



*Achieving Business Excellence Through Standards*

# **STANDARDS CATALOGUE**

Complete to December 2024



## FOREWORD

The Standards Association of Zimbabwe (SAZ) is the national standards body of Zimbabwe. Formed in 1957 and incorporated in 1960, the Association is a non-governmental and non-profit making organization operating under the Zimbabwe Companies' Act (Chapter 24:03) with Articles and Memorandum of Association. A General Council consisting of 48 representatives of government, local authorities, professional and academic institutions, industry and commerce and individuals governs the Association. The General Council determines the overall policy of the Association. Drawn out of the General Council is an Executive Committee, which keeps the activities of the Association under review and fulfills any functions that the General Council may delegate to them. Whilst the Association derives its income from certification activities, laboratory testing, calibration, training and sale of publications, it is subsidized by funds from the Standards Development Levy Fund (SDLF). Government collects the levy from specified employers through the Ministry of Industry and Commerce to promote standards in Zimbabwe.

### VISION

To be the center of excellence through standards

### MISSION STATEMENT

To develop national standards and promote their use for socio-economic development

### CORE VALUES

Integrity Customer Centric Excellence

### CORE ACTIVITIES

- To develop and publish Zimbabwe national standards.
- To promote an understanding of standards requirements by offering standards based training programs.
- To make available to producers and consumers laboratory facilities for the testing of manufactured goods, raw materials, and calibration of equipment.
- To promote the widespread use of standards by operating third party certification schemes.
- To provide information services on national, regional and international standards and technical regulations.
- To provide a World Trade Organization /Technical Barriers to Trade (WTO/TBT) enquiry point for standards and conformity assessment information.

These standards are also available for purchase from the SAZ Web store: <https://sazportal.saz.org.zw/#/store/home> and from the SAZ offices in Harare, Bulawayo and Mutare contact the emails below:

The SAZ Information Centre: [standards@saz.org.zw](mailto:standards@saz.org.zw) / +263 242 882 017

SAZ Mutare: [sazmutare@saz.org.zw](mailto:sazmutare@saz.org.zw) / +263 20 66252

SAZ Bulawayo: [sazbyo@saz.org.zw](mailto:sazbyo@saz.org.zw) / +263 29 70447

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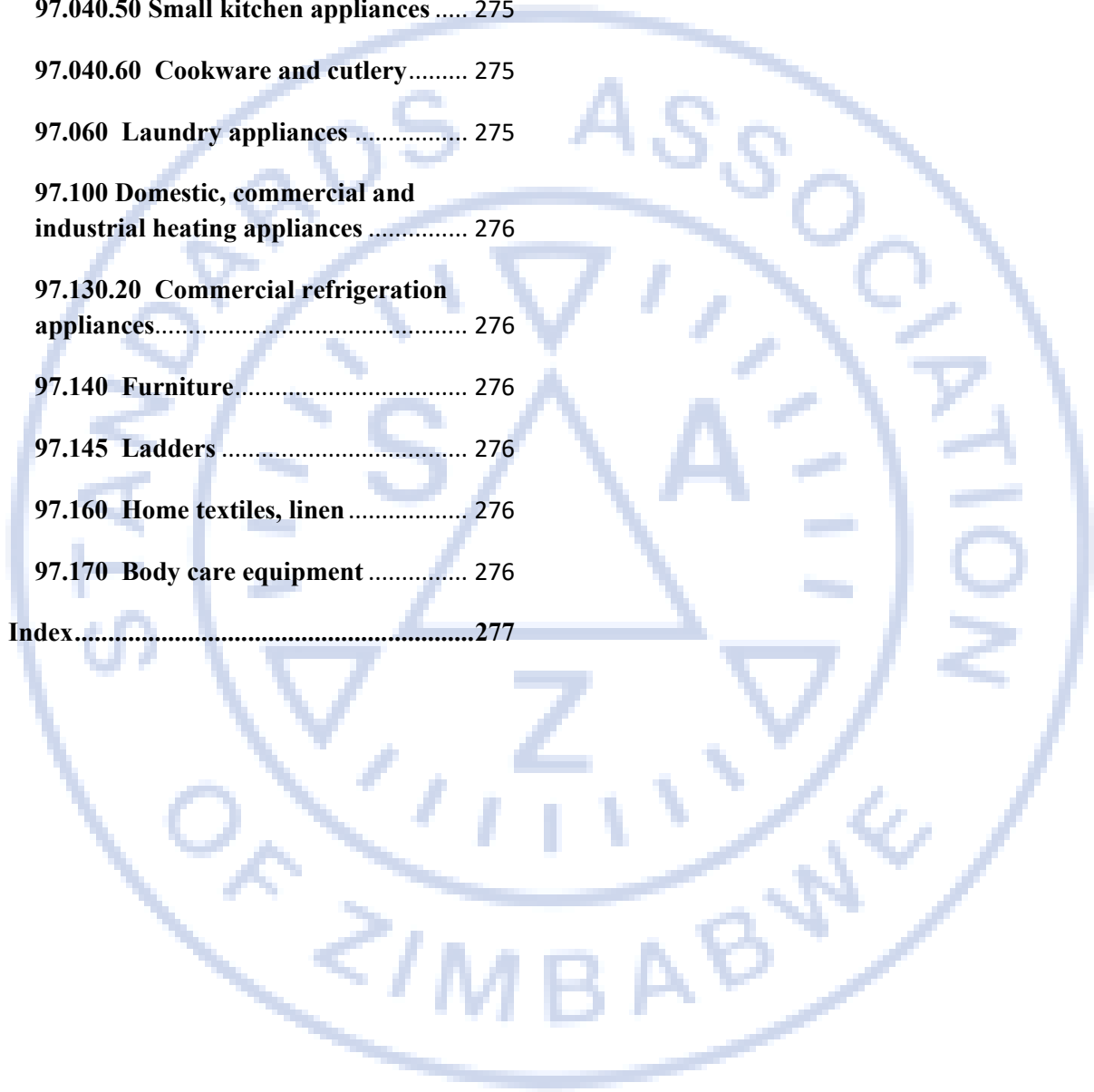
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# ZWS STANDARDS

## ZWS Directive: Part 2:2022

### ZWS Directive

#### Part 2: Drafting and presentation of Zimbabwe national standards

Price Code: Gr.

71 pages

First publication 1987 as SAZ 100 Part 3

First revision 2012 as SAZ 100 Part 3

Second revision 2022, as SAZ 100: Part 3:2012

This Zimbabwe Standard Directive specifies the requirements for the structure, drafting and presentation of Zimbabwe Standards and other standards publications.

## ZWS K18:1969 (Under revision)

### Solid Carbon dioxide

Price Code: Gr. 2

6 pages

Reprinted 2008

Covers solid carbon dioxide for use in the carbonation of mineral waters and for refrigeration.

## ZWS N7:1971

### Agricultural discs

Price Code: Gr. 5

19 pages

Amended by MD 195: 1972

Reconfirmed 2002

Covers plough, harrow and seed-drill discs. Material, manufacture and dimensions are given.

## ZWS 013:1969

### Chipboard

Price Code: Gr. 3

10 pages

Based on BS 350

Specifies the requirements of boards consisting mainly of particles of wood and/or other lignocellulosic materials bonded with synthetic resin and/or other organic binders.

## ZWS S18:1968

### Worcestershire sauce

Price Code: Loan

17 pages

Amended MD 63: 1968

Endorsement of SABS 303: 1951

Covers sauce of one type and grade. Factory, ingredients, containers, packing, labelling and microbiological requirements are given.

## ZWS S19:1968

### Cucumber pickles

Price Code: Loan

17 pages

Amended by MD 66: 1968

Endorsement of SABS 302: 1951

Covers pickles of five types and one grade. Factory, ingredients, containers, packing, labelling and microbiological requirements are specified.

## ZWS S25:1970

### Canned soups

Price Code: Gr. 7

39 pages

Amended by MD 198: 1972; MD 446: 1978; MD 600: 1999

Replaces ZWS S8, ZWS S10, ZWS S11, ZWS S12, ZWS S13

Covers manufacture and processing of vegetable soup.

## ZWS T1:1967

### Rubber Closures for injectable products

Price Code: Loan

12 pages

Amended by MD 33: 1967

Endorsement of BS 3263: 1960

Covers material, tolerance, penetrability, fragmentation self-sealability, water extract, alkalinity or acidity and compatibility.

## ZWS X3:1968

### Office desks, tables and seating

Price Code: Loan

32 pages

Amended by MD 79: 1968

Endorsement of BS 3893: 1965

Partially superseded by ZWS 562 Part 1: 2002

Specifies dimensions and other requirements for office chairs, desks and tables.

## ZWS X4:1968

### Anthropometric recommendations for dimensions of non-adjustable office chairs, desks and tables

Price Code: Loan

12 pages

Amended by MD 80: 1968

Endorsement of BS 3079: 1959

Recommends dimensions for general purpose administrative and clerical non-adjustable office chairs, desks and tables.

## ZWS Z2:1961

### Marking articles made of sterling silver

Price Code: Gr. 1

6 pages

Based on: SABS 30: 1948

Details articles which qualify for the mark and the mark to be used.

## ZWS Z4:1961

### Miners' boots (Derby type with premoulded stuck-on-sole and heel)

Price Code: Gr. 3

10 pages

Covers men's Derby type mining boots with reinforced toe cap.

## ZWS Z5C:1973

### Charts for the identification of the contents of gas containers

Price Code: Loan

8 pages

Amended by MD 254:1973; MD 483: 1982

Endorsement of BS 349C: 1973

A 760 by 460 mm chart giving marking for gas cylinders with 24 different contents.

**ZWS Z6:1964****Medical gas cylinders and anaesthetic apparatus**

Price Code: Loan

23 page

Endorsement of BS 1319 1955

Specifies construction and identification of medical gas cylinders and gives fully, dimensioned details of non inter-changeable outlet for various gases and gas mixtures.

**ZWSZ14:1971****Conveyor belting for use in flammable or explosive atmospheres**

Price Code: Loan

16 pages

Amended by MD 137:1971

Endorsement of BS 3289: 1960

Specifies requirements and test methods for conveyor belting intended for underground use.

**ZWS Z17:1971****Industrial gloves**

Price Code: Loan

48 pages

Amended by: MD 148: 1971

Endorsement of BS 1651: 1966

Partially superceded by ZWS 339: 1991

Covers a range of gloves from protection against common industrial hazards. The standard classifies these common hazards and recommends gloves for protection against each hazard.

**NOTE: From 1974 onwards the practice of using alpha-numeric identification which indicated broad subject classification was discontinued. All standards published since then are purely numerical.**

**ZWS 100 (under revision)****Code of practice for preparation of ZWS standards****Part 1:2016 Guide to general principles of standardization**

Price Code: Gr. 6

22 pages

Describes the context of standardization and in particular identifies the aims and principles that apply when standards are prepared, the range of ZWS standards publications and the role of standards within the framework of Zimbabwe law.

**Part 2:2010 SAZ and the technical committee procedures**

Price Code: Gr.6

25 pages

Explains the organization and functions of ZWS and outlines the procedures governing the presentation of Zimbabwe Standards and other standards publications.

**Part 3:2012 Drafting and presentation**

Price Code: Gr. 8

64 pages

Based on BS 0 Part 3:1981

Specifies the requirements for the structure, drafting and presentation of Zimbabwe standards

**ZWS 101:1976****Safety factors and smoke emission of domestic stoves burning solid fuels at a rate not exceeding 5 kg per hour**

Price Code: Gr. 3

6 pages

Reprinted 2014

Covers the smoke emission and certain safety factors of domestic stoves burning solid fuels. Quality of manufacture and general performance not included.

**ZWS 102:1993****Steel pipes****Part 1: Steel pipes of nominal bore not exceeding 200mm**

Price Code: Gr. 7

15 pages

Replaces: ZWS 102: 1989

Based on SABS 62: 1989

Reprinted 2014

Covers requirements for three classes (light, medium and heavy) of welded and seamless steel pipes of nominal bore in the range 6 to 200 mm.

**Part 2: Pieces and pipes fittings of nominal bore not exceeding 150 mm, made from steel pipe**

Price Code: Gr. 6 17

pages

Replaces: ZWS 102: 1989

Based on SABS 62: 1989

Reprinted 2014

Covers requirements for two classes (light, medium and heavy) of welded and seamless steel pipes of nominal bore in the range 6 to 150 mm.

**ZWS 103:1974****Glazed ceramic tiles and tile fittings for internal walls**

Price Code: Loan

32 pages

Amended by MD 259: 1974

Endorsement of BS 1281: 1966

Gives the requirements for one size of tile 150 x 150 x 6 mm and various fittings.

**ZWS 104:1974****Precast concrete paving slabs**

Price Code: Gr. 4

9 pages

Based on SABS 541: 1971

Reprinted 2000

Reprinted 2007

Covers precast concrete paving slabs for use on a weaving surface on pavements, footpaths, etc.

**ZWS 105:2001****Road tar binders**

Price Code: Gr. 7

31 pages

Replaces: ZWS A20:1966

Based on SABS 748: 1978

Reprinted 2005

Covers the essential requirements for a number of viscosity grades of road binders prepared entirely from crude tars produced as a by-product of the carbonisation of coal in coke ovens suitable for various types of road construction.

**ZWS 106: 1974****Standard export documents**

Price Code: Gr. 7

40 pages

Based on SITPRO: 1970

Lays down the requirements for a standard form of export documents for use in Zimbabwe and which can be reproduced by the “one run”, system.

#### **ZWS 107:1998**

##### **The assessment of defects in textile piece-goods and made-up articles**

###### **Part 1: Defects in woven piece-goods (cellulosic and cellulosic blends)**

Price Code: Gr. 5

14 pages

Based on SABS 076: Part 1: 1981

Reprinted 2014

Applicable to woven fabrics (cellulosic and cellulosic blends) manufactured from yarns spun on the cotton system.

###### **Part 2: Defects in woven terry toweling**

Price Code: Gr. 4

11 pages

Based on SABS 076: Part 2: 1972

Covers the permissible number of defects, stringing of defects, length deductions of defects, net length, and colour matching and includes a guide to the various defects that shall be strung by the manufacturer.

###### **Part 3: Defects in household articles**

Price Code: Gr. 5

14 pages

Based on SABS 076: Part 7: 1985

Applicable to made-up household textile articles and includes a guide to the types of defects that are unacceptable in a made-up articles.

#### **ZWS 109:1995**

##### **Winding wires**

###### **Part 1: Polyurethane base with solderable properties Class 130**

Price Code: Gr. 6

23 pages

Replaces: ZWS 108: 1974

Based on BS 6811: Part 1 Sec. 1.1, BS 6811 Part 3 Sec. 3.2 and BS EN 60182: Part 2

Reprinted 2012

Specifies requirements, including those for dimensions, for round copper conductors covered with a synthetic enamel of class 180 based on a polyesterimide resin.

###### **Part 2: Polyesterimide base enamel Class 180**

Price Code: Gr. 6

24 pages

Replaces: ZWS 109: 1974

Based on BS 6811: Part 1 Section 1.1: part 3 Section 3.2 and BS EN 60182: Part 2

Specifies requirements, including those for dimensions for round copper conductors covered with a synthetic enamel of class 180 based on a polyesterimide resin, which may be a modified resin.

###### **Part 3: Test methods**

Price Code: Gr. 8

55 pages

Replaces ZWS 108: 1974 and ZWS 109:: 1974

Based on BS 6811: Part 2 Section 2.1 to section 2.6

Relates the methods of test for winding wires, irrespective of the conductor material and the type of insulation.

#### **ZWS 111:1974**

##### **Canned meat products**

###### **Part 1: Corned beef and corned meat**

Price Code: Gr. 4

10 pages

Amended by MD 283: 1974

Based on SABS 274: 1950

Reprinted 2007

Covers manufacture, processing and treatment of canned meat for human consumption.

#### **ZWS 112:2023**

##### **Dog and cat food**

Price Code: Gr. 6

14 pages

First published, 1974

First revision, 1999

Reprinted 2014

Second revision, 2023

This Zimbabwe Standard specifies the requirements for wet and dry types of dog and cat foods..

#### **ZWS 113:2000**

##### **Fibre-cement pressures pipes and joints**

Price Code: Gr. 6

26 pages

Replaces: ZWS 113: 1987

Based on BS 486: 1966

Reprinted 2014

Specifies the characteristics of fibre – cement pipes and joints for use under pressure for non-potable water and sewage.

#### **ZWS 114:2010**

##### **Softwood flooring boards (Metric units)**

Price Code: Gr.7

19 pages

Replaces: ZWS O 5: 1967

Amended by MD 394/5: 1977: MD 269: 1974

Based on SABS 629: 1973

Covers requirements, marking and test methods for two grades of board.

#### **ZWS 115:1974**

##### **Terrazzo tiles**

Price Code: Gr. 6

22 pages

Based on BS 4131: 1973

Specifies requirements for hydraulically – pressed terrazzo floor and wall tiles.

#### **ZWS 116:1974**

##### **Self-tapping screws and metallic drive screws**

Price Code: Loan

52 pages

Amended by MD 271: 1974

Endorsement of BS 4174: 1972

Relates to ferrous and non ferrous thread cutting and thread forming screws with countersunk, raised countersunk, raised countersunk or pan heads, slotted or recessed.



**ZWS 117:1974****Small garden implements**

Price Code: Gr. 4  
8 pages

Covers planting trowels, weeding forks and daisy grubbers. Materials dimensions and strength requirements are given.

**ZWS 118:1974****Hardwood block and strip flooring**

Price Code: Gr. 7  
29 pages  
Based on SABS 281: 1972  
Reprinted 2007

Covers species of wood, dimensions, defects squareness, finish and preservative treatment of two grades of flooring.

**ZWS 120:2022****Eucalyptus poles, cross-arms and spacers for power distribution and communication systems**

Price Code: Gr. 7  
36 pages  
Based on SABS 754  
Eighth Revision

This standard specifies the requirements for eucalyptus poles, grown in Southern Africa, and that are intended to be used as upright supports for communications systems, and as upright supports, cross-arms and spacers (in five-pole structures) for power distribution lines.

**ZWS 121:1989****Two-pole and earthing-pin plugs socket-outlets and socket-outlet adaptors for circuits up to 250 volts**

Price Code: Gr. 8  
53 pages

Relates to plugs, fused and non-fused, socket-outlets, shuttered and non-shuttered and fused socket-outlet adaptors, shuttered and non shuttered, for use in domestic premises, offices, etc with ratings up to 30 A.

**ZWS 122:1991****General purpose fuse links for domestic and similar purpose (primarily for use in plugs)**

Price Code: Gr. 7  
30 pages  
Based on BS 1362:1973  
Reprinted 2000  
Reprinted 2006

Specifies dimensions and performance requirements for general purpose cartridge fuse links of current ratings not exceeding 13 A for domestic and similar purposes.

**ZWS 123:1974****Glass fibre reinforced plastics baths and basins**

Price Code: Gr. 6  
20 pages  
Based on BS 4305: 1972  
Reprinted 2006

Specifies the properties of the materials and the design, construction, workmanship, dimensions, testing and inspection of baths and basins.

**ZWS 125:1974****Protective apparel for use against pesticides**

Price Code: Gr. 4  
12 pages  
Reprinted 2003

Covers the production, testing and sampling of the following protective apparel: sou'westers, jackets, trousers, one-piece suits, boots, gloves, goggles, respirators, face-masks, face-shields and aprons.

**ZWS 126:1997****Food Hygiene****Part 1: 1997 Manufacturing**

Price	Code:	Gr.	9
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13 pages  
Based on SABS 049: 1989  
Reprinted 2006

Covers construction of the factory, hygiene, equipment and water supply, freedom from disease, medical examination of employees, prophylactic precautions and clothing.

**Part 2:2001 Catering sector**

Price	Code:	Gr.	9
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138 pages  
Reprinted 2004  
Based on UK Industry guide to Good Hygiene Practice - Catering Guide

Covers hygiene requirements for various food catering operations.

**Part 3:2001: Retailing**

Price	Code	Gr.	8
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85 pages  
Reprinted 2004

Based on UK Industry guide to Good Hygiene Practice –Retail Guide

Intended for application to food retailers, including grocery, butchers, fishmongers, green grocers, supermarkets etc. Also applies to business where food is only a part of what they do such as food shops at fuel stations and news agents.

**Part 4:1999: The horticultural Industry**

Price	Code:	Gr.	7
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29 pages  
Amended by MD 628: 2000  
Based on Codex Volume 1B: 1995  
Reprinted 2006

Recommends general hygienic practices for use in the handling of horticultural food and human consumption in order to ensure a safe, sound and wholesome product.

**ZWS 127:2006****Ballasts for fluorescent lamps**

Price	Code:	Gr.	8
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50 pages  
Reprinted 2006 incorporate MD 572: 1996  
Partially superseded by ZWS 354: 1978  
Identical to SABS 890:1977

Covers ballasts (for hot cathode lamps) with insulation at least class A; power factor corrected or uncorrected; for use on 50 Hz supply at 110-250 V and operation at temperatures between 10 and 40 °C. The specification does not cover resistors and filament lamps used as ballasts.

**ZWS 130:2010****Plywood and composite board**

Price Code: Gr. 7

37 pages

Replaces ZWS O2: 1973 and ZWS O12 1969

Reprinted 2004

Covers requirements for materials, construction, preservative treatment, dimensions and performance of plywood and composite board which is at least 3 mm thick.

**ZWS 133:1975****Internal combustion engine lubricating oil**

Price Code: Loan

13 pages

Replaces: ZWS D7: 1970

Amended by MD 289: 1975

Endorsement of SABS 704-A: 1974

Covers one type of engine lubricating oil (in six viscosity grades) suitable for crankcase lubrication of reciprocating internal combustion engines of both the spark ignition and the normally aspirated compression ignition types.

**ZWS 134:1975****Sodium-base lubricating grease**

Price Code: Gr. 4

9 pages

Replaces ZWS K23

Based on SABS 351: 1974

Reprinted 2000

Covers grease in four consistency grades.

**ZWS 135:1975****Chassis lubricating grease**

Price Code: Gr. 4

9 pages

Replaces ZWS K24

Endorsement of SABS 352: 1974

Reprinted 2000

Reprinted 2007

Covers water-resistant grease in three consistency grades.

**ZWS 136:1975****Lithium-base lubricating grease**

Price Code: Gr. 4

8 pages

Replaces ZWS K25: 1970

Based on SABS 406: 1974

Covers four grades suitable for temperatures between -20°C and 120°C.

**ZWS 137:2000****The construction and site control of earthworks**

Price code: Gr. 8

74 pages

Deals with the selection of materials, construction practice, tolerances and quality control of earthworks. Should be read in conjunction with ZWS 185.

**ZWS 138:1975****Bitumen-based filling compounds for electrical purposes**

Price Code: Gr. 7

18 pages

Replaces ZWS C5: 1967

Reprinted 2006 incorporate MD 293

Identical to BS 1858:1973

Covers bitumen-based filling compounds in six classes, according to softening point.

**ZWS 139:1975****Meat-cutting bandsaw blades**

Price code:

Gr.

4

7 pages

Based on ZWS B6: 1972

Gives requirements for blades supplied either in coil or cut ready for use. Saws with heat-hardened teeth are not included

**ZWS 140:1975****Calcium-base lubricating grease**

Price Code: 4

9 pages

Replaces ZWS K22

Reprinted 2000

Covers water-resistance grease in five consistency grades.

**ZWS 141:1978****Cast Iron fittings for asbestos-cement pressure pipes**

Price Code: Gr. 7

29 pages

Equivalent to SABS 546 1977

Covers two categories of fittings for pressure up to 1 800 kPa, one for constant outside diameter pipes and the other for constant internal diameter pipes. Constructional requirements and tests are detailed.

**ZWS 142:2023****Pig feeds**

Price Code: Gr. 5

16 pages

First published 1959 as CAS 142,

First revision 1972, as CAS 142,

Second revision 1975, as CAS 142,

Third revision 1996, as ZWS 142,

First reprint 2005, as ZWS 142,

Fourth revision 2023, as ZWS 142

This Zimbabwe Standard covers the following types of pig feeds: Pig creep meal; Pig weaner meal; Pig grower meal; Dry sow and boar meal; Lactating/brood sow meal; and Pig finisher meal. It also provides for all types of concentrates in the categories listed above.

**ZWS 143:1975****Life jackets**

Price Code:

Gr.

4

12 pages

Amended by MD 471: 1982

Reprinted 2012

Applies to inherently buoyant jackets, preferably of the waist coat type for use in conditions prevailing on lakes and rivers of Zimbabwe.

**ZWS 147:1998****Switches for household and similar fixed electrical installations – General requirements**

Price Code:

Gr.

8

95 pages

Based on BS 3676: Part 1:1996

Specifies requirements and test for manually operated general purpose switches with a rated voltage not exceeding 440 V a.c or d.c and a similar fixed electrical installations.

**ZWS 148:1994**  
**Cast steel gate valves**  
Price Code: Gr. 5  
15 pages  
Replaces: ZWS 148 1975  
Reprinted 2009

Covers the material and constructional requirements for flanged cast steel gate valves (50 to 350 mm nominal bore) with rising or non-rising spindles and intended for use in waterworks, mining and industrial applications, in which the pressure differences across the gate in the closed position, will not exceed 2.5 mPa and the temperature of the fluid will not exceed 50 °C.

**ZWS 149:1993**  
**Cast Iron gate valves for waterworks**  
Price Code: Gr. 8  
46 pages  
Amended by MD 400 1977  
Replaces ZWS 149: 1977  
Based on SABS 664: 1989

Covers the material and constructional requirements for cast iron gate valves of three classes and of either the inside or the outside screw type.

**ZWS 150:1975**  
**Matrices for tyre reconditioning**  
Price Code: Gr. 4  
7 pages  
Reprinted 2012

Covers the alloy to be used, casting and machining processes and pressure tests.

**ZWS 152:1999**  
**Pepper sauce**  
Price Code: Gr. 4  
7 pages  
Reprinted 2006 incorporate MD 611: 1999  
Reprinted 2012

Covers pepper sauce of one type and grade.

**ZWS 153:2000**  
**Spades and shovels**  
Price Code: Gr. 6  
26 pages  
Replaces ZWS Z12  
Based on SABS 284: 1974  
Reprinted 2007

Covers dimensional, material, constructional and strength requirements for four types of spades and ten types of shovels.

**ZWS 154:1999**  
**Forks and rakes**  
Price Code: Gr. 7  
25 pages  
Replaces ZWS Z24  
Based on SABS 390: 1974  
Reprinted 2007

Covers material, dimensional, constructional and strength requirements of six types of forks and seven types of rakes.

**ZWS 156:1975**  
**Unplasticized polyvinyl chloride (UPVC) components for rain-water systems**  
Price Code: Gr. 5  
16 pages  
Reprinted 1997 incorporate amendments  
Identical to SABS 11: 1970  
Reprinted 2007

The specification covers unplasticized polyvinyl chloride (UPVC) rainwater system components of different types and intended for external applications.

**ZWS 157:1995**  
**The use of structural steel in building**  
Price Code: Gr. 9  
119 pages  
Based on BS 449: Part 2: 1969  
Reprinted 2004

Relates primarily to the use of hot rolled steel sections and plates and normalized tubular shapes.

**ZWS 158:1975**  
**The use and disposal of acaricides (cattle dips)**  
Price Code: Gr. 4  
8 pages  
Amended by MD 423: 1978  
Reprinted 2005

Covers the handling, use and disposal of acaricides, so that these operations can be effected with minimum risk to humans and livestock.

**ZWS 159:1975**  
**Rubber and plastics belting of textile construction for use on bucket elevators**  
Price Code: Gr. 7  
15 pages  
Replaces: ZWS Z14: Part 2 & 4  
Reprinted 1996 incorporation MD 312: 1975  
Identical to BS 490: Part 2: 1975  
Reprinted 2007

Covers construction, preferred dimensions, tensile strength, ply adhesion, sampling and testing of belting impregnated with either a rubber or a plastic mix.

**ZWS 160:1977 (under revision)**  
**Basic data for the design of buildings: loads and forces**  
**Part 1: Dead and imposed loads**  
Price Code: Loan  
20 pages  
Endorsement of BS CP 3: Chapter V Part 1: 1967  
Reprinted 2012

Gives dead and imposed loads as applied to new buildings, alterations and additions to existing buildings or change of use of existing construction.

**Part 2: Wind loads**  
Price Code: Loan  
52 pages  
Amended by MD 380: 1977  
Endorsement of CP 3 Chapter V Part 2: 1972

Gives methods for calculating wind loads which should be taken into account when designing buildings. Does not apply to buildings of unusual shape or those in unusual locations.

**ZWS 162: Structural use of timber****Part 1: 2000 Limit states design**

Price Code: Gr. 10

39 pages

Reprinted 2004

Reprinted 2005

Gives guidance on the design, fabrication and erection of timber structures (and structural (and structural timber components in structures framed in other materials) where the design is based on limit states.

**Part 2:2001 Allowable stress design**

Price Code: Gr. 10

154 pages

Gives guidance on the structural design based on the allowable stresses of timber and on the evaluation of timber members and structures.

**ZWS 164:1975****The structural use of reinforced concrete in building**

Price Code: Gr. 8

83 pages

Amended by MD 1241: 1973: MD 1552: 1974: MD 1923: 1976:

MD 2304: 1977 MD 324: 1975

Endorsement of BS CP 114: 1969

Reprinted 2013

Covers the structural use of reinforced concrete in buildings.

**ZWS 165:1975****The structural use of prestressed concrete in buildings**

Price Code: Gr. 9

44 pages

Amended by MD 325: 1975

Endorsement of BS CP 155: 1969

Reprinted 2014

Deals with the structural use of prestressed concrete in buildings. It covers both work carried out on site and the manufacture of precast prestressed concrete units.

**ZWS 166:1975****The structural use of precast concrete**

Price Code: Gr. 9

147 pages

Amended by MD 326: 1975

Endorsement of BS CP 116: 1969

Reprinted 2013

Gives requirements for the materials, design, workmanship, inspection and testing of finished products of the various types of concrete.

**ZWS 167:1975****Earthenware aeration tiles**

Price Code: Gr. 4

6 pages

Reprinted 2007

Covers the type of tiles used in biological trickle filters treating sewage and trade effluents.

**ZWS 168:1975****Screwdrivers**

Price Code: Loan

25 pages

Amended by MD327: 1975

Endorsement of BS 2559: Part 1: 1971

Reprinted 2012

Covers six types of screwdrivers for use with slotted head screws.

**ZWS 169:2010****Laminated timber (glulam)**

Price Code: Gr. 7

35 pages

Based on SABS 1460: 1988

Covers the general requirements for softwood and hardwood laminated timbers.

**ZWS 170****The structural use of concrete****Part 1: 2003 Code of practice for design and construction**

Price Code: Gr. 11

223 pages

Replaces ZWS 170: 1978

Reprint 2012

Gives recommendations for the structural use of concrete in buildings and structures, excluding bridges and structural concrete made with high alumina cement.

**Part 2:1978 Design charts for singly reinforced beams doubly reinforced beams and rectangular columns.(Under revision)**

Price Code: Gr. 9

90 pages

Amended by MD 417: 1978

Endorsement of BS CP 110 Part 2: 1972

Reprinted 2013

Covers design charts for singly reinforced beams, doubly reinforced beams and rectangular columns. The charts have been based on the assumptions laid down in Part 1, use being made of the parabolic-rectangular stress block throughout.

**Part 3:1978 Design charts for circular columns and prestressed beams (under revision).**

Price Code: Gr. 11

174 pages

Amended by MD 418: 1978

Endorsement of BS CP 110 Part 3: 1972

Guidance is given on the specification and workmanship of concrete, the inspection and testing of structures and the fire resistance of various forms of construction. Parts 2 and 3 consist of design charts for use with Part 1.

**ZWS 171:1975****Flexible urethane foam for load bearing applications**

Price Code: Gr. 5

12 pages

Replaces ZWS D5

Amended by MD 329: 1975

Endorsement of BS 3379: 1975

Reprint 2012

Covers five types of foam for four conditions of services, depending upon severity. The foam is manufactured in block, sheet and strip foam in moulded and fabricated shapes and as reconstituted materials.

**ZWS 172:1975****Ceramic insulators and pole fittings for telephone lines**

Price Code: Gr. 8

44 pages

Amended by MD 330: 1975

Endorsement of BS 16: 1974

Reprinted 2001

Reprinted 2013

Dimensions and methods of test of insulators and fittings are detailed.

**ZWS 173:1990**

**Code of practice for timber buildings**

Price Code: Gr. 9

113 pages

Replaces ZWS 173: 1975

Describes practices to be followed in the design and construction of single-storey and double –storey timber buildings and portions of such buildings for residential or similar use. It does not cover buildings more than two storeys in height or where walls have a dimension exceeding 6 m without effective lateral restraint.

**ZWS 174:1983**

**Tarpaulins**

Price Code: Gr. 6

21 pages

Replaces: ZWS L 5: 1964

Amended by MD 547: 1993

Based on BS 3408: 1977

First reprint 2018

Specifies requirements for materials, manufacture and proofing of tarpaulins that have been treated and/ or coated to induce water resistance and rot resistance.

**ZWS 175:1975**

**Plastics W.C seats**

Price Code: Loan

38 pages

Amended by MD 335: 1975

Endorsement of BS 1254: 1971

Covers two types of seat for use with W.C pans complying with BS 1213.

**ZWS 176:2000**

**Fire doors and fire shutters**

Price Code: Gr. 6

8 pages

Reprinted 2004

Specifies the requirements for four classes of fire door and fire shutter assembled and two classes of fire doors and fire shutters that are intended to close permanent openings in walls or partitions, to provide a fire resistance of 30 mins or more in order to stop the spread of fire and to limit the spread of smoke.

**ZWS 178:1976**

**Low voltage insulators**

Price Code: Loan

34 pages

Amended by MD 340: 1976

Endorsement of SABS 161:1955

Reprinted 2013

Covers pin, reel and shackle insulators and bushings and support insulators for busbars for voltages up to 1000 V.

**ZWS 179:1976**

**Cleats, bobbins and leading-in tubes**

Price Code: Loan

8 pages

Amended by MD 341: 1976

Endorsement of SABS 176:1955

Reprint 2016

Covers dimensional and quality requirements for porcelain cleats, bobbins and leading in- tubes for the support of insulated conductors in the open

wiring of circuits at system voltages up to and including 660volts between conductors.

**ZWS 181:1992**

**Mirrors**

Price Code: Gr. 5

12 pages

Replaces ZWS 181: 1976

Reprinted 2010

Covers three qualities of back silvered mirrors made from plate float or sheet glass.

**ZWS 182:1976**

**Steel boilers and super heaters tubes**

**Part 1: Low tensile carbon steel tubes without specified elevated temperature properties**

Price Code: Gr. 6

49 pages

Amended by MD 343: 1976

Endorsement of BS 3059: 1968

Reprinted 2012

Reprinted 2014

Covers the requirements for tubes not exceeding 127 mm outside diameter intended for low pressure boilers for use at temperatures up to 40 °C.

**Part 2: Carbon alloy and austenitic steel tubes with specified elevated temperature properties**

Price Code: Gr. 7

27 pages

Endorsement of BS 3059:1969

Reprinted 2014

Contains requirements for seamless and electric resistance welded tubes of carbon and alloy steels and for cold finished seamless tubes of austenitic steels, not exceeding 12.5mm thick and 127mm outside diameter for use in the construction of boiler units.

**ZWS 184:2024**

**Wooden doors**

Price Code: Gr. 7

26 pages

Based on SABS 545:2018.

Replaces ZWS A 27: 1968

First published, 1968 as CAS A27,

First revised, 1976 as CAS 184,

Second revision, 2000 as ZWS 184,

First reprint, 2010 as ZWS 184,

First revision 2024 as ZWS 184.

This specification covers the requirements for wooden doors of three exposure classes and three performance classes. This specification does not cover the requirements for fire doors manufactured in accordance with ZWS 176.

**ZWS 185**

**Methods of testing soils for civil engineering purposes**

**Part 1: 1998: Preparation, classification and density of soil**

Price Code: Gr. 8

95 pages

Replaces ZWS A43: Part 1: 1971

Reprinted 2005

Gives methods for the preparation of soil samples and for their classification and measurements. Procedures for use in the laboratory and in the field are given and methods of recording and calculating the results are included.

**Part 2: 2001: Strength tests**

Price Code: Gr. 8  
70 pages

Gives methods for strength testing of soils and aggregates for pavements. Procedures for use in the laboratory and in the field are given and methods of recording and calculating the results are included.

**ZWS 186:1976**

**Identification of pipelines**

Price Code: Loan  
11 pages  
Replaces ZWS Z7  
Amended by MD 345: 1976  
Endorsement of BS 1710: 1975

Defines the meaning and application of colours for the identification of pipes containing fluids in liquid or gaseous conditions. Also includes ducts and conduits for electrical services.

**ZWS 187:1984**

**Concrete roofing tiles**

Price Code: Gr. 4  
10 pages  
Replaces: ZWS 187: 1976  
Amended by  
Based on SABS 542: 1969

Covers roofing tiles of plain and interlocking types. Dimensions and methods of test are given.

**ZWS 188:1976**

**Cable glands for elastomer and plastic insulated cables**

Price Code: Loan  
33 pages  
Amended by MD 346: 1976  
Endorsement of BS 6121:1973

Gives details of glands suitable for use with cables conforming to ZWS 240.

**ZWS 189:2002**

**Hydraulic brake fluid**

Price Code: Gr. 8  
49 pages  
Replaces ZWS D1: 1962

Covers requirements for DOT 3 and DOT 4 fluids in hydraulic brake system of motor vehicles.

**ZWS 190:1997**

**Methods for sampling and testing of aggregates and fillers**

Price Code: Gr. 9  
110 pages  
Replaces: ZWS 190: 1978  
Amended by 631:2001  
Reprinted 2004 to incorporate MD 631: 2001

Covers methods for sampling and testing of materials for use in the production of normal structural concrete and bituminous road surface.

**ZWS 191:1976**

**Current transformers**

Price Code: Gr. 8  
67 pages  
Based on BS 3938:1973  
Reprinted 2000  
Reprinted 2005

Gives the requirements for current transformers suitable for frequencies of 15 Hz to 100 Hz, intended for use with electrical measuring instruments and electrical protective devices.

**ZWS 192:1976**

**Covers electrodes for the manual metal-arc welding of carbon and carbon manganese steels**

Price Code: Loan  
14 pages  
Replaces ZWS B7 and B8  
Amended by MD 349: 1976  
Endorsement of BS 639: 1976

Covers electrodes depositing weld metal having a tensile strength of not more than 650 mPa.

**ZWS 193:1976**

**Cast iron baths for domestic purposes**

Price Code: Loan  
17 pages  
Replaces: ZWS A39  
Amended by MD 350: 1976  
Endorsement of BS 1189: 1972  
Reprinted 2012

Covers material, design and construction. Guidance in the care and handling of the baths is given.

**ZWS 194:1976**

**Hard rubber chopping blocks**

Price Code: Gr.3  
5 pages  
Reprinted 2010

Covers chopping and cutting blocks such as those used by butchers, bakers, catering establishments, households, etc made from rubber materials.

**ZWS 195:1976**

**Asbestos-cement pipes for sewerage and drainage**

Price Code: Gr. 6  
15 pages

Specifies requirements for asbestos-cement pipes suitable for gravity flow lines at atmospheric pressure for sewerage and drainage applications.

**ZWS 196:1979**

**Materials for elastomeric joint rings for pipework and pipelines**

Price Code: 4  
5 pages  
Replaces: ZWS A37: 1969 and ZWS A38: 1969  
Amended by MD 355: 1976 MD 455: 1979  
Endorsement of BS 2494: 1976  
Reprint 2016

Six hardnesses of vulcanized rubber joint rings are covered with details of requirements for tensile strength, elongation compression set before and after aging, swelling and water absorption

**ZWS 197:1976**

**Wooden handles for tools and implements**

**Part 1: Wooden handles for brooms, hay-forks and rakes (including general requirements for other wooden handles for tools)**

Price Code: Gr. 6  
17 pages  
Amended by MD 356: 1976  
Endorsement of SABS 77: 1975

Reprinted 2012

Covers detailed requirements for one grade of wooden handles for brooms, hay-forks and rakes.

**Part 2: Wooden handles for beater picks, mattocks and picks**

Price Code: Gr. 3

7 pages

Replaces ZWS O11: 1969

Amended by MD 357: 1976

Endorsement of SABS 268: 1975

Reprinted 2012

Covers one grade of wooden handles for beater picks, mattocks and picks.

**Part 3: Wooden handles for forks, shovels and spades**

Price Code: Gr. 4

11 pages

Replaces ZWS O11: 1968

Amended by MD 358: 1976

Endorsement of SABS 269: 1975

Reprinted 2012

Covers one grade of wooden handles for forks, shovels and spades.

**Part 4: Wooden handles for hammers**

Price Code: Gr. 3

18 pages

Replaces ZWS O11: 1968

Amended by MD 359: 1976

Endorsement of SABS 292: 1975

Reprinted 2012

Covers one grade of wooden handles of different shapes for 14 types of hand-held hammer heads.

**Part 5: Wooden handles for axes**

Price Code: Gr. 3

8 pages

Amended by MD 360: 1976

Endorsement of SABS 573: 1975

Reprinted 2012

Covers one grade of wooden handles for axes

**Part 6: Wooden handles for hatchets**

Price Code: Gr. 4

6 pages

Amended by MD 361: 1976

Endorsement of SABS 672: 1975

Reprinted 2012

Covers one grade of wooden handles for hatchets.

**Part 7: Wooden handles for universal type picks**

Price Code: Gr. 3

8 pages

Replaces: ZWS O11: 1968

Amended by MD 362: 1976

Endorsement of SABS 692: 1975

Reprinted 2012

Covers two types of wooden handles for universal type picks

**ZWS 198:2019**

**Fibre-cement sheets: Corrugated and flat**

Price Code: Gr. 7

20 pages

Replaces: ZWS 198: 1992

Endorsement of SANS 685:1972

Covers straight corrugated, curved corrugated, flat and flat pressed fibre-cement sheets.

**ZWS 199:1984**

**Non-refillable metallic containers up to 1.4 litres capacity and 85 mm diameter for liquefied or compressed non-flammable gases**

Price

Code:

Gr.4

6 pages

Amended by MD 368: 1976: MD 503: 1984

Endorsement of BS 5188: 1975

Reprinted 2010

Covers the materials and constructional requirements for two groups, depending on size, of non refillable metallic containers for use solely with liquefied or compressed gases or mixtures thereof.

**ZWS 201:1977**

**Liners and fluting for corrugated board**

Price

Code:

Gr.

4

21 pages

Amended by MD 376: 1977

Endorsement of SABS 431: 1961

Reprinted 2012

Covers lining and fluting used in the manufacture of high quality board boxes and other corrugated paper products.

**ZWS 202:1977**

**Safety colours and safety signs**

Price

Code:

Loan

12 pages

Amended by MD 378: 1977

Endorsement of BS 5378: 1976

Replaces ZWS Z8

Defines safety colours and safety signs for the prevention of accidents and health hazards and for warning of certain emergencies.

**ZWS 203:2000**

**Wooden scaffold boards**

Price

Code:

Gr.

7

26 pages

Reprinted 2010

Specifies requirements for the four types of wooden scaffold board.

**ZWS 204:1977**

**External rendered finishes**

Price Code: Loan

21 pages

Replaces ZWS CA3

Amended by MD 381: 1977

Endorsement of BS 5262: 1976

Reprinted 2012

Deals with renderings on all common backgrounds and the maintenance and repair of existing work.

**ZWS 205:1977**

**Electric cable soldering sockets**

Price

Code:

Gr.

4

9 pages

Amended by MD 382: 1977

Endorsement of BS 91: 1973

Reprinted 2014

Specifies the requirements for sockets of copper or copper alloy for connecting to each other or to apparatus. Suitable for conductors from 6 square millimeters up to 1 200 square millimeters.

**ZWS 206:1977**

**Snap-on connectors**

Price Code: Gr. 5  
12 pages  
Amended by MD 383: 1977  
Endorsement of BS 5057: 1973  
Reprinted 2014

Specifies in-line tabs with rectangular section and the corresponding receptacles. Dimensions, strength and electrical performance are detailed.

**ZWS 207:1977**

**Calcium hypochlorite and chlorinated lime**

Price Code: Gr. 6  
18 pages  
Replaces ZWS K29  
Reprinted 2002

Covers two types (calcium hypochlorite and chlorinated lime) of bleaching compound.

**ZWS 208:2010**

**The manufacture of finger-jointed structural timber**

Price Code: Gr. 7  
24 pages  
Based on SABS 096: 1976  
First revision 2015

Covers recommendations for the manufacture of finger-jointed structural timber.

**ZWS 209:1992**

**Sickles**

Price Code: Gr. 4  
7 pages  
Replaces: ZWS 209: 1977

Covers serrated edges sickles

**ZWS 210:1977**

**Safety and proof testing of small arms**

**Part 1: Small arms using 9 mm parabellum cartridges**

Price code: Gr. 4  
7 pages  
Reprinted 2010

Refers to guns using 9 mm parabellum. Covers safety aspects and proof testing. Does not cover the design or efficiency of the arms.

**Part 2: Small arms using 12 – bore cartridges**

Price code: Gr. 4  
8 pages

Covers safety aspects and methods of proof testing.

**ZWS 212:1978**

**Primary cells and batteries**

Price Code: Gr. 7  
27 pages  
Based on SABS 180: 1975  
Reprinted 2005

Covers primary cells and batteries of the leclanche type and the air-depolarized type for use in torches, radios and similar appliances. (for multi-cell dry batteries, see ZWS 291).

**ZWS 214:1997**

**Wooden ceiling and paneling boards (Metric units)**

Price Code: Gr. 6  
21 pages  
Endorsement of SABS 1039: 1975  
Reprinted 2005

Covers three grades of profiled boards, planed or planed and sanded, manufactured from hardwood or softwood.

**ZWS 215:1993**

**The design and manufacture of welded steel cylinders for low pressure services**

Price Code: Gr. 7  
23 pages  
Replaces: ZWS 215: 1978

Covers fusion welded cylinders of capacity 0,5to 130 litres for the storage and conveyance of compressed gas, having a maximum service pressure of 7 mPa.

**ZWS 216:1995**

**Glazed ceramic sanitary ware**

Price Code: Gr. 6  
23 pages  
Replaces: ZWS 216: 1978  
Based on SABS 497: 1991  
Reprinted 2005

Covers wash-hand basins, pedestals, sinks, water closet pans, bidets, urinals and flushing cisterns made of ceramic materials.

**ZWS 217:1978**

**Rubber, balata or plastics flat transmission belting of textiles construction for general use**

Price code: Loan  
9 pages  
Replaces ZWS Z14 Part 6  
Amended by MD 412: 1978  
Endorsement of BS 351: 1976  
Reprinted 2014

Specifies the minimum requirements for belting designed for power transmission under specified operating conditions.

**ZWS 218:2012**

**The mechanical stress grading of softwood timber - Flexural method**

Price code Gr. 5  
18 pages  
Replaces: ZWS 218:1978  
Amended by MD 582: 1999  
Reprinted 2010  
Replaces ZWS 218:1999

Covers the requirements for the mechanical stress grading by the determination of stiffness in bending of solid timber (free from glued or other joints) derived from trees of the genus pinus grown in the Southern Africa.

**ZWS 219:1993**

**Unplasticised polyvinyl chloride (UPVC) sewer and drain pipes and pipe fittings.**

Price Code: Gr. 8  
52 pages  
Replaces: ZWS 219: 1978  
Based on SABS 791: 1986  
Amended by MD 652: 2003



Covers two types, normal and heavy, of unplasticized polyvinyl (UPVC) pipes of nominal sizes 110 to 630 mm and one type of UPVC pipe fitting of nominal sizes 110 mm and 160 mm for sewer and drains.

**ZWS 220:1993**

**Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and fittings**

Price Code: Gr. 8

48 pages

Replaces: ZWS 220: 1978

Based on SABS 967: 1987

Amended by MD 653: 2003

Covers unplasticized polyvinyl chloride (UPVC) pipes and fittings of nominal sizes 40-160 mm intended for above-ground non-pressure applications for the conveyance of soil and waste water.

**ZWS 222:2003**

**Draw-off taps and above-ground stopvalves for water services (screw-down pattern)**

Price Code: Gr. 8

72 pages

Replaces: ZWS 222: 1978

Amended by md647:2003

Identical to BS 1010: Part 2: 1973

Reprinted 2004

Specifies requirements for screw-down pattern draw – off taps and stopvalves of ¼, 3/8, 1, 1¼, 1 ½ and 2 inch nominal sizes. Pillar taps of rising type are specified in ½, ¾ and 1 inch nominal sizes and non-rising type in ½ and ¾ inch nominal sizes only.

**ZWS 223:1985**

**Restraining devices (safety belts) for occupants of adult build in motor vehicles**

Price Code: Gr. 8

62 pages

Replaces: ZWS 223: 1982

Based on SABS 1080: 1983

Reprinted 2010

This standard is mandatory through Zimbabwe Government Roads and Road Traffic legislation. The specification applies to safety belts and restraint systems which are designed for separate use by person of adult build occupying forward-facing seats.

**ZWS 224:1978**

**The handling, storage and disposal of pesticides and their containers**

Price Code: Gr. 4

9 pages

Reprinted 1998

Reprinted 2004

This code of practice covers the handling, storage and disposal of pesticides and their containers on farms and smallholdings. For other instances, refer to ZWS 250.

**ZWS 225:2018**

**Portable fire extinguishers**

Price Code: Gr. 7

42 pages

Reprinted 2018

Covers portable fire extinguishers containing an extinguishant which is expelled by internal pressure. The extinguishant shall be one of the following: water, foam, dry powder, carbon dioxide. Details are given of mechanical design, extinguishants, marking, prototype tents and production tests.

**ZWS 226:1978**

**Automotive V-belt drives**

Price Code: Gr. 7

19 pages

Amended by MD 425: 1978

Endorsement of BS AU 150: 1973

Reprinted 2012

Covers endless V-belts and V-groove pulleys used for power transmission for automotive type engines in mobile and static applications.

**ZWS 227:1978**

**Endless V-belt drives sections Y, Z, A, C and D**

Price Code: Loan

49 pages

Amended by MD 426: 1978

Endorsement of BS 1440: 1971

Reprinted 2012

Reprinted 2013

Covers endless V-belts and V-grooved pulleys used for power transmission.

**ZWS 228:1978**

**Endless wedge belt drives of SPZ, SPA, SPB and SPC sections**

Price Code: Loan

32 pages

Amended by 427: 1978

Endorsement of BS 3790: 1973

Reprinted 2012

Covers endless wedge belts and their corresponding V-grooved pulleys, when used for power transmission.

**ZWS 229:2006**

**General purpose textile-reinforced conveyor belting**

Price Code: Gr. 7

24 pages

Revision of ZWS 229: 1979

Covers general requirements for textile-reinforced conveyor belting designed for use on flat or troughed idlers.

**ZWS 231:2003**

**Boiler suits and work wear**

Price Code: Gr. 8

25 pages

Based on SABS 434: 1998

Specifies general requirements of the material, cut, make and trim of boiler suits and separate jackets and pairs of trousers of work wear suits.

**ZWS 232:1978**

**Crushed stone for surface treatment of roads**

Price Code: Gr. 4

9 pages

Replaces ZWS A21: 1966

Reprinted 2004

Covers aggregate for use in surface dressings in the construction and maintenance of bituminous surfacing. Requirements are laid down for sizes, strength, gradation and methods of sampling and test.

**ZWS 233:1997****Aggregates from natural sources for concrete**

Price Code: Gr. 6

21 pages

Replaces ZWS 233: 1978

Reprinted 2004

Covers naturally occurring materials for use in the production of normal structural concrete.

**ZWS 234:2010****Terry toweling, towels and other terry weave articles**

Price Code: Gr. 5

13 pages

Based on SABS 1401: Part 1 &amp; 5: 1983

Replaces ZWS 234: 1978

Amended by MD 665:2010

Reprinted 2010

Covers the specific requirements of three types of cotton terry toweling fabric and articles in the form of bibs, face cloths napkins and towels.

**ZWS 235:1978****Wax crayons**

Price Code: Loan

14 pages

Replaces ZWS Z22

Amended by MD 432: 1978

Endorsement of SABS 244: 1978

Reprinted 2012

Covers wax crayons for drawing.

**ZWS 236:1978****Safety glass for land transport**

Price Code: Gr. 7

42 pages

Replaces ZWS R1

Based on BS 857: 1967

Reprinted 2000

Covers requirements and tests for flat and curved safety glass for land transport.

**ZWS 237:1978****Testing water boreholes**

Price Code: Gr. 6

26 pages

Amended by MD 437: 1978:

Endorsement of SABS 045: 1974

Reprinted 2012

Covers (a) the straightness and verticality of boreholes and (b) the determination of the yield from a borehole by means of a direct pumping test.

**ZWS 238:1978****Hose clamps (worm drive type) for general purpose use**

Price Code: Loan

3 pages

Amended by MD 438: 1978: MD 442: 1978

Endorsement of SABS 045: 1974

Covers the range of sizes and methods of test for worm drive hose clamps for general purpose use.

**ZWS 239:1998****Protective helmets for equestrian activities**

Price Code: Gr. 6

21 pages

Identical to EN 1384: 1997

Reprinted 2009

Specifies requirements for protective helmets, that may or may not have a peak, for people involved in equestrian activities.

**ZWS 240:1999****Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/ 3 300 V)**

Price Code: Gr. 8

43 pages

Replaces ZWS 240: 1973

Based on SABS 150: 1970

Reprinted 2013

Covers the requirements for construction, materials dimensions and electrical properties of single – core and multicore extruded solid dielectric operating voltage ( $U_0/V$ ) in the range 300/ 500 V to 1900/ 3300 V and intended for use in fixed installations.

**ZWS 241:1979****Screwed metal conduit and fittings for electrical wiring**

Price Code: Loan

40 pages

Replaces ZWS C16

Amended by MD 449: 1979

Endorsement of SABS 162: 1978

Reprinted 2013

Covers the requirements for screwed metal conduit of nominal sizes 16-63 mm inclusive, intended for the protection of electrical wiring. It also covers the requirements for metal fittings used in conjunction with conduit.

**ZWS 242:1979****Part 1 Resin cored solders – Non corrosive (Metric units)**

Price Code: Gr. 6

19 pages

Replaces: ZWS H 4: 1968

Endorsement of SANS 137: 1971

Amended by MD 452: 1979

Reprinted 2013

Covers soft solders in the form of wire or ribbon containing one or more cores of non-corrosive flux.

**Part 2****Resin cored solders Highly activated (Metric units)**

Price Code: Gr. 4 9

pages

Replaces: ZWS H 4: 1968

Endorsement of SABS 137: 1971

Amended by MD 452: 1979

Reprinted 2013

Covers soft solders in the form of wire or ribbon containing one or more cores of highly activated flux.

**ZWS 243:1979****Cast iron pipes and pipe fittings for use above ground in drainage installation**

Price Code: Gr. 8

46 pages

Identical to: SABS 746: 1976

Reprinted to include amendments

Reprinted 2008

Covers the requirements for low pressure cast-iron pipes and pipe fittings, intended for use above ground as soil water, waste water and vent pipes.

**ZWS 244:1999**

**Corn starch**

Price Code: Gr. 3

9 pages

Amended by MD 612: 1999

Replaces ZWS 244: 1979

Reprinted 2009

Covers three types of starch, viz, corn, textile, low viscosity and textile, high viscosity.

**ZWS 247:1985 (Under revision)**

**Cotton sailcloth, cotton jean and drill fabrics, cotton denim and cotton indigo denim.**

Price Code: Gr. 5

14 pages

Replace: ZWS 247: 1980

Amended by MD 383:1977

Reprinted 2008

Covers three types of cloth, suitable for the manufacture of clothing

**ZWS 248:1983**

**Abrasive papers and cloths**

Price Code: Loan

9 pages

Amended by MD 491: 1983

Endorsement of BS 871:1981

Reprinted 2013

Covers requirements for abrasive papers and cloths for both technical and general purpose products. Appendices cover grading, metal removal test, breaking strength, dimensions and recommendations for storage and ordering.

**ZWS 249:1980**

**Ballasts for low pressure sodium vapour and high intensity discharge lamps and reference ballasts for low pressure sodium vapour and high intensity discharge lamps**

Price Code: Gr. 6

27 pages

Amended by MD 463: 1980

Endorsement of SABS 1266/1267: 1979

Covers ballasts with insulation of at least class B for use with discharge lamps on a.c. supply voltages having a frequency of 50 Hz and for operation at ambient temperatures of -10 to +40°C.

**Part 2**

**Reference ballasts for low pressure sodium vapour and high intensity discharge lamps**

Price Code: Gr. 4

6 pages

Incorporates MD 463: 1980

Endorsement of SABS 1267: 1979

Covers the essential design features and operating characteristics of reference ballasts for high pressure mercury vapour, low pressure sodium vapour, and high pressure sodium vapour discharge.

**ZWS 250:1980**

**Code of practice for the handling, storage and disposal of pesticides and used pesticides containers**

Price Code: Gr. 6

14 pages

Amended by MD 518/2: 1996

Reprinted 2010

This code of practice covers the handling, storage and disposal of pesticides including veterinary remedies declared to be hazardous substances. It does not apply to pesticides used on farms or small-holdings. For such instances refer to ZWS 224.

**ZWS 251:1980**

**Code of practice for fire extinguishing installations and equipment on premises - Sprinkler system**

Price Code: Loan

16 pages

Amended by MD 466: 1980

Endorsement of BS 5306: Part 2: 1979

Reprinted 2012

Covers the provision of automatic sprinkler systems and installations in buildings, their essential supplies and maintenance.

**ZWS 252:1980**

**Agricultural box shooks and box boards**

Price Code: Gr. 7

17 pages

Amended by MD 467: 1980

Based on SABS 452: 1972

Reprinted 2009

Covers box shooks, box boards and assembled components derived from Zimbabwean grown or imported softwoods, poplar species and eucalyptus.

**ZWS 253:1981**

**Softwood stubs for timber frames in buildings**

Price Code: Gr. 5

13 pages

Based on SABS 1146: 1977

Covers one grade of softwood structural timber for use as concealed load-sharing members in domestic wall and partition constructions. Requirements are laid down for dimensions, finish, moisture content and gradient, density, packing and marking. Methods of test are covered by reference.

**ZWS 254**

**Standardized specification for civil engineering construction**

Based on SABS 1200

Complete set available in loose leaf file format (POA)

**A: 1984 General**

Price Code: Gr. 7

22 pages

**AA: 2001 General (small works)**

Price Code: Gr. 6

18 pages

Reprinted 2013

**AB: 2001 Engineer's office**

Price Code: Gr. 6

7 pages

Reprinted 2012

Reprinted 2013

**AD: 2001 General (small dams)**

Price Code: Gr. 5

16 pages

Reprinted 2012

Reprinted 2013

**AH: 2001 General (structural)**

Price Code: Gr. 6  
16 pages

**C: Site clearance**

Price Code: Gr. 5  
11 pages  
Reprinted 2012  
Reprinted 2013

**D: 1984 Earthworks**

Price Code: Gr. 8  
33 pages  
Reprinted 2012  
Reprinted 2013

**DA: 1984 Earthworks (small works)**

Price Code: Gr. 8  
25 pages  
Reprinted 2013

**DB: 2001 Earthworks (pipe trenches)**

Price Code: Gr. 8  
31 pages  
Reprinted 2012  
Reprinted 2013

**DE: 2001 small earth dams**

Price Code: Gr. 7  
34 pages

**DK: 2001 Gabions and pitching**

Price Code: Gr. 6  
20 pages  
Reprinted 2012  
Reprinted 2013

**DM: 2008 Earthworks (roads, subgrade)**

Price Code: Gr. 7  
28 pages  
Reprinted 2013

**DN: 2001 Earthworks (railway sidings)**

Price Code: Gr. 8  
18 pages  
Reprinted 2012  
Reprinted 2013

**G: 1984 Concrete (structural)**

Price Code: Gr. 8  
45 pages  
Reprinted 2013

**GA:2001 Concrete (small works)**

Price Code: Gr. 7  
32 pages  
Reprinted 2012  
Reprinted 2013

**GB:2001 Concrete (ordinary buildings)**

Price Code: Gr. 7  
38 pages

**GE:2001 Precast concrete (structural)**

Price Code Gr. 5  
16 pages  
Reprinted 2013

**GF: 2001 Prestressed concrete**

Price Code: Gr. 7  
31 pages  
Reprinted 2013

**H: 2001 Structural steelwork**

Price Code: Gr. 7  
29 pages  
Reprinted 2013

**HA:2001 Structural steelwork (sundry items)**

Price Code: Gr. 5  
15 pages  
Reprinted 2013

**HB: 2001 Cladding and sheeting**

Price Code: Gr. 7  
27 pages  
Reprinted 2013

**HC:2001 Corrosion protection of structural steel work**

Price Code: Gr. 6  
21 pages  
Reprinted 2013

**HE:2001 Structural aluminium work**

Price Code: Gr. 6  
17 pages  
Reprinted 2012  
Reprinted 2013

**L:2001 Medium pressure pipelines**

Price Code: Gr. 7  
Reprinted 2013  
37 pages

**LB: 2001 Bedding (pipes)**

Price Code: Gr. 6  
22 pages  
Reprinted 2013

**LC: 2001 Cable ducts**

Price Code: Gr. 5  
16 pages  
Reprinted 2013

**LD:2001 Sewers**

Price Code: Gr. 7  
30 pages  
Reprinted 2013

**LE:2001 Stormwater drainage**

Price Code: Gr. 6  
17 pages  
Reprinted 2013

**LF:2001 Stand connections (water)**

Price Code: Gr. 6  
22 pages  
Reprinted 2013

**LG:2007 Pipe jacking**

Price Code: Gr. 5  
15 pages  
Reprinted 2013

**LK: 2007 Valves**

Price Code: Gr. 4  
8 pages

**M: Roads (general)**

Price Code: Gr. 6  
39 pages

**ME:2007 Subbase**

Price Code: Gr. 6  
19 pages

**MF:2007 Base**

Price Code: Gr. 6  
19 pages

**MFL:2007 Base (Light pavement structures)**

Price Code: Gr. 6  
18 pages

**MG:2007 Bituminous surface treatment**

Price Code: Gr. 7  
28 pages

**MH:2007 Asphalt base and surfacing**

Price Code: Gr. 7  
32 pages

**MJ:2007 Segmented paving**

Price Code: Gr. 5  
14 pages

**MK:2007 Kerbing and channeling**

Price Code: Gr. 6  
21 pages

**MM:2007 Ancillary road works**

Price Code: Gr.7  
39 pages

**ZWS 255:1994****Tyre reconditioning**

Price Code: Gr. 7  
26 pages

Replaces: ZWS 255: 1982

Amended by MD 507: 1994; MD 552: 1994

Reprinted 2006

Covers the minimum requirements for the precautions to be observed in the reconditioning of pneumatic tyres for passenger and commercial vehicles. Included the requirements of acceptance for reconditioning, limits of damage, repairs, processing, marking and inspection.

**ZWS 257:2014****Sawn softwood timbers****Part 1: General requirement**

Price Code: Gr. 7

31 pages

Based on SABS 1783: Part 1: 1997

Replaces ZWS 334: 1991 and ZWS 335: 1991

First reprint 2015 as ZWS 257.1

Incorporates MD 679:2014

Specifies requirements for visually, mechanically and proof-graded sawn softwood timber, for use as structural timber, brandering and battens, for frame wall construction and industrial purposes.

**Part 2:2014 Stress-graded structural timber and timber for frame wall construction**

Price Code: Gr. 6

7 pages

Based on SABS 1783: Part 2: 1997

Replaces ZWS 334: 1991 and ZWS 335: 1991

Amended by AMD 669:2011, MD 677:2014

First reprint 2015 as ZWS 257.2

Specifies requirements for three stress grades of visually graded structural timber and three stress grades of mechanically graded structural timber.

**Part 3: Industrial grade timber**

Price Code: Gr. 5  
14 pages

Based on SABS 1783: Part 3: 1977

Replaces ZWS 336: 1991

First reprint 2015 as ZWS 257.3

Incorporates MD 676:2014

Specifies requirements for four grades of timber intended for industrial but not for structural use.

**Part 4: Brandering and battens**

Price Code: Gr. 6  
19 pages

Based on SABS 1783: Part 4: 1997

First reprint 2015 as ZWS 257.4

Incorporates MD 675:2014

Specifies requirements for one grade of timber suitable for use as brandering and battens intended for being fixed against beams and joist in roofs for the attachment of ceilings and for the boxing in of leaves and for use as supports on roof trusses for the fixing of roof slates, tile, wooden shingles and thatch moisture and warpage resistance of lenses.

**ZWS 257:Part 5-1:2022****Structural timber****Part 5-1: Stress-grade (Assessment)**

Price Code: Gr. 7  
10 pages

This part of ZWS 257-5 specifies procedures for sampling, testing and assessing characteristic values of structural properties for specific grades and sizes of sawn softwood and hardwood timber produced from unproven resources or by innovative grading methods to meet the stress-grade requirements of grades.

**Part 5-2: Quality assurance of stress grading**

Price Code: Gr. 7

9 pages

This part of ZWS 257-5 specifies procedures for sampling, testing and assessing characteristic values of structural properties for specific grades and sizes of sawn softwood and hardwood timber produced from unproven resources or by innovative grading methods to meet the stress-grade requirements of grades.

**ZWS 258:Part 1:1982****Motor vehicle lighting and signaling equipment****Part 1: Side, rear, parking, marker and stop lamps and direction indicators.**

Price Code: Gr. 5

10 pages

Amended by MD 478

Endorsement of BS AU 40: Part 1: 1963

Reprinted 2013

Covers lighting and signalling equipment for motor vehicles of all types including motor cycles etc. Requirements include the colour of the light, its intensity at various angles, resistance of lamps to vibration, corrosion, penetration of dust and moisture.

**Part 2: Reflex reflectors for vehicles, including cycles**

Price Code: Loan  
12 pages  
Amended by MD 492:1983  
Endorsement of BS AU 40: Part 2:1965  
Reprinted 2013

Specifies requirements for reflex reflecting devices for use on motor vehicles, their trailers and pedal cycles. Includes tests for the colour and intensity of the reflected light, resistance of water penetration, petrol's, oils, corrosion, heat and the adhesion of the mirror backing of reflectors.'

**ZWS 259:1982**  
**Short link chain for lifting purposes: General conditions of acceptance**

Price Code: Loan  
8 pages  
Amended by MD 472:1982  
Endorsement of ISO 1834:1980  
Reprinted 2013

Specifies the general conditions of acceptance for electrically welded round steel short link chain for use on cranes, in chain slings and for use with chain hoists and other lifting appliances.

**ZWS 260:1982**  
**Short link chain for lifting purposes: Grade M (4), non-calibrated, for chain slings etc.**

Price Code: Loan  
8 pages  
Amended by MD 473:1982  
Endorsement of ISO 1835:1980  
Reprinted 2013

Covers requirements for lifting chains, grade M (4), non-calibrated, for use on cranes, chain slings and for general lifting purposes. These are electrically welded rounded steel short link chains.

**ZWS 261:1982**  
**Short link chain for lifting purposes – Grade M (4), calibrated for chain hoists and other lifting appliances.**

Price Code: Loan  
9 pages  
Amended by MD 474:1982  
Endorsement of ISO 1836:1980  
Reprinted 2013

Specifies requirements for lifting chains, grade M (4) calibrated for use as load chains hoists and similar appliances.

**ZWS 262:1982**  
**Short link chain for lifting purposes – Grade T (8); non-calibrated, for chain slings etc.**

Price Code: Loan  
9 pages  
Amended by MD 475:1982  
Endorsement of ISO 3076:1980  
Reprinted 2013

Specifies requirements for lifting chains T (8), non-calibrated for use on cranes, in chain slings and for general lifting purposes. These are electrically welded round steel short link chains.

**ZWS 263:1982**  
**Short link chain for lifting purposes – Grade T (8), calibrated, for chains hoists and other lifting appliances**

Price Code: Loan  
9 pages  
Amended by MD 476:1980

Endorsement of ISO 3077:1982  
Reprinted 2013

Specifies requirements for lifting chains, grade T (8), accurately calibrated, for use as load chain hoists and similar appliances. These are electrically welded round steel short link chains.

**ZWS 264:1984**  
**Code of practice for use with standardized specifications for civil engineering construction and contract documents.**

Based on SABS 0120  
Complete set available in loose leaf file format (POA)

The various parts of this code explain the format and content of ZWS 254 and give guidance on the drafting of project specifications and other contract documents.

**Part 1:1984 Format and contents**

Price Code: Gr. 8  
28 pages  
Reprinted 2004

**0 – Introduction**

**Part 2: Project Specification**

Price Code: Gr. 6  
12 pages  
Reprinted 2004

**Part 3: Guidance for Design**

Price Code: Gr. 5  
7 pages  
Reprinted 2004  
Reprinted 2013

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 5  
12 pages  
Reprinted 2004  
Reprinted 2013

**Part 5: Contract Administration**

Price Code: Gr. 6  
16 pages  
Reprinted 2013

**A – General**

**Part 2: Project Specification**

Price Code: Gr. 6  
11 pages

**Part 3: Guidance for Design**

Price Code: Gr. 6  
11pages

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 5  
5 pages

**Part 5: Contract Administration**

Price Code: Gr. 5  
6 pages  
Reprinted 2013

**C – Site Clearance**

**Part 2: Projection Specification**

Price Code: Gr. 5  
11 pages  
Reprinted 2004

**Part 3: Guidance for Design**

Price Code: Gr. 3  
6 pages  
Reprinted 2004

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 4  
4 pages  
Reprinted 2004

**Part 5: Contract Administration**

Price Code: Gr. 5  
5 pages  
Reprinted 2004

**D – Earthworks****Part 2: Projection Specification**

Price Code: Gr. 6  
11 pages

**Part 3: Guidance for Design**

Price Code: Gr. 5  
8 pages

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 4  
4 pages

**Part 5: Contract Administration**

Price Code: Gr. 6  
9 pages

**DA – Earthworks (Small works)****Part 2: Project Specification**

Price Code: Gr. 6  
6 pages

**Part 3: Guidance for Design**

Price Code: Gr. 3  
3 pages  
Reprinted 2004

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 4  
4 pages  
Reprinted 2004  
Reprinted 2013

**Part 5: Contract Administration**

Price Code: Gr. 3  
3 pages

**G – Concrete (Structural):1985****Part 2: Project Specification**

Price Code: Gr. 8  
19 pages  
Reprinted 2004

**Part 3: Guidance for Design**

Price Code: Gr. 6  
13 pages

**Part 4: Typical Bills of Quantities**

Price Code: Gr. 5  
5 pages

**Part 5: Contract Administration**

Price Code: Gr. 7  
14 pages

**ZWS 265:2018****Open pack meat products**

Price Code: Gr. 7  
37 pages  
Amended by MD 614:1999, MD 645:2002  
Replaces ZWS S1:1966

Covers the manufacture, production, processing and treatment of open pack meat products of human consumption.

**ZWS 266:1982****White chalks**

Price Code: Gr. 4  
9 pages  
Reprinted 2000  
Reprinted 2008  
Reprinted 2013

Covers for hard and soft white chalks.

**ZWS 267:1984****Coloured chalks and pastels**

Price Code: Gr. 5  
15 pages  
Reprinted 2000  
Reprinted 2009  
Reprinted 2014

Covers requirements for coloured chalks (soft and hard), soft dustfree and pastels for use in schools.

**ZWS 268:1992****Mechanical jacks**

Price Code: Gr. 4  
11 pages  
Replaces ZWS 268:1982  
Based on SABS 1126:1977  
Reprinted 2009

Covers the constructional, marking and performance requirements for mechanical jacks of the scissors, body and bumper types for use with motor vehicles.

Covers good practice in the planning, installation, testing and up-keep of hose reels on premises.

**ZWS 270:1992****Filler metals for brazing**

Price Code: Gr. 6  
17 pages  
Based on BS 1845:1984

Specifies a range of filler metals used for brazing and lays down requirements for quality control system at the manufacturer's works.

**ZWS 271:1993****Intruder alarm systems in buildings**

Price Code: Gr. 6  
25 pages  
Replaces ZWS 271:1983

Gives the general requirements for the installation and operation of intruder alarm systems with audible signalling and/or remote signaling.

**ZWS 272:1987**  
**Semi-flexible vinyl floor tiles**  
Price Code: Gr. 6  
19 pages  
Replaces 272:1982  
Based on SABS 581:1977  
Reprinted 2008  
Reprinted 2010

Covers four thicknesses of semi-flexible floor tiles of compound vinyl plastic. Requirements are laid down for marbling, dimensions, resistance to indentation and impact, flexibility after aging, loss in mass after heating, chemical resistance and resistance to curling.

**ZWS 273:1982**  
**Luminaires – General requirements and tests**  
Price Code: Gr. 9  
113 pages  
Amended by MD 488:1982  
Endorsement of BS 4533: Part 101:1981  
Reprinted 2011

Specifies general requirements for the classification and marking of luminaires and for their mechanical construction and electrical construction together with related tests.

**ZWS 274:1983**  
**Single-phase induction motors**  
Price Code: Gr.7  
54 pages  
Amended by MD 497:1983  
Endorsement of SABS 1189:1978  
Reprinted 2011

Covers four types of single-phase alternating current induction motors with standard dimensions and frame sizes up to and including 100 for voltages up to and including 250V at a frequency of 50Hz.

**ZWS 276:1993**  
**Damp-proofing materials**  
**Part 1: Bituminous damp-proofing materials**  
Price Code: Gr. 5  
16 pages  
Amended by MD 656:2004

Specifies the requirements for bituminous materials suitable for use in the construction of damp-proof courses.

**Part 2: Sandwich membranes in floors**  
Price Code: Gr. 4  
10 pages  
Replaces ZWS A25: Part 2: 1972

Specifies requirements for and methods of application of materials suitable for use in the construction of damp-proof floors. The materials may be used in order to prevent capillary rise of moisture when applied between concrete slabs or on top of blinding screed which has been laid on a hard core.

**Part 3: Polyethylene sheet for damp-proofing in walls and floors**  
Price Code: Gr. 4  
11 pages  
Replaces ZWS A25: Part 3:1972

Covers the requirements for two types of polyethylene sheet for use in damp-proof courses in walls and for the damp-proofing of floors and basemen

**ZWS 277:1993**  
**Non-metallic conduit**  
**Part 1: Metric units**  
Price Code: Gr. 6  
18 pages  
Replaces ZWS C13:1969

Covers conduit and fittings manufactured from non-metallic materials, principally unplasticized polyvinyl chloride but applies also to conduit and fittings manufactured from any other non-metallic materials which meets with requirements of this specification. Sizes covered are 20 – 25 mm.

**Part 2: Imperial units**  
Price Code: Gr. 4  
8 pages

As above but imperial measurements still sometimes used in Zimbabwe. Sizes covered are ¾ and 1 inch.

**ZWS 279:1995**  
**Twist drills**  
Price Code: Gr. 7  
39 pages  
Based on BS 328: Part 1: 1993  
Reprinted 2009

Specifies requirements for dimensions, design, materials, hardness values and performance for twist drills made from high-speed steel with either parallel or Morse taper shanks.

**ZWS 280:1985**  
**Lined polyvinyl chloride boots**  
**Part 1: PVC moulded boots for general industrial purposes**  
**Part 2: PVC moulded safety footwear**  
Price Code: Gr. 4  
16 pages  
Based on BS 6159 and BS 1870 Part 3  
Reprinted 2009

Part 1 specifies the requirements for boots moulded from polyvinyl chloride compounds for general industrial use. Part 2 specifies requirements for two types of moulded polyvinyl chloride (PVC) safety footwear.

**ZWS 281:1985**  
**Lined rubber gumboots**  
**Part 1: Rubber gumboots for general purposes**  
Price Code: Gr. 6  
15 pages  
Based on BS 5462: Parts 1 & 2:1984  
Reprinted 2009

**Part 1** specifies requirements for high sided rubber boots in tended for heavy duty or to protect the wearer from injury due to penetration by sharp objects.

**Part 2: Rubber gumboots for safety purposes**  
Price Code: Gr. 6  
15 pages  
Based on BS 5462: Parts 1 & 2:1984  
Reprinted 2009

**Part 2** specifies the requirements for two types of lined rubber safety boots: with safety toecaps and protective midsoles.



**ZWS 282:1993****Open-end, ring and combination spanners**

Price code: Gr. 6

18 pages

Based on SABS 1112: 1976

Covers the requirements for the material, dimensions, performance and finish of wrenches (spanners).

**ZWS 283:1984****Stationary instantaneous electric water heaters**

Price code: Loan

44 pages

Endorsement of BS 3456 Part 3 section 3.9 1979

Amended by MD 505: 1984

Reprinted 2012

Safety requirements for electric stationary instantaneous water heaters for heating water to a temperature below its boiling point. Covers sheathed and bare element types but does not include the electrode type.

**ZWS 284:1994****Steel fencing materials**

Price Code: Gr. 7

32 pages

Replaces: ZWS N5: 1971

Amended by MD 549: 1984

Reprinted 2000

Reprinted 2013

Covers barbed wire; fencing standards; droppers; galvanized wire; gateposts; gates and straining posts. Materials complying with this standard meet the requirements of the Zimbabwe Fencing Act.

**ZWS 285:1986****Mild steel wire nails**

Price code: Gr. 6

18 pages

Based on SABS 820: 1974

Reprinted 2012

Covers the requirements for wire and cut mild steel nails and tacks. The standard is partially comparable to BS 1202: 1974 but includes types of nails currently manufactured in Zimbabwe. It comprises general requirements, dimensions and tolerances, packing, sampling and methods of test.

**ZWS 286:1985****Natural fibre ropes**

Price Code: Gr. 6

14 pages

Amended by MD 531: 1989

Based on SABS 991: 1980

Reprinted 2009

Covers manila, sisal and cotton ropes of two grades and of 3 strand hawser (plain-laid) construction. Also gives requirements, packing, sampling and test methods.

**ZWS 287:1998****Fibre-cement boards**

Price code: Gr. 6

14 pages

Based on SABS 803: 1971

Reprinted 2008

Specifies the requirements for the flat unpressed and flat pressed boards manufactured from fibre-cement with acceptable additives. The boards may have either a smooth or a textured surface and are

generally recommended for internal use. For external use reference shall be made to ZWS 198.

**ZWS 288:1994****Ground granulated blast furnace slag for use with Portland cement**

Price Code: Gr. 6

19 pages

Based on BS 6699:1992

Reprinted 2009

Specifies requirements for the composition and manufacture of ground granulated blast furnace slag (ggbs) for use in combination with Portland cement.

**ZWS 289:1995****Cast iron wedge and double disk gate valves for general purposes**

Price code: Gr. 5

19 pages

Based on BS 5150: 1974 and BS 4504

Reprinted 2007

Specifies requirements for flanged and screwed body end cast iron gate valves of the wedge and double disk types, copper alloy faced, resilient seated or of all iron construction for general purpose.

**ZWS 290:1986****Electric luminaries: handlamps**

Price Code: Gr. 5

16 pages

Identical to BS 4533: Section 102.8:1982 and IEC 598: Part 2: Section 8: 1981

Reprinted 2010

Specifies requirements for handlamps and similar portable hand-held luminaires for use with tungsten filament and tubular fluorescent lamps on supply voltages not exceeding 250 V. To be read in conjunction with ZWS 273.

**ZWS 291:1986****Multi-cell dry batteries**

Price Code: Gr. 5

13 pages

Reprinted 2009

Covers dry cell batteries for use with military and similar radio equipment. Includes designation of batteries, construction, electrical and physical requirements, packaging and testing.

**ZWS 292:1986****Detergent-disinfectants (iodophors)**

Price Code: Gr. 6

28 pages

Amended by MD 550: 1993

Reprinted 2001

Reprinted 2009

Covers both acidic and non-acidic detergent-disinfectants that contain an iodophor and compatible surface-active agent for use only on previously cleaned inanimate surfaces. Methods of test include stability, disinfecting efficacy, rinsing properties and cleaning efficiency.

**ZWS 293:1986****Fusion welded steel air receivers**

Price Code: Gr. 8

69 pages

Amended by MD 537: 1991

Based on BS 5169: 1975

Reprinted 2007

Species requirements for Class I, Class II, and Class III fusion welded steel air receives.

**ZWS 294:1999**

**Woven polypropylene fertilizer bags**

Price Code: Gr. 4

10 pages

Based on SABS CKS 632: 1990

Reprinted 2009

Covers requirements for 50 kg fertilizer bags, made from tubular, woven fabric of which polypropylene yarns are the major component and suitable for use for the handling, transportation and storage of fertilizer.

**ZWS 295:1989**

**Salt cured and shade dried bovine hides**

Price Code: Gr. 8

22 pages

Reprinted 2009

Specifies the requirements for bovine hides of both commercial and country origin cured by suspended shade drying; dry salting; wet salting without prior brining; or wet salting with prior brining.

**ZWS 296:1987**

**Liquid carbon dioxide (industrial)**

Price Code: Gr. 7

27 pages

Replaces: ZWS K19: 1969

Based on BS 4105: 1969

Reprinted 2009

Specifies three types of carbon dioxides for industrial use only. Does not cover carbon dioxide intended for medical use.

**ZWS 297:2000**

**Mills balls**

Price Code: Gr. 5

13 pages

Amended by MD 639: 2001

Reprinted 2020

Specifies requirements for mill balls: a) cast steel; b) unalloyed white cast iron; c) chromium white cast iron; nickel chromium white cast iron; e) manganese cast steel.

**ZWS 298:1988**

**Detergent-disinfectants based on quaternary ammonium compounds**

Price Code: Gr. 4

9 pages

Based on SABS 639: 1974

Reprinted 2000

Reprinted 2009

Covers two types (liquid or solid) of detergent-disinfectants that contain quaternary ammonium compound disinfectants and other chemical agents that are miscible with water and are intended for use on inanimate surfaces that are free from excessive dirt.

**ZWS 299:1991**

**Moulded – case circuits – breakers**

Price Code: Gr. 8

49 pages

Based on SABS 156: 1977

Covers single-pole and multi – pole air break circuit breakers, assembled as an integral unit in a supporting and in enclosing moulded case of insulating materials, for current ratings up to and including 1 000 A and alternative voltages up to and including 660 V.

**ZWS 302:2012**

**Quaternary ammonium compound disinfectants**

Price Code: Gr. 5

15 pages

Replaces ZWS K31

Reprinted 2009

Covers formulations based on quaternary ammonium compounds in liquid or in powder form for disinfecting inanimate surfaces.

**ZWS 303:1993**

**Safety helmets for industrial use and for firemen**

Price Code: Gr. 7

28 pages

Replaces: ZWS Z13: 1970

Amended by MD 574: 1997 MD 579 199

Based on SABS 397: 1983

Covers three types of safety helmets (with brim or peak) for protection against falling objects and electrical hazards such as may be encountered in industry during fire-fighting and rescue operations.

**ZWS 305:1991**

**Pneumatic tyre valves**

Price Code: Gr. 5

15 pages

Based on BS AU 50: Part 3: Section 1a, 2, 3 and 5

Covers all known pneumatic tyre valves manufactured locally and are capable of being adapted to cover any valve to be produced at any time in the future.

**ZWS 308:1990**

**Mastic asphalt for roofing**

Price Code: Gr. 5

14 pages

Replaces: ZWS A1: 1960

Covers mastic asphalt for roofing composed of fine ground limestone and coarse aggregate incorporating either (a) asphalt bitumen or (b) a blend of asphaltic bitumen and refined lake asphalt or (c) blends of bitumen (s), asphaltite and refined lake asphalt.

**ZWS 309:1990**

**Mastic asphalt for flooring**

Price Code: Gr. 5

14 pages

Replaces: ZWS A2: 1960

Covers mainly industrial flooring applications, but mastic asphalt that complies with this standard may also be used as a base coat to receive floor coverings such as wood block, parquet, vinyl, rubber, ceramic or stone as protection against rising damp.

**ZWS 310:1990**

**Mastic asphalt for tanking**

Price Code: Gr. 5

14 pages

Replaces: ZWS A3: 1960

Covers mastic for tanking composed of fine ground limestone and coarse aggregate incorporating either (a) bitumen or (b) blends of

bitumen and refined lake asphalt or (c) blends of bitumens and asphaltite or blends of bitumens, asphaltite and refined lake asphalt.

**ZWS 311:1990**

**Code of practice for application of mastic asphalt for roofing**

Price Code: Gr. 4

9 pages

Replaces ZWS A1: 1960

Deals with the use of mastic as a roof covering, including situations designed to carry traffic. It also covers recommendations for the preparation of the base to which the mastic asphalt is applied and sets out the site practice. It includes recommendations concerning various accessory materials generally used in conjunction with mastic for roofing, including the use of mastic asphalt as waterproofing of roofs of reservoirs.

**ZWS 313:1990**

**Code of practice for the application of mastic asphalt tanking**

Price Code: Gr. 3

6 pages

Replaces: ZWS A3: 1960

Deals with the use of mastic asphalt for waterproofing concrete structures below ground level and tank linings, includes recommendations for the preparation of the base to which the mastic asphalt is applied and sets out the site practices.

**ZWS 314:2014**

**Pre-constructional termite proofing**

Price Code: Gr. 3

6 pages

Replaces: ZWS 314: 1973

Amended by MD 682

Reprinted 2013

Covers the application of chemicals to building sites as an aid to the proofing of buildings against subterranean termite attacks. It is not intended for the proofing of wooden structures in contact with the ground.

**ZWS 315:2010**

**Concrete Pipes (non-pressure)**

Price Code: Gr. 6

20 pages

Replaces: ZWS 315: 1973

Amended by MD 667:2010

Reprinted 2010

Covers non-pressure precast reinforced and unreinforced concrete circular pipes intended for the conveyance of storm water, sewage and water for irrigation.

**ZWS 316:1997**

**Graphical symbols for electrical diagrams**

Price Code: Gr. 9

113 pages

Based on IEC 617: Part 1 to 11

Reprinted 2006

Contains graphical symbols for use in typical electrotechnical diagrams. These symbols have been selected from Parts 2 to 8 and 11 of IEC 617 and are those that are more commonly used.

**ZWS 317:1995**

**Lever arch files for stationery**

Price Code: Gr. 5

12 pages

Identical to SABS CKS 368: 1973

Reprinted 2011

Covers lever arch files of the landscape and upright types for filing.

**ZWS 319:1989**

**Sandlime bricks**

Price Code: Gr. 4

9 pages

Replaces: ZWS A8: 1960

Based on BS 187: 1955 and SABS 285: 1951

Covers dimensions and strengths of three classes of bricks, viz, bricks for special purposes, face bricks and common bricks.

**ZWS 320:2007**

**Cleaning services Industry – cleaning performance for commercial residential, industrial and health premises**

Price Code: Gr. 7

22 pages

Based on SS 449: 02

Applies to the quality of cleaning services in commercial, residential, industrial and health premises.

**ZWS 321:1982**

**Bitumen roofing felts**

Price Code: Gr. 6

21 pages

Replaces: ZWS A30 1968

Based on SABS 92

Reprinted 2010

Covers three types of bituminous felt and two types of glass fibre tissue based felt classed according to mass per square metre.

**ZWS 322:1993**

**Photovoltaic modules**

Price Code: Gr. 7

44 pages

Based on CAN/CSA F380-M87

Reprinted 2011

Applies to terrestrial photovoltaic modules used for converting solar radiation into electric energy and is limited to mobile applications producing up to a maximum of 300 V.

**ZWS 323:1991**

**Wheelchairs for the disabled**

Price Code: Gr. 6

22 pages

Specifies the requirements for folding or collapsible wheel chairs for adults. Static performance, dynamic and life requirements are specified.

**ZWS 324:1990**

**Slide fasteners**

Price Code: Gr. 7

27 pages

Based on BS 3084

Give requirements for both metal and plastic zip fasteners supplied for use in industry and also when sold singly to the general public. Information on performance when related to end use is also shown for the labelling purposes.

**ZWS 325:1993**

**Capillary and compression fittings for copper tubes**

Price Code: Gr. 7

31 pages

Based on BS 864: Part 2: 1983

Reprinted 2010

Specifies requirements for capillary fittings and compression fittings for use with copper tubes complying with tables W, X, Y and Z of ZWS.

**ZWS 326: 1990**

**Copper tubes**

Price Code: Gr. 5

13 pages

Reprinted 2004 to incorporate MD 544 and 546: 2004

Based on BS 2871: Part 1: 1971

Specifies requirements for copper tubes in the following four different conditions: annealed (O) copper tubes; half hard (1/2 H) copper tubes (See table X); half hard (1/2 H) copper tubes; and hard drawn (H) copper tubes.

**ZWS 327:2002**

**Part 1: 2003 Components of pressure pipe systems- unplasticized poly(vinyl chloride) pressure pipe systems**

Price Code: Gr. 9

58 pages

Replaces ZWS K21: 1971

Reprinted 2004 to incorporate MD 655: 2003

Amended: MD 663: 2009

Reprinted 1999

Specifies requirements for unplasticized poly (vinyl chloride) (PVC-U) pipes and injection molded fittings intended for above-ground and below ground pressure applications for the conveyance of potable water in reticulation systems, and for other applications in which continuous temperatures in excess of 25 °C are not encountered.

**Part 2: 2002 Modified (vinyl chloride) PVC-M) pressure pipes systems**

Price Code: Gr. 8

42 pages

Specifies requirements for modified unplasticized poly (vinyl chloride) (PVC) pipes ( with integral joints that incorporate rubber sealing rings) and fittings (post-formed from pipe made of PVC-M) that are intended for above-ground and below-ground pressure applications for the conveyance of portable water in reticulation system and for other application in which continuous temperature n excess of 25 °C are not encountered.

**ZWS 329:1990**

**Code of practice for application of mastic asphalt flooring**

Price Code: Gr. 4

8 pages

Replaces: ZWS A2: 1960

Reprinted 2010

Deals with the use of mastic asphalt as a floor covering on new or old worn concrete.

**ZWS 330:1991**

**Storage of cereals and pulses**

**Part 1: Guide to control of attack by vertebrate and invertebrate animals**

Price Code: Gr. 5

13 pages

Based on ISO 6322: part 3: 1981

Gives guidance on limiting accessibility of grain and pulses to birds, rodents and other pests which might feed on it.

**Part 2: Guide to particular problems encountered in the storage of cereals and pulses**

Price Code: Gr. 6

21 pages

Based on ISO 6322: part 1: 1981

Describes general considerations related to the problems of keeping cereals. Other aspects of the storage of cereals and pulses are dealt with in ZWS 330: Part 1 and ZWS 331.

**ZWS 331:1991**

**Storage of cereals and pulses**

Price Code: Gr. 5

14 pages

Based on ISO 6322: Part 2: 1981

Gives guidance on the choice of a method of storage of cereals and pulses and on the essential requirements for good storage according to the method chosen. Other aspects of the storage of cereals and pulses are dealt with in ZWS 330: Part 1 and 2.

**ZWS 332: 2015**

**Labelling of food and feed that are and are not products of genetic modification**

Price Code: Gr. 5

8 pages

Specifies the labeling and advertising of food and feed produced from genetic modification or consisting of or containing GMOs irrespective of whether the food/feed contains DNA or protein.

**ZWS 333: 1974**

**Wood Screws**

Price Code: Gr. 7

31 pages

Reprint of ZWS 10: 1974

Reprinted 2004

Specifies the requirements for slotted head wood screws manufactured to the dimensions specified.

**ZWS 337:1991**

**Hydraulic jacks**

Price Code: Gr. 4

10 pages

Based on SABS 1144: 1977

Reprinted 2004

Covers the requirements for the suggested dimensions, construction and performance of hydraulic jacks of the general industrial (bottle) and trolley (garage) types.

**ZWS 338:1990**

**Concrete floor and wall tiles**

Price Code: Gr. 3

12 pages

Based on BS 1197: Part 2: 1980 and SABS CKS 208: 1969

Specifies the requirements for dimensions, strength and workmanship of floor and wall tiles made with cement and aggregate.

**ZWS 339:1991**

**Industrial leather hand protectors and leather protective clothing**

Price Code: Gr. 7

25 pages

Replaces: ZWS Z17: 1971 (Partially)

Based on SABS 316: 1988

Covers materials and construction of industrial leather hand protectors (e.g. gloves) and leather protective clothing.

**ZWS 341:2022****The Petroleum industry - The storage, transportation and use of small quantities of flammable petroleum liquids**

Price Code: Gr. 9  
 48 pages  
 Replaces: ZWSCZ2: 1972  
 Reprinted 2004  
 Amended by MD 682:2014

This standards specifies requirements for storage and transportation of flammable petroleum products of quantities not exceeding 1000 litres for diesel and illuminating paraffin and quantities not exceeding 200 litres for petrol/ ethanol blends.

**ZWS 342:1977****Earthenware drain and sewer pipes and fittings**

Price Code: Gr. 7  
 40 pages  
 Replaces: ZWS A16: 1973  
 Reprinted 2011

Covers vitrified clay pipes suitable for jointing by the following methods: mortar caulking; rolling rubber ring; bitumen run; reformed factory-applied; plain-end pipe; slip seal rubber. Jointing methods are not covered in the specification.

**ZWS 343:1991****Supersulphated cement**

Price Code: Gr. 4  
 9 pages  
 Based on BS 4248: 1974

Specifies requirements for the composition, manufacture, sampling and testing of supersulphated cement.

**ZWS 344:1999****Insecticide in the form of one percent or three percent endosulfan granules**

Price Code: Gr. 4  
 12 pages  
 Replaces ZWS 230: 1978  
 Reprinted 2010

Covers a granular type of insecticide consisting of quartzitic sand to which is bonded a finely-ground concentrate of endosulfan by means of an emulsifier to which is added a stabilizer.

**ZWS 345:1991****Pesticide in the form of five percent disulfoton granules**

Price Code: Gr. 5  
 14 pages  
 Replaces: ZWS 230: Pat 2: 1986

Covers a granular type of pesticide consisting of crushed brick pumice, Fuller's earth, attapulgitic granules or any other suitable carrier to which is adsorbed and absorbed a concentrate of disulfoton.

**ZWS 346:1991****Insecticide in the form of two and a half percent trichlorfon granules**

Price Code: Gr. 4  
 9 pages  
 Replaces ZWS 230 Part 3: 1986

Covers granular type of insecticide consisting of crushed brick granules, dolomite, sand or any other suitable carrier to which is adsorbed and absorbed a concentrate of trichlorfon. Applies to insecticides for the treatment of maize against stalk borer.

**ZWS 347:1991****Handheld blowpipes, mixers and nozzles, using fuel gas and oxygen, for gas welding, cutting and related processes**

Price Code: Gr. 7  
 30 pages  
 Based on BS 6503: 1984

Specifies materials, construction, safety, performance and test requirements for handled blowpipes and nozzles.

**ZWS 348:2007****The manufacture of soft drinks and soft drink concentrates**

Price Code: Gr. 10  
 65 pages  
 Second revision of ZWS 348: 1972  
 Based on SANS 449: 1985  
 Replaces: ZWS S9: 1967  
 Amended MD 613: 1999: MD 642: 2002

Covers the manufacture of soft drinks.

**ZWS 350:1992****The protection of dwelling houses against lightning**

Price	Code:	Gr.	8
62 pages			
Replaces: ZWS CC2: 1973			
Based on SABS 03A: 1976			

Provides authoritative guidance on the principles and practice which experience has shown to be of major importance in the protection of dwelling houses and similar buildings against lightning.

**ZWS 351:1993****The protection of structures against lightning**

Price	Code:	Gr.	9
123 pages			
Replaces: ZWS CC2: 1973			
Based on SABS 03: 1985			

Covers the installation of a lightning protection system and sets out the principles. Requirements for air terminal systems, down conductor, earthing and materials are given.

**ZWS 352:2002****Fruit squashes and fruit cordials (fruit syrups) and their bases**

Price	Code:	Gr.	6
16 pages			
Amended by MD 615: 1999, MD 644: 2002			
Replaces: CAS S21:1969			
Reprinted 2011			

Covers the manufacture of fruit squashes and fruit cordials (fruit syrups) and their bases.

**ZWS 354:1978****Fluorescent lamp ballasts**

Price	Code:	Gr.	5
13 pages			
Partially superseded by ZWS 127: 1978			
Reprinted 2011			

Covers the features and operating characteristics of reference ballasts for fluorescent lamps for use on a.c supplies at a frequency of 50 Hz.

**ZWS 355:1995****Universal undercoating: White**

Price Code: Gr. 4  
 10 pages  
 Amended by MD 553: 1994

Replaces: ZWS K9: 1961  
Reprinted 2011

Covers white undercoating for air-drying protective and decorative paints for use on primed steel and timber and on sealed and primed masonry wall board, compressed fibre board and other constructional and finishing materials in building.

**ZWS 356:1995**  
**High gloss synthetic enamel paint**  
Price Code: Gr. 4  
12 pages  
Replaces: ZWS 356: 1993  
Reprinted 2011

Covers ready mixed high gloss synthetic resin based enamel paint for interior and exterior use as a finishing coat on metal, wood, sealed plaster walls and concrete surfaces, composition board and similar materials.

**ZWS 357:1993**  
**Emulsion paints for exterior use**  
Price Code: Gr. 4  
14 pages  
Amended by MD 567: 1995  
Replaces: ZWS K13: 1968  
Based on SABS 634: 1972

Covers emulsion paints based on synthetic polymers primarily intended for exterior use on plaster, fibre cement or other similar porous surfaces or on surfaces previously painted with compatible emulsion paint.

**ZWS 359:1995**  
**Domestic and industrial security grill swing-type gates**  
Price Code: Gr. 4  
7 pages  
Reprinted 2011

Covers requirements for both single and double security grill swing-type gates and their accessories for domestic and industrial application.

**ZWS 360:1993**  
**Self-supporting plastics containers of nominal capacities 5 to 220 litres**  
Price Code: Gr. 7  
39 pages  
Amended by MD 577: 1997  
Based on SABS 1176: 1981

Covers self-supporting containers made of plastics materials, of nominal capacities 5 to 220 litres, suitable for the storage and transportation of commodities. Also covers self supporting containers of maximum nominal capacity 10 litres for reserve fuel for motor vehicles.

**ZWS 361:1968**  
**Carbon paper**  
Price Code: Gr. 5  
13 pages  
Replaces: ZWS X1: 1968  
Based on SABS 652: 1961

Covers three types of typewriter carbon paper and two types of pencil carbon paper.

**ZWS 362:1994**  
**Aluminum tubes for irrigation purposes**  
Price Code: Gr. 4  
12 pages  
Based on ASAE S263.2: 1992 and BS 1474: 1987  
Reprinted 2011

Specifies minimum requirements, design, manufacture and testing of aluminum tubes for use in irrigation tubing systems where operational pressure does not exceed 1 000 kPa.

**ZWS 363:1996**  
**Irrigation equipment – irrigation sprayers and rotating sprinklers**  
Price Code: Gr. 7  
37 pages  
Based on ISO 7749: Part 1: 1986: ISO 7749: Part 2: 1990 and ISO 8026: 1985

Covers irrigation equipment, irrigation sprayers and rotating sprinklers.

**ZWS 365:1993**  
**Whole spices: Determination of extraneous matter content**  
Price Code: Gr. 3  
6 pages  
Equivalent to ISO 927: 1982

Describes a method for determining the presence of foreign substances in whole spices.

**ZWS 366:1993**  
**Spices and condiments: Determination of total ash**  
Price Code: Gr. 4  
7 pages  
Equivalent to ISO 928: 1980

Describes a method for the determination of total ash from spices and condiments.

**ZWS 367:1993**  
**Spices and condiments: Determination of water - insoluble ash**  
Price Code: Gr. 3  
6 pages  
Equivalent to ISO 929: 1980

Describes a method for determination of water-insoluble ash from spices and condiments.

**ZWS 368:1993**  
**Spices and condiments: Determination of moisture content (Entrainment method)**  
Price Code: Gr. 4  
6 pages  
Equivalent to ISO 939: 1980

Describes a test method for the determination of the moisture content of spices and condiments.

**ZWS 369:1993**  
**Spices and condiments: Determination of alcohol-soluble extract**  
Price Code: Gr. 3  
6 pages  
Equivalent to ISO 940: 1979

Specifies a method for determination of alcohol-soluble extract from spices and condiments.

**ZWS 370:1993****Spices and condiments: Determination of cold water-soluble extract**

Price Code: Gr. 3  
6 pages  
Equivalent to ISO 941: 1980

Specifies a method for the determination of cold water-soluble extract in spices and condiments.

**ZWS 371:1993****Method of sampling spices and condiments**

Price Code: Gr. 4  
7 pages  
Equivalent to ISO 948: 1980

Specifies a method of sampling spices and condiments.

**ZWS 372:1993****Spices and condiments: Preparation of a ground sample for analysis**

Price Code: Gr. 2  
4 pages  
Equivalent to ISO 2825: 1981

Specifies a method of preparing a groundsample of spices or condiments for analysis, from a laboratory sample obtained by the method specified in ZWS 371.

**ZWS 373:1993****Agricultural food products: Determination of crude fibre content – General method**

Price Code: Gr. 6  
22 pages  
Equivalent to ISO 5498: 1981

Specifies a conventional method for the determination of crude fibre content of agricultural food products. Method is based on the Weende method which involves acid treatment followed by alkali treatment.

**ZWS 374:1993****Black pepper and white pepper, whole or ground: Determination of piperine content - Spectrophotometric method**

Price Code: Gr. 3  
7 pages  
Equivalent to ISO 5564: 1962

Specifies a spectrophotometric method for the determination of the piperine content of black or white pepper (*Piper nigrum*L), in whole or ground form. The test method determines the quantity of pungent compound (piperine) and its analogues in the product.

**ZWS 375:1993****Agricultural food products: Determination of crude fibre content – Modified Scharrer method**

Price Code: Gr. 4  
11 pages  
Equivalent to ISO 6541: 1981

Specifies a conventional method for the determination of the crude fibre content of agricultural food products. Method is applicable to cereals and cereal products as well as to certain products containing less than 1 % of crude fibre, for example yeast.

**ZWS 376:1993****Nomenclature for spices and condiments: First list**

Price Code: Gr. 4  
11 pages  
Based on ISO 678  
Reprinted 2013

A list of spices and condiments together with their botanical names, their common English names and names of parts used in the spices or condiments are given.

**ZWS 377:1995**

**Curry powder**  
Price Code: Gr. 4  
8 pages  
Based on ISO 2253: 1986  
Amended by MD 609: 1999

Specifies minimum requirements for curry powder which is used as a flavouring material in the preparation of foods.

**ZWS 378:1993****Spices and condiments: Determination of acid-insoluble ash**

Price Code: Gr. 3  
6 pages  
Equivalent to ISO 930: 1980

Specifies a method for the determination of acid-insoluble ash from spices and condiments.

**ZWS 379:1995****Ginger: whole, in pieces or ground**

Price	Code:	Gr.	5
13 pages			
Amended by MD 616: 1999			
Based on ISO 1003: 1980			
Reprinted 2013			

Specifies requirements for ginger (*Zingiber officinale Roscoe*) whole, in pieces or ground.

**ZWS 380:1995****Dehydrated garlic**

Price	Code:	Gr.	5
12 pages			
Amended by MD 610: 1999			
Equivalent to ISO 5560: 1983			

Specifies requirements for dehydrated garlic in various commercial forms.

**ZWS 381:1996****Part 1: Black pepper****Specifies requirements for black pepper (*Piper nigrum Linnaeus*), whole or ground**

Price	Code:	Gr.	6
17 pages			
Amended by MD 617: 1999			
Identical to ISO 959: Part 1: 1988			
Reprinted 2009			

Specifies requirements for black pepper (*Piper nigrum Linnaeus*) whole or ground.

**Part 2: White pepper****Specifies requirements for white pepper (*Piper nigrum Linnaeus*) whole or ground at the following commercial stages semi processed (SP) pepper, processed (P) pepper**

Price	Code:	Gr.	5
14 pages			
Amended by MD 618: 1999			
Equivalent to ISO 959: Part 2: 1988			

Specifies requirements for white pepper (*Piper nigrum Linnaeus*) whole or ground, at the following commercial stages semi processed (SP) pepper, processed (P) pepper.

**ZWS 382:1993****Spices and condiments: Determination of filth**

Price Code: Gr. 5

13 pages

Equivalent to ISO 1208: 1982

Specifies a method for the quantitative determination of mineral matter (sand, soil) and matter of animal origin (insect fragments, rodents hairs and excreta) in spices and condiments.

**ZWS 383:1993****Spices and condiments: Determination of non-volatile ether extract**

Price Code: Gr. 3

6 pages

Equivalent to ISO 1108: 1992

Specifies a method for determining the whole of the non-volatile substances extracted by diethyl- ether.

**ZWS 384:1993****Spices and condiments: determination of volatile oil content**

Price Code: Gr. 4

11 pages

Equivalent to ISO 6571: 1984

Specifies a method for the determination of the volatile oil content of spices, condiments and herbs.

**ZWS 385:1993****Spices and condiments - Determination of volatile organic Sulphur Compounds**

Price Code: Gr. 4

7 pages

Specifies a method for determination of volatile organic sulfur compounds in dehydrated garlic.

**ZWS 386: 1993****Aerials for the reception of sound and television broadcasting in the frequency range 30 MHz to 1 GHz: Electrical and mechanical characteristics**

Price Code: Gr. 4

9 pages

Based on BS 5640: Part 1: 1978

Covers linearly polarized receiving aerials for domestic use. Also defines and specifies the essential electrical and mechanical properties of aerials for the reception of sound and television broadcasting.

**ZWS 387: 1993****Aerials of the reception of sound and television broadcasting in the frequency range 30 MHz to 1 GHz: Methods of measurements of electrical performance parameters**

Price Code: Gr. 6

17 pages

Based on BS 5640: Part 2: 1978

Covers linearly polarized aerials for domestic use. Also specifies the conditions and methods of measurement of electrical performance parameters of aerials for the reception of sound and television broadcasting.

**ZWS 390:1995****Soya beans**

Price Code: Gr. 4

11 pages

Reprinted 2013

Specifies the requirements for soya beans suitable for human consumption.

**ZWS 391:1996****Wheat grain**

Price Code: Gr. 6

17 pages

Based on ISO 7970: 1989

Lays down minimum specification for wheat (*Triticum aestivum*) intended for human consumption and which is the subject of international trade.

**ZWS 392:1995****Sunflower seeds**

Price Code: Gr. 4

9 pages

Based on Grain Marketing Act (Chapter 113) and Grain Marketing (Sunflower) Rules 1993

Specifies minimum requirements for sunflower seeds (*Helianthus annuus*).

**ZWS 394:1993****Golden syrup, flavoured syrup and treacle**

Price Code: Gr. 4

10 pages

Amended by MD 565: 1994, MD 620: 1999

Replaces: ZWS S29: 1970

Specifies physical and chemical requirements as well as containers and packaging.

**ZWS 395: 1993****Hearing protectors: Ear-plugs**

Price Code: Gr. 4

9 pages

Reprinted 2012

Covers the constructional and chemical requirements of ear plugs intended for use as hearing protectors.

**ZWS 396:1994****Orange juice preserved exclusively by physical means**

Price Code: Gr. 4

9 pages

Amended by MD 585: 1999

Based on Codex standard 45: 1981

Reprinted 2012

Covers unfermented orange juice intended for direct consumption obtained by a mechanical process from the endocarp of sound ripe oranges preserved exclusively by physical means.

**ZWS 397:1994****Pineapple juice preserved exclusively by physical means**

Price Code: Gr. 4

9 pages

Amended by MD 592: 1999

Based on Codex standard 85: 1981

Reprinted 2012

Covers unfermented pineapple juice, intended for direct consumption, obtained by a mechanical process from the flesh or parts



thereof if sound, ripe pineapples preserved exclusively by physical means.

**ZWS 398:1999**

**Apple juice preserved exclusively by physical means**

Price Code: Gr. 4

8 pages

Amended by MD 591: 1999

Based on Codex standard 46: 1981

Reprinted 2011

Covers unfermented grape juice, obtained by mechanical process from sound, ripe grapes preserved exclusively by physical means.

**ZWS 399:1999**

**Grape juice preserved exclusively by physical means**

Price Code: Gr. 4

8 pages

Amended by MD 590: 1999

Based on Codex standard 82: 1981

Reprinted 2011

Covers unfermented grape juice, obtained by mechanical process from sound, ripe grapes preserved exclusively by physical means.

**ZWS 400:2006**

**Electrical wiring of premises (ZWS wiring rules)**

Price Code: Gr. 12

155 pages

Replaces: ZWS CCI: 1964

This code of practice is designed to ensure safety in the utilization of electricity in or on premises and covers, design, selection, erection, inspection and testing of electrical installations.

**ZWS 401:1993**

**Paints: Determination of volatile content**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15 Part 2: 1966

Test method for determining the volatile content of paint at 105 +/- 2 °C.

**ZWS 405:1993**

**Paints: Lieberman-Storch test for rosin derivatives in paint**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 5: 1966

Specifies the Lieberman-Storch test method for determining the content of rosin and rosin derivatives in paint.

**ZWS 406:1993**

**Paints: Determination of daylight 45°, 0° luminous directional reflectance of surface coatings and pigments**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 6: 1966

Specifies a test method for determining the daylight 45°, 0° luminous directional reflectance of surface coating and pigment.

**ZWS 407:1993**

**Paints: Coarse skins and particles in emulsion paints**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 7: 1966

Test method for determining coarse skins and particles in paints.

**ZWS 408:1993**

**Paints: Determination of flexibility of paints films**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 8: 1996

Based on SABS method 145: 1975

Test method to assess the flexibility of paint films.

**ZWS 410:1993**

**Paints: Resistance to wet abrasion of emulsion paints**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15 Part 10: 1966

Based on SABS Method 175: 1975

Test method for assessing the resistance of emulsion paints to wet abrasion.

**ZWS 411:1993**

**Paints: Light fastness and resistance to exposure**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 11: 1966

Test method for determining ability of paints to withstand exposure to light and outdoor atmospheric conditions.

**ZWS 414:1996**

**Paints – Determination of aluminum metal content of aluminum paint**

Price Code: Gr. 4

5 pages

Replaces: ZWS K15: Parts 13 and 14: 1967

Based on SABS 682: 1972

Reprinted 2011

Specifies the method of determining aluminum content of aluminum paint.

**ZWS 417:1996**

**Paints- Determination of leafing value of aluminum paint**

Price Code: Gr. 4

5 pages

Replaces: ZWS K15: Part 17: 1967

Based on ISO1247: 1974, SABS 1214: 1984

Reprinted 2011

Specifies the method of determining the leafing value of aluminum paint.

**ZWS 418:1996**

**Paints and varnishes – Determination for viscosity by means of an efflux cup**

Price Code: Gr. 4

7 pages

Identical to SABS Method 125: 1995

Reprinted 2011

Specifies the determination of the viscosity of Newtonian or near-Newtonian liquids with an efflux cup.

**ZWS 420:1993**

**Paints-Pre-treatment of metal test panel –Abrading**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 20: 1967

Specifies the method of pre-treating metal test panels for use during testing of paints.

**ZWS 421:1993****Paints: Consistency of paints measured by means of a Krebs-stormer viscometer (without stroboscope)**

Price Code: Gr. 3

6 pages

Replaces: ZWS K15: Part 15: Part 21: 1967

Specifies a method of measuring the consistency of paints using Krebs-stormer viscometer without stroboscope.

**ZWS 422:1993****Paints: Consistency of paints measured by means of Krebs-stormer viscometer (with stroboscope)**

Price Code: Gr. 3

6 pages

Replaces: ZWS K15: Part 22: 1967

Specifies a method of measuring the consistency of paints by means of a Krebs-stormer viscometer with stroboscope.

**ZWS 423:2005****The installation of glazing in buildings**

Price Code: Gr 8

91 pages

Based on SABS 0137: 2002

Covers methods of glazing and the fixing of glazing materials normally used in buildings.

**ZWS 424:1993****Paints: Determination of mass per litre and specific gravity**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 24: 1971

Based on SABS Method 80: 1975

Specifies a method of determining mass per litre and specific gravity of paints.

**ZWS 425:1993****Paints: Wet hiding power**

Price Code: Gr. 3

6 pages

Replaces: ZWS K15: Part 25: 1971

Equivalent to SABS Method 464: 1975

Test method for determining the wet hiding power of paints. Includes a note for the use of the method for water based paints.

**ZWS 426:1993****Paints: Brushing properties of paints**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 26: 1971

Equivalent to SABS Method 42: 1975

Specifies a test method for assessing the brushing properties of paints.

**ZWS 428:1996****Paints-Spraying properties of paints**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 28: 1977

Based on SABS Method 44: 1975

Reprinted 2011

Specifies a method for determining the spraying properties of paints.

**ZWS 429:1993****Paints: Fineness of grind of paints and pastes**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 29: 1971

Equivalent to SABS Method 53: 1975

Specifies a method for assessing the fineness of grid of paints and pastes

**ZWS 430:1993****Paints: Drying time of paint films**

Price Code: Gr.3

5 pages

Replaces: ZWS K15: Part 30: 1971

Amended by MD 548: 1993

Based on SABS Method 148: 1975

Test method for assessing the drying time of paints under laboratory conditions.

**ZWS 431:1993****Paints: Sixty-degree specular reflection of paint films**

Price Code: Gr. 2

4 pages

Replaces: ZWS K15: Part 31: 1971

Test method for determining the sixty-degree specular reflection of paint films using glossmeter.

**ZWS 432:1993****Relative density of liquids**

Price Code: Gr. 3

5 pages

Replaces: ZWS K15: Part 32: 1975

Identical to SABS Method 51: 1975

Test method for assessing relative density of liquids using a pycnometer.

**ZWS 433:1993****Paints: Relative density of pigments and extenders**

Price Code: Gr. 3

6 pages

Replaces: ZWS K15: Part 33: 1971

Equivalent to SABS Method 52: 1975

Method for assessing relative density of pigment and extenders used in paints.

**ZWS 434:1993****Paints: Pigment content of paints with a non-aqueous solvent base**

Price Code: Gr. 4

7 pages

Replaces: ZWS K15 Part 34: 1971

Equivalent to SABS Method 192: 1974

Test method for determining the content of pigments in paints and pastes with a non-aqueous base.

**ZWS 435:1993****Paints: Pigment volume concentration of paints with a non-aqueous solvent base**

Price Code: Gr. 3

6 pages

Replaces: ZWS K15: Part 35: 1971

Equivalent to SABS Method 560: 1975

Test method for determining the volume concentration of pigments in paints with a non-aqueous solvent base.

**ZWS 436:2007**

**Textile floor coverings – Clearing maintenance of residential and commercial carpeting**

Price Code: Gr.8  
55 pages

Provides specifications and guidelines for maintenance techniques for textile floor coverings. It provides cleaning practitioners and consumers with minimum requirements for cleaning maintenance programmes and cleaning techniques to enable textile floor coverings to be kept in a good and hygienic conditions.

**ZWS 437:1993**

**Paints: Resistance to skinning of paint, varnish and lacquer**

Price Code: Gr. 2  
3 pages  
Equivalent to SABS Method 149: 1975

Test method for determining the resistance of paint, varnish and lacquer to skinning.

**ZWS 438:1993**

**Paints: Resistance of paint films to laboratory artificial weathering**

Price Code: Gr. 4  
8 pages  
Equivalent to SABS Method 182: 1975

Test method for determining resistance of paint films to weathering under laboratory conditions.

**ZWS 439:1993**

**Paints: Titanium dioxide content of white emulsion paint pigment**

Price Code: Gr. 3  
6 pages  
Based on ASTM D 1394: 1987

Test method for determining the titanium dioxide content of white emulsion paint.

**ZWS 440:1993**

**Paints: Application of paint by doctor blade**

Price Code: Gr. 3  
5 pages  
Equivalent to SABS Method 37: 1975

Method of paint application using a doctor blade during test procedures.

**ZWS 441:1993**

**Paints: Wet film thickness of paint**

Price Code: Gr. 2  
4 pages  
Based on SABS Method 139: 175

Specifies a method of determining the wet film thickness of paints using an eccentric disc type wet film thickness gauge.

**ZWS 442:1993**

**Hearing protectors: Ear-muffs**

Price Code: Gr. 7  
31 pages  
Based on SABS 1451: Part 1: 1988

Covers constructional, design and performance requirements for ear-muffs intended for use as hearing protectors.

**ZWS 443:1994**

**Primer for wood for interior and exterior use**

Price Code: Gr. 4  
8 pages  
Replaces: ZWS K7: 1961

Covers requirements for primer for wood which is intended for interior and exterior use under synthetic resin enamel paints.

**ZWS 444:1993**

**Red oxide primer for iron and steel**

Price Code: Gr. 4  
8 pages  
Replaces: ZWS K4: 1961  
Reprinted 2012

Covers requirements for red oxide primer for use on iron and steel substrate. Intended for interior or exterior use under ready-mix synthetic resin paints.

**ZWS 445:1993**

**Zinc phosphate primer**

Price Code: Gr. 4  
9 pages  
Amended by MD 551: 1994  
Based on SABS 1319: 1980

Lays down requirements for zinc phosphate primer for use on suitably prepared iron and steel surfaces.

**ZWS 446:1993**

**Paints: Determination of total iron, expressed as iron (III) oxide, in paints**

Price Code: Gr. 3  
6 pages  
Identical to ISO 1248: 1974

Test method for determining the total iron, as iron (III) oxide, in paints.

**ZWS 447:1993**

**Paints: Resistance of paints and varnish films to cold water**

Price Code: Gr. 3  
5 pages  
Based on SABS Method 167: 1975

Method for determining the resistance of paints and varnishes to cold water.

**ZWS 448**

**Road and runway marking paint**

**Part 1: 2000 Non-reflectORIZED solvent-borne road marking paint**

Price Code: Gr. 6  
19 pages  
Replaces: ZWS K20: 1970  
Amended by MD 575: 1996. 626: 2000  
Reprinted 2011

Covers non-reflectORIZED quick drying solvent-borne road marking paint for use on bituminous and concrete road surfaces.

**Part 2: 1996: Non-reflectORIZED water-borne road and runway marking paint**

Price Code: Gr. 6  
20 pages  
Based on SABS 731: 1995

Covers non-reflectORIZED quick-drying water borne road and runway paint for use in bituminous and concrete road and runway surfaces.

**ZWS 449:2007**

**The cleaning and maintenance of floors**

Price Code: Gr. 8

48 pages

Based on SANS 10170: 04

Outlines the basic principles of floor maintenance and covers procedures for the cleaning and maintenance the resilient wooden and hard surface floors in domestic,commercial and industrial establishments.

**ZWS 451:2007**

**Cold Chain Management – Milk and dairy products**

Price Code: Gr. 7

36 pages

Based on Singapore Standard CP 95:2002

Intended for the application and observance of temperature controls in each sector of the cold chain for milk and dairy products.It sets out recommendations and guidelines for the proper management of these during the production storage, transportation, manufacturing, distribution, handling etc.

**ZWS 457:2015**

**Natural mineral water and spring water**

Price Code: Gr. 7

18 pages

Amended by MD 664:2009

Reprinted 2004

Reprinted 2013

Second revision 2015

Applies to natural mineral water and spring water for human consumption.

**ZWS 458:1994**

**Wax emulsionfor coating citrus fruit**

Price Code: Gr. 5

14 pages

Based on SABS 1448: 1988

Covers requirements for wax emulsions that are used on citrus fruits to replace the natural coating that has been partially or entirely removed by washing and brushing.

**ZWS 459:1993**

**Measurement of water pH value**

Price Code: Gr. 3

7 pages

Reprinted 2004

Test method for measuring the hydrogen ion activity in water and waste water using a glass electrode with reference calomel or a silver/silver chloride electrode or a combination pH electrode at a standard temperature.

**ZWS 461:1994**

**Starches: Determination of moisture content, oven-drying method**

Price Code: Gr. 5

13 pages

Equivalent to ISO 1666: 1973

Reprinted 2012

Specifies two methods for the determination of moisture content in starch: (a) the oven-drying method at 130 °C at atmospheric pressure; (b) the oven-drying method at 100 °C or 73 °C under reduced pressure.

**ZWS 462:1994**

**Starches: Determination of ash**

Price Code: Gr. 4

7 pages

Equivalent to ISO 3593: 1981

Reprinted 2012

Specifies a method for the determination of the ash yield by starches. The method is applicable to native (unmodified) starches and to modified starches yielding not more than 2 % of ash.

**ZWS 463:1994**

**Starches: Native (unmodified) or modified: Determination of total fat content**

Price Code: Gr. 4

7 pages

Identified ISO 3947: 1977

Reprinted 2012

Specifies a method for the determination of the total fat content of starches, native (unmodified) or modified, of which the expected total fat content is less than 1,5 % mass fraction.

**ZWS 464:1995**

**Incandescent lamps**

Price Code: Gr. 5

17 pages

Based on SABS 56:1990

Covers electric incandescent lamps having a nominal life of 1 000 h and intended for domestic and similar general lighting purposes.

**ZWS 465:1999**

**Woven polypropylene grain bags**

Price Code: Gr. 4

12 pages

Based on SABS CKS 632: 1990

Reprinted 2012

Covers the requirements for 50 kg bags, made from slip-resistant, tubular, woven fabric (of which polypropylene yarns are the major components) and suitable for use for the handling, transportation and storage of whole cereal grains.

**ZWS 466:1994**

**Starches and derived products: Determination of nitrogen and protein content by the Kjeldahl method - Titrimetric method**

Price Code: Gr. 4

10 pages

Equivalent to ISO 3188: 1978

Based on SABS CKS 632: 1990

Reprinted 2012

Specifies a titrimetric method for the determination of the nitrogen and protein content of starch and its derived products with nitrogen content which is greater than 0,01 % (mass fraction).

**ZWS 467:1995**

**Bitumens for roads, Industrial and other purposes**

Price Code: Gr. 6

19 pages

Replaces: ZWS 144: 1975 and ZWS 145: 1975

Based on BS 3690: Parts 1 & 2: 1990

Specifies the requirements for penetration, cut-back, hard and oxidized bitumens suitable for use in road construction, industrial purposes and maintenance.

**ZWS 468:1995**  
**Burglar resisting safes**  
Price Code: Gr. 5  
15 pages  
Identical to SABS 751: 1983  
Reprinted 2011  
Amended by AMD 673:2014

Covers the requirements for four categories of burglar-resisting safes.

**ZWS 469:1995**  
**Paints – Resistance of paint films to laboratory artificial weathering using fluorescent lamps**  
Price Code: Gr. 2  
4 pages

Specifies a method of determining the resistance of paint films to laboratory artificial weathering using fluorescent lamps.

**ZWS 470:1999**  
**Guava nectar preserved exclusively by physical means**  
Price Code: Gr. 4  
8 pages  
Amended by MD 566: 1995: MD 589: 1999  
Based on Codex standard 148: 1985  
Reprinted 2011

Covers unfermented pulpy or non-pulpy product obtained by blending guava juice and /or the total edible sieved ground or homogenized product of sound ripe guavas concentrated or unconcentrated with water, sugars or honey and preserved exclusively by physical means.

**ZWS 471:1999**  
**Grapefruit juice preserved exclusively by physical means**  
Price Code: Gr. 4  
8 pages  
Amended by MD 588: 1999  
Based on Codex standard 48: 1981  
Reprinted 2011

Cover unfermented grapefruit juice, intended for direct consumption, obtained by a mechanical process, from the endocarp of sound, ripe grapefruit preserved exclusively by physical means.

**ZWS 472:1994**  
**Lemon juice preserved exclusively by physical means**  
Price Code: Gr. 4  
8 pages  
Amended by MD 587: 1999  
Based on Codex standard 47: 1981  
Reprinted 2011

Covers unfermented lemon juice intended for direct consumption, obtained by a mechanical process, from the endocarp of sound, ripe lemons preserved exclusively by physical means.

**ZWS 473:1994**  
**Precast concrete interlocking pavers**  
Price Code: Gr. 5  
14 pages  
Amended by MD 594: 1999  
Based on BS 6717 Part 1: 1993 and SABS 1058: 1986  
Reprinted 2011

Specifies requirements for precast concrete interlocking pavers intended for use in the construction of paved surfaces subjected to vehicular loading and pedestrian traffic.

**ZWS 474:1996**  
**Mechanical properties of fasteners – Bolts, screws and studs**  
Price Code: Gr. 7  
36 pages  
Based on ISO 898 Part 1: 1988  
Reprinted 2011

Specifies the mechanical properties of bolts, screws and studs when tested at room temperature. Properties will vary at higher and lower temperatures.

**ZWS 475:1994**  
**Granadilla juice preserved exclusively by physical means**  
Price Code: Gr. 4  
9 pages  
Amended by MD 586: 1999  
Reprinted 2011

Covers unfermented granadilla juice intended for direct consumption, obtained by a mechanical process, from the flesh of sound, ripe granadillas preserved exclusively by physical means.

**ZWS 477:1996**  
**Water quality – Examination and determination of colour**  
Price Code: Gr. 4  
11 pages  
Based on ISO 7887: 1985

Specifies three methods for the determination of colour.

**ZWS 478:1995**  
**Water quality – Determination of turbidity**  
Price Code: Gr. 4  
11 pages  
Based on ISO 7027: 1990  
Reprinted 2011

Specifies four methods for the determination of turbidity of water. Method A – using the transparency testing tube (suitable for pure and lightly polluted water); Method B – using the transparency testing disk (especially suitable for surface water); Method C and D specify quantitative methods using optical turbidity meters.

**ZWS 479:1995**  
**Water quality – Determination of chloride – silver nitrate titration with chromate indicator (MOHR's Method)**  
Price Code: Gr. 4  
9 pages  
Based on ISO 9297: 1989  
Reprinted 2011

Specifies a titration method for the determination of dissolved chloride in water. The method is applicable to the direct determination of dissolved chloride in concentrations between 5 and 150 mg/l. Due to many interferences the method is not applicable to heavily polluted waters of low chloride content.

**ZWS 480:1995**  
**Water quality – Determination of sulfate – Gravimetric method using barium chloride**  
Price Code: Gr. 5  
12 pages  
Based on ISO 9280: 1990  
Reprinted 2010

Specifies a gravimetric method for the determination of sulfate in water. The method is applicable to the analysis of all types of water including sea water and most industrial effluents.

**ZWS 481:1995**  
**Water quality – Determination of nitrate – Spectrometric method using sulfosalicylic acid**  
Price Code: Gr. 4  
12 pages  
Based on ISO 7890: Part 3: 1988  
Reprinted 2011

Specifies a method for the determination of nitrate ions in water. Applies to raw and portable water samples.

**ZWS 482:1995**  
**Water quality – Determination of nitrite – Molecular absorption spectrometric method**  
Price Code: Gr. 4  
11 pages  
Based on ISO 6777: 1984  
Reprinted 2011

Specifies a molecular absorption spectrometric method for the determination of nitrite in potable, raw and waste water.

**ZWS 483:1995**  
**Water quality – Determination of ammonium – Distillation and titration method**  
Price Code: Gr. 4  
10 pages  
Identical to ISO 5664: 1984  
Reprinted 2011

Specifies a distillation and titration method for the determination of ammonium in raw, potable and waste water.

**ZWS 484:1995**  
**Water quality – Determination of calcium content EDTA titrimetric method**  
Price Code: Gr. 4  
9 pages  
Based on ISO 6058: 1984  
Reprinted 2011

Specifies a titrimetric method using ethylene diamine tetraacetic acid (EDTA) for the determination of the calcium content of ground waters, surface waters and drinking waters.

**ZWS 485:1995**  
**Water quality – Determination of the sum of calcium and magnesium – EDTA titrimetric method**  
Price Code: Gr. 4  
11 pages  
Based on ISO 6059: 1984  
Reprinted 2011

Specifies a titrimetric method using ethylene diamine tetraacetic acid for the determination of the sum of the calcium and magnesium concentrations in ground water, surface water and drinking water. The lowest concentration that can be determined is 0,05 mmol/l.

**ZWS 486:1995**  
**Water quality – Determination of iron – Spectrometric method using 1,10 phenantroline**  
Price Code: Gr. 4  
12 pages  
Based on ISO 6332: 1988  
Reprinted 2011

Specifies a 1,10 phenantroline spectrometric method for determination of iron in water and waste water.

**ZWS 487:1995**  
**Water quality – Determination of manganese – Formaldoxime spectrometric method**  
Price Code: Gr. 4  
11 pages  
Based on ISO 6333:1986  
Reprinted 2011

Specifies a formaldoxime spectrometric method for the determination of total manganese concentrations between 0,01 and 5 mg/l including dissolved, suspended and organically bound manganese in surface and ground water.

**ZWS 488:1995**  
**Water quality – Determination of cobalt, nickel, zinc, copper, cadmium and lead – Flame atomic absorption spectrometric methods**  
Price Code: Gr. 6  
24 pages  
Based on ISO 8288: 1986  
Reprinted 2011

Specifies three methods for determining cobalt, nickel, copper, zinc, cadmium and lead in water by flame atomic absorption spectrometry.

**ZWS 489:1996**  
**Water quality – Determination of phosphorus – Ammonium molybdate spectrometric method**  
Price Code: Gr. 7  
25 pages  
Based on ISO 6878: Part 1: 1986  
Reprinted 2011

Specifies methods for determination of phosphorous compounds present in ground, surface and waste waters in various concentrations in dissolved and undissolved state.

**ZWS 490:1995**  
**Water quality – Determination of fluoride – Electrochemical probe method for portable and lightly polluted water**  
Price Code: Gr. 4  
11 pages  
Based on ISO 10359 Part 1: 1992  
Reprinted 2011

Specifies a method for the determination of dissolved fluoride in fresh, portable and low contaminated water and some surface waters, using an electrochemical technique.

**ZWS 491:1996**  
**Water quality – Guidelines for the determination of total organic carbon (TOC)**  
Price Code: Gr. 4  
12 pages  
Based on ISO 8245: 1987  
Reprinted 2011

Gives guidelines for the measurement of TOC concentrations in all kinds of water.

**ZWS 492:1995**  
**Water quality – Determination of total water arsenic – Silver diethyldithiocarbamate spectrophotometric method**  
Price Code: Gr. 4  
13 pages  
Identical to ISO 6595: 1985  
Reprinted 2011

Specifies a silver diethylthiocarbamate spectrophotometric method for the determination of arsenic in water and waste water.

**ZWS 493:1996**

**Water quality – Determination of cyanide as cyanogens chloride**

Price Code: Gr. 4

12 pages

Based on ISO 6703: Part 3: 1984

Reprinted 2011

Specifies a method for the determination of cyanide, as cyanogens chloride in water.

**ZWS 494:1996**

**Water quality – Determination of total chromium – Atomic absorption spectrometric methods**

Price Code: Gr. 5

14 pages

Based on ISO 9174: 1990

Reprinted 2011

Specifies two methods for the determination of total chromium in water by atomic absorption spectrometry.

**ZWS 495:1995**

**Water quality – Determination of chemical oxygen demand**

Price Code: Gr. 4

9 pages

Based on ISO 6060: 1989

Reprinted 2011

Specifies a method for determining the chemical oxygen demand (COD) of water. It is applicable to water with a COD value of between 30 and 700 mg/l. The chloride content must not exceed 1 000 mg/l.

**ZWS 496:1995**

**Water quality – Determination of biochemical oxygen demand after 5 days (BOD5) Dilution and seeding method**

Price Code: Gr. 5

15 pages

Based on 5815: 1989

Reprinted 2010

Reprinted 2011

Specifies a method for the empirical and conventional determination of the biochemical oxygen demand of waters by dilution and seeding.

**ZWS 497:1995**

**Water quality – Determination of total mercury by flameless atomic absorption spectrometric method after digestion with bromine**

Price Code: Gr. 5

15 pages

Based on ISO 5666: Part 3: 1994

Reprinted 2012

Specifies a flameless atomic absorption spectrometric method for the determination of total mercury in fresh waters, soft water and brines (saline waters) drinking water and other waters containing only small amounts of organic matter.

**ZWS 498:1998**

**The installation of communal and single antenna systems for the reception of television and sound broadcast transmission**

**Part 1: VHF and UHF TV and VHF sound antenna systems**

Price Code: Gr. 7

43 pages

Based on SABS 061: Part 1: 1994

Reprinted 2012

Reprinted 2013

Establishes principles for the installation, modification and maintenance of communal and single antenna systems.

**Part 2: Satellite antenna systems**

Price Code: Gr.

49 pages

Establishes principles for the installations of communal and single antenna systems for the reception of signals in the frequency range 11.2 to 12.7 GHz from orbiting satellites.

**ZWS 499:1995**

**Passive antennae for the reception of VHF and UHF television and VHF sound transmissions**

Price Code: Gr. 5

21 pages

Identical to SABS 1252: 1994

Specifies the characteristic of passive antennae designed to be used out of doors for the reception of VHF and UHF television and VHF sound transmissions.

**ZWS 500:1999**

**Wheat flour**

Price Code: Gr. 4

8 pages

Based on MS 85: 1988

Reprinted 2012

Covers wheat flour, classified according to the following groups: standard white flour, cake flour, self raising flour and biscuit flour, standard brown flour, wholemeal flour and crakka wheat flour.

**ZWS 502:1995**

**Mailing envelopes**

Price Code: Gr. 4

9 pages

Replaces: ZWS P1: 1970 (Partially)

Identical to SABS 822:1966

Specifies envelopes used for mailing purposes, including window-faced envelopes.

**ZWS 503:1995**

**Bond Paper**

Price Code: Gr. 4

9 pages

Identical to SABS CKS 610: 1986

Covers four classes (based on grammage) of general purpose bond paper suitable for printing, typewriting, pen and ink writing and photocopying and that are supplied in sheets or reels.

**ZWS 504:1995**

**Toilet tissue**

Price Code: Gr. 5

14 pages

Based on SABS 648: 1980

Covers single and double ply grades of creped toilet tissue supplied in rolls.

**ZWS 505:1995**

**Melamine tableware**

Price Code: Gr. 5

13 pages

Based on SABS CKS 8: 1977

Reprinted 2012

Covers two types of tableware made of melamine formaldehyde of the categories contained in Table 1 of this standard.

**ZWS 506:1995**

**Fiberglass washdown low flush volume water closet pans with horizontal outlets**

**Part 1: Connecting dimensions**

Price Code: Gr. 3

7 pages

Reprinted 2012

Specifies the connecting dimensions of pedestal wash down low flush volume water closet pans with independent low level cisterns of capacity not less 4, 51.

**Part 2: Materials quality, performance and dimensions other than connecting dimensions**

Price Code: Gr. 4

10 pages

Based on ISO 5503: Part 2: 1977

Lays down requirements for dimensions, materials, quality and performance requirements for pedestal wash down, low flush volume water-closet pans with horizontal outlet .

**ZWS 507:1995**

**Paper and board – Determination of water absorptiveness – Cobb method**

Price Code: Gr. 4

10 pages

Identical to ISO 535: 1991

Reprinted 2012

Specifies a method of determining the water absorptiveness of sized paper and board, including corrugated fibreboard.

**ZWS 508:1995**

**Paper, board and pulps – Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples**

Price Code: Gr. 6

17 pages

Identical to ISO 187:1990

Reprinted 2012

Specifies the standard atmosphere for conditioning and for testing pulp, paper and board including the procedures for measuring the temperature and relative humidity.

**ZWS 509:1995**

**Paper and board – Determination of grammage**

Price Code: Gr. 4

9 pages

Identical to ISO 536: 1994

Reprinted 2012

Specifies a method of determining the grammage of paper and board.

**ZWS 510:1995**

**Paper and board – Determination of tearing resistance (Elmendorf method)**

Price Code: Gr. 6

19 pages

Identical to ISO 1974: 1990

Reprinted 2012

Specifies a method for determining the tearing resistance of paper. The method can also be used for light boards if the tearing resistance is within the range of the instrument.

**ZWS 511:1995**

**Paper and board – Measurement of diffuse blue reflectance factor (ISO brightness)**

Price Code: Gr. 4

9 pages

Identical to ISO 2471: 1977

Reprinted 2012

Specifies a method for measuring the diffuse blue reflectance factor (ISO brightness) of paper and board.

**ZWS 512:1995:**

**Paper and Board - Determination of opacity (paper backing) - diffuse reflectance method**

Price Code: Gr. 4

11 pages

Identical to ISO 2471: 1977

Reprinted 2012

Specifies a method for the measurements of the opacity of paper by diffuse reflectance. It is restricted to white and near white papers and boards. Also includes paper or board which has been treated with fluorescent dyestuff or exhibits significant fluorescence.

**ZWS 513:1996**

**Paper –Determination of bursting strength**

Price Code: Gr. 6

17 pages

Identical to ISO 2758: 1983

Reprinted 2012

Specifies a method for measuring the bursting strength of paper submitted to increasing hydraulic pressure.

**ZWS 514:2019**

**Wood-Preserving creosote**

Price Code: Gr. 8

44 pages

Based on SANS 616:2008 and BS 144:1977

Supersedes ZWS 514:2011

Amended by MD 689

Covers wood preserving creosote from coal tar. This coal tar may either be a coal-tar distillate (creosote) or a solution of coal tar pitch in coal-tar distillate and is intended for use in the preservation of timber.

**ZWS 515:1996**

**Scholastic stationery**

Price Code: Gr. 7

44 pages

Based on SABS CKS 596: 1984

Amended by MD 580: 2001

Covers 15 types of books and pads and 3 types of ruled paper intended for scholastic and related uses.

**ZWS 517:2023**

**Poultry feeds**

Price Code: Gr. 6

18 pages

First published, 1959

First revision, 1972

Second revision, 1996

Third revision, 2005

Fourth revision, 2023

Replaces ZWS 517: 2005



The objective of this standard is to ensure that poultry animals, used either as poultry meat or for the production of eggs used for human food, are fed rations, which are appropriate for the category of bird; and to help ensure the safety of food for human consumption through adherence to recommended poultry feeding practice at the farm level and good best practices during the procurement, handling, storage, processing and distribution of poultry feed and feed ingredients. This standard is meant to control the production and trade of farm feeds in Zimbabwe.

**ZWS 518:2023**

**Cattle feeds**

Price Code: Gr. 5  
10 pages  
First published, 1959  
First revision, 1972  
Second revision, 1996  
Replaces: ZWS N2: 1959  
First reprinted 2006  
Third revision, 2023

The objective of this standard is to provide guidance on animal feeding in relation to animal nutrition and health. It encompasses animal nutrient requirements and veterinary requirements that matter in animal production. These standards are meant to control the production and trade of farm feeds in Zimbabwe.

**ZWS 519:2000**

**Measurement of lettable and tenancy areas of a building**

Price Code: Gr. 5  
13 pages

Sets down the method by which the floor area of any commercial and industrial building, or portion thereof, shall be measured for the purposes of establishing lettable and tenancy areas.

**ZWS 520:1996**

**Inlet air cleaning equipment for internal combustion engines and compressors – Performance testing**

Price Code: Gr. 8  
48 pages  
Based on ISO 5011: 1988  
Reprinted 2012

Establishes and specifies uniform test procedures, conditions equipment and performance reports to permit the direct laboratory performance comparison of air cleaners.

**ZWS 521:1996**

**Welded steel fabric for the reinforcement of concrete and masonry**

Price Code: Gr. 5  
13 pages  
Based on SABS 1024: 1991  
Reprinted 2012

Specifies the characteristic of steel fabric made of hard-drawn steel wire, consisting of longitudinal cross wire welded together and intended for use as a form of reinforcement for concrete and masonry.

**ZWS 522:2017**

**Solar batteries**

Price Code: Gr. 4  
6 pages  
Reprinted 2012  
First revision 2017

Specifies the minimum requirements for batteries to be used in photovoltaic systems.

**ZWS 523:1999**

**Fluorescent lights for use in photovoltaic systems**

Price Code: Gr. 4  
10 pages  
Reprinted 2012

Specifies the minimum requirements for fluorescent tube lights powered with direct current (dc) invertors ballasts for use in photovoltaic systems.

**ZWS 524:1998**

**Charge controllers for photovoltaic systems using lead acid batteries**

Price Code: Gr. 4  
9 pages  
Reprinted 2012

Specifies the requirements for charge controllers which shall be fitted on all battery-based photovoltaic electric systems.

**ZWS 525:2007**

**Windows, doors, sidelights and tanlights made from rolled mild steel sections**

Price Code: Gr. 7  
33 pages  
Based on SABS 727: 1981

Covers windows, doors, sidelights and fanlights fabricated from rolled mild steel sections complete with fittings and ancillary components.

**ZWS 526:1996**

**Copper for electrical purposes**

**Part 1: High conductivity copper rectangular conductors with drawn or rolled edges**

Price code: Gr. 7  
27 pages  
Based on BS 1432:1987  
Reprinted 2012

Covers requirements for high conductivity copper conductors of rectangular cross section with drawn or rolled edges.

**Part 2: Rod and bar**

Price Code: Gr. 6  
23 pages  
Based on BS 1433:1970  
Reprinted 2012

Specifies requirements for copper rod and bar for electrical purposes.

**ZWS 527:1997**

**Heavy duty thermoplastic flexible film sacks**

Price Code: Gr. 4  
9 pages  
Based on BS EN 787: 1984

Specifies the general characteristics, requirements and methods of test for sacks made of heavy duty thermoplastic flexible film.

**ZWS 528:1996**

**Pressed steel door frames**

Price Code: Gr. 4  
12 pages  
Replaces: ZWS A36: 1969  
Amended by MD 632:2001; MD641: 2002  
Reprinted 2012

Specifies the sizes fittings and finish for pressed steel door frames.

**ZWS 529:1998****Identification colours for gas cylinders**

Price Code: Gr 9

9 pages

Replaces: ZWS Z5: 1973

Reprinted 2004

Specifies requirements for identification of the contents of industrial gas containers.

**ZWS 530:2023****Animal feeding stuffs – Sampling and preparation of test samples**

Price Code: Gr. 3

3 pages

Reprinted 2012

First Revision 2023

This Zimbabwe standard specifies methods of sampling animal feeding stuffs and a method for the preparation of test samples.

**ZWS 531:1996****Polyethylene (PE) pipes for irrigation laterals**

Price Code: Gr. 5

13 pages

Based on ISO 8779: 1992. ISO 8796: 1989

Reprinted 2012

Specifies the test methods and required properties for pipes made from polyethylene designed to be used for irrigation laterals.

**ZWS 532:1997****Salt**

Price Code: Gr. 4

13 pages

Replaces ZWS S34: 1972

Based on Codex Standards 150: 1985

Amended by MD 629: 2000

Specifies requirements for common salt for human and animal consumption.

**ZWS 533:1996****Laying precast concrete interlocking pavers**

Price Code: Gr. 5

16 pages

Based on BS 6717: Part 3: 1989: South African Concrete Masonry

First reprint 2018

Association Paving block manual and Precast paving blocks-Laying manual

Specifies requirements for laying precast concrete interlocking pavers intended for use in the construction of paved surfaces subjected to vehicular loading and pedestrian traffic.

**ZWS 534:1996****Paper, board and pulps – Determination of pH or aqueous extracts**

Price Code: Gr. 4

8 pages

Identical to ISO 6588: 1981

Specifies a method for the determination of the pH of an aqueous extract of paper, board of pulps. The pH value is not a quantitative measure of the total content of acid or base in the material extracted.

**ZWS 535:2021****Manned security services**

Price Code: Gr. 7

20 pages

Based on BS 7499: Part 1: 1991

First published 1999

Reprinted 2014

It gives the recommendation for the management, staffing and operation of an organization providing security guarding services on a static site and/or mobile patrol basis.

**ZWS 536:1998****Design, sizing and installation of battery based photovoltaic systems**

Price Code: Gr. 4

7 pages

Gives recommendations for the design, sizing and installation of battery based photovoltaic domestic systems of up to 100 W peak.

**ZWS 537:1997****Malleable cast iron fittings threaded to ISO 7: Part 1**

Price Code: Gr. 8

49 pages

Based on ISO 49: 1994

First reprint 2016

Specifies requirements for the design and performance of malleable cast iron threaded pipe fittings.

**ZWS 538:1996****Portable aluminum ladders, steps, trestles and lightweight stagings**

Price Code: Gr. 8

47 pages

Replaces: ZWS A40: 1969

Based on BS 2037: 1994

Reprinted 2015 as ZWS 538

Specifies requirements for materials and details of construction and performance for portable aluminum ladders, steps trestles and stagings.

**ZWS 540:1996****Ready-mixed aluminum finishing paint**

Price Code: Gr. 4

8 pages

Replaces: ZWSK 14 1967

Based on SABS 682: 1972

Covers a general purpose ready-mixed aluminum paint for use as a finishing coat on printed surface for interior and exterior use.

**ZWS 541 :2020****Carbon steel bars for the reinforcement of concrete****Part 1 – Weldable Reinforcing Bar, coil and de-coiled products**

Price Code: Gr. 7

37 pages

Based on BS 4449: 2016

Amended by MD 646: 2003

First reprint 2020

Specifies requirements for weldable steel for the reinforcement of concrete structures. It covers plain round steel bars in grade 250, square twisted bars in grade 410 and deformed high yield steel bars in grade 460.

**ZWS 541 :2020****Carbon steel bars for the reinforcement of concrete****Part 2 – Specification**

Price Code: Gr. 7

37 pages

Based on BS 4482: 2016

Amended by MD 646: 2003

Specifies requirements for weldable steel for the reinforcement of concrete structures. It covers plain round steel bars in grade 250, square twisted bars in grade 410 and deformed high yield steel bars in grade 460.

**ZWS 542:1996**

**Animal feeding stuffs – Determination of available lysine**

Price Code: Gr. 5

14 pages

Replaces: ZWS K 1: 1969

Based on ISO 5510: 1984

First reprint 2018

Specifies a method for the determination of available lysine in animal feeding stuffs containing animal or vegetable proteins.

**ZWS 543:1996**

**Animal feeding stuffs – Determination of total nitrogen content and calculation of crude protein content**

Price Code: Gr. 4

12 pages

Replaces: ZWS K1: 1969

Based on ISO 5983: 1991

Specifies methods for determination of the total nitrogen content of feeding stuffs by the Kjeldahl process and for calculation of crude protein content.

**ZWS 544:1996**

**Animal feeding stuffs-Determination of crude ash**

Price Code: Gr. 4

7 pages

Replace: ZWS K 1 1969

Based on ISO 5984: 1978

Specifies a method for the determination of crude ash of feeding stuffs.

**ZWS 545:1996**

**Animal feeding stuffs – Determination of calcium content –Titrimetric method**

Price Code: Gr. 4

8 pages

Replaces: ZWS K1: 1969

Based on ISO 6490: Part 1: 1985

Specifies a titrimetric method for the determination of the calcium content of animal feeding stuffs.

**ZWS 546:1997**

**Animal feeding stuffs – Determination of total phosphorus content – Spectrophotometric method**

Price Code: Gr. 4

9 pages

Based on ISO 6491: 1980

Specifies a spectrophotometric method for the determination of the total phosphorus content of animal feeding stuffs.

**ZWS 547:1996**

**Animal feeding stuffs – Determination of moisture content**

Price Code: Gr. 4

8 pages

Replaces:ZWS K 1: 1969

Based on ISO 6496: 1983

Reprinted 2015

Specifies a method for determination of the moisture (water and other volatile substances) content of animal feeding stuffs.

**ZWS 548:1996**

**Animal feeding stuffs-Determination of aflatoxin B<sub>1</sub>, content**

Price Code: Gr. 3

6 pages

Replaces: ZWS K 1: 1969

Based on ISO 6651: 1987

Specifies two methods for the determination of aflatoxin B<sub>1</sub>, content of animal feeding stuffs.

**ZWS 549:1996**

**Animal feeding stuffs-Determination of urea content**

Price Code: Gr. 5

8 pages

Replaces: ZWS K1: 1969

Based on ISO 6654: 1991

Reprinted 2015

Specifies a spectrophotometric method for the determination of the urea content of animal feeding stuffs.

**ZWS 550:1996**

**Animal feeding stuffs – Determination of free and total gossypol**

Price Code: Gr. 4

9 pages

Replaces: ZWS K1: 1969

Based on ISO 6866: 1985

Reprinted 2015

Specifies a method for the determination of the total content of free and total gossypol and chemically related substances in animal feeding stuffs.

**ZWS 553:2023**

**Hard woodpoles, droppers, laths, guardrail posts and spacer blocks**

Price Code: Gr. 7

36 pages

Amended by MD 622: 1999: 625: 2000

Based on SABS 457: Part 1 to 3: 1994

Incorporates MD 678:2014

First reprint 2015

Fifth revision, 2023

This standard specifies requirements for hardwood structural poles, agricultural poles, fencing poles, round droppers and guardrail posts. The poles are intended for the erection of fences and vine trellises, for general use in orchards and for structural purposes. The droppers are intended for fencing. The guardrail posts are intended for the erection of steel guardrails at the sides of roads.

**ZWS 554:1998**

**W.C flushing cisterns**

Price Code: Gr. 6

17 pages

Based on SABS 821: 1990

First reprint 2015

Covers the requirements for hand-operated high-level, low-level, near-level and close-coupled cisterns of various flushing capacities and that are designed for a single operation or a dual-flushing operation.

**ZWS 555:1997****Cold pour resin compound and heat-shrink cable joints in the voltage range up to 1 000 V ac and 1 500V dc****Part 1: Specification for materials**

Price Code: Gr. 8

49 pages

First reprint 2015 as ZWS 555.1

Specifies requirements for materials supplied in kits for making cable joints in operating voltage range up to 1 000 V a.c. and 1 500 V d.c in which the cable insulation reinstatement is effected by cold pour resin compound.

**Part 2: Code of practice for on-site installation**

Price Code: Gr. 6

23 pages

Based on BS 6910: part 2: 1989

Provides guidance on the procedures to be followed when making joints by the cold pour resin or heat-shrink methods in cables in the operating voltage range up to 1 000 V ac and 1 500 V dc.

**ZWS 556:1997****13 A plugs, socket-outlets, adaptors and connection units****Part 1: Rewirable and non rewirable 13 A fused plugs**

Price Code: Gr. 8

75 pages

Replaces ZWS C22 1973

Based on BS 1363: Part 1: 1995

Specifies requirements for 13 A fused plugs having insulating sleeves on line and neutral pins, for household, commercial and light industry purposes, with particular reference to safety in normal use. The plugs are suitable for sound-vision equipment, luminaires, etc, in a.c. circuits only, operating at voltages not exceeding 250 V r.m.s at 50 Hz.

**Part 2: 13 A switched and un switched socket-outlets**

Price Code: Gr. 8

76 pages

Replaces ZWS C22: 1973

Based on BS 1363: Part 2: 1995

Specifies requirements for 13 A switched and unswitched shuttered sockets-outlets for household, commercial and light industrial purposes with particular references to safety in normal use.

**ZWS 557:1997****Immersion heaters for electric storage water heaters**

Price Code: Gr. 4

16 pages

Based on SABS 514: 1975

Covers withdrawable and non withdrawable types of electric immersion heaters for use in thermostatically controlled electric storage water heaters.

**ZWS 558:1999****Waste water**

Price Code: Gr. 8

22 pages

Replaces ZWS Z21: 1972

Reprinted 2004

Specifies standards for waste water which has been produced by or results from the use of water for manufacturing, mechanical or mining purposes, for the generation of power or for the purposes of water-borne sanitation.

**ZWS 559:1999****Refined sugar for household use**

Price Code: Gr. 4

10 pages

Amended by MD 636:2001, MD640: 2004

Based on Codex standard 4: 1981

First reprint 2016

Specifies requirements for refined sugar that is produced for the purpose of household use only.

**ZWS 560:1997****Water for domestic supplies**

Price Code: Gr. 6

21 pages

Based on SABS 241: 1984

Reprinted 2004

Lays down the minimum physical, chemical and bacteriological requirements for the purity as delivered to the consumer, of water for domestic supplies regardless of source.

**ZWS 561:1998****Diaries**

Price Code: Gr. 4

10 pages

Based on SABS CKS 301: 1971

First reprint 2016

Specification covers four different types of diaries.

**ZWS 562:2002****Office furniture – Work tables and desks****Part 1: 2002 Dimensions**

Price Code: Gr. 4

7 pages

Amended by MD 657: 2004

Based on EN 527: Part 1: 2000

Partially supersedes ZWSKX 3: 1968

Specifies dimensions of office tables and desks for general use. It includes neither dimensions for drawers nor those for other tables or reception desks.

**Part 2:2003 Mechanical safety requirements**

Price Code: Gr. 3

7 pages

Based on EN 527-2: 2002

Specifies the mechanical safety requirements of office tables and desks.

**ZWS 564: 1998****Protective helmets for pedal cyclists**

Price Code: Gr. 6

21 pages

First reprint 2016 Based on SABS 1542: 1991

Specifies the characteristics of protective headgear for wear by pedal cyclists.

**ZWS 567:1996****Animal feeding stuffs- Determination of sodium chloride content**

Price Code: Gr. 3

6 pages

Partially replaces: ZWS K 1: 1969

First reprint 2016

Specifies a method of determining sodium chloride in animal feeding stuffs.

**ZWS 569:1997**

**Wood mosaic flooring**

Price Code: Gr. 6  
19 pages  
Endorsement of SABS 978: 1983  
Supersedes ZWS 015: 1972  
First reprint 2016

Covers the requirements for two grades of mosaic flooring in the form of prefabricated panels that are made from fillets of certain species of wood and are intended to be bonded directly or over an interlayer to a supporting base.

**ZWS 571:1997**

**Agricultural food products – General directions for the determination of nitrogen by the Kjeidahl method**

Price Code: Gr. 7  
11 pages  
Based on ISO 1871: 1975  
Reprinted 2010

Gives general directions for the apparatus and procedures used for the determination of nitrogen in agricultural food products by the Kjeidahl method.

**ZWS 572:1998**

**Waste water – Determination of temperature**

Price Code: Gr. 3  
5 pages  
Replaces ZWS Z21: 1972 (Clause 20)  
First reprint 2016  
Describes a method for the determination of temperature in waste water.

**ZWS 573:1997**

**Waste water - Determination of dissolved oxygen**

Price Code: Gr. 4  
8 pages  
Replaces ZWS Z21: 1972 (clause 21)  
Reprinted 2004

Specifies a method for the determination of dissolved oxygen in waste water.

**ZWS 574:1997**

**Waste water – Determination of chemical oxygen demand**

Price code: Gr. 4  
7 pages  
Replaces: ZWS Z21: 1972 (Clause 22)  
Reprinted 2004

Describes a method for the determination of chemical oxygen demand (COD) in waste water.

**ZWS 575:1997**

**Waste water – Determination of oxygen absorbed**

Price Code: Gr. 3  
6 pages  
Replaces ZWS Z21: 1972 (Clause 23)  
Reprinted 2004

Specifies a method for the determination of oxygen absorbed in waste water.

**ZWS 576:1997**

**Waste water – Determination of total suspended solids, total dissolved solids and total solids**

Price Code: Gr. 3  
5 pages  
Replaces ZWS Z21: 1972 (Clause 24, 25 and 26)  
Reprinted 2004

Specifies a method for the determination of total suspended solids, total dissolved solids and total solids in waste water at the point of discharge.

**ZWS 577:1997**

**Water quality – Determination of total dissolved solids – Conductivity method**

Price	Code:	Gr.	3
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6 pages  
First reprint 2016

Specifies the conductivity method for the determination of total dissolved solids (TDS) in water.

**ZWS 578:1997**

**Water quality – Determination of sulfate content – Turbidimetric method**

Price	Code:	Gr.	4
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7 pages  
Reprinted 2004

Specifies a method for determination of sulfate in water.

**ZWS 579:1997**

**Waste water – Determination of calcium and magnesium content – Titrimetric method**

Price	Code:	Gr.	3
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6 pages  
Replaces: ZWS Z21: 1972 (Clause 27)  
Reprinted 2004

Specifies the titrimetric method for the determination of calcium and magnesium content in waste water.

**ZWS 580:1997**

**Water quality – Determination of sodium and potassium – Flame emission spectrometry**

Price	code:	Gr.	4
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10 pages  
Based on ISO 9964: 1993  
Reprinted 2005

Specifies a method for the determination of dissolved sodium and potassium by flame emission spectrometry (FES). It is intended for the analysis of raw and drinking waters.

**ZWS 581:1998**

**Waste water – Determination of soap, oil or grease**

Price	Code:	Gr.	3
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5 pages  
Replaces ZWS Z21: 1972 (Clause 25)  
First reprint 2018

Describes a method for the determination of soap, oil or grease in waste water.

**ZWS 582:1997**

**Waste water – Determination of free and saline ammonia**

Price	Code:	Gr.	3
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6 pages  
Replaces: ZWS Z21: 1972 (Clause 3)  
Reprinted 2005

Specifies a method for the determination of free and saline ammonia in waste water.

**ZWS 583:1997**

**Waste water – Determination of arsenic content – Gutzeit method**

Price Code: Gr. 4

6 pages

Replaces: ZWS Z21: 1972 (Clause 31)

Reprinted 2005

First reprint 2016

Describes the Gutzeit method for the determination of arsenic content in waste water.

**ZWS 584:1997**

**Waste water – Determination of barium content**

**Part 1: Turbidimetric method**

Price Code: Gr. 4

7 pages

Replaces: ZWS Z21: 1972 (clause 32)

Reprinted 2004, 2005

Describes the turbidimetric method for the determination of barium content in waste water.

**Part 2: Direct nitrous oxide-acetylene flame method**

Price Code: Gr. 4

9 pages

Reprinted 2004

Describes the direct nitrous oxide-acetylene flame method for the determination of barium content in waste water.

**ZWS 585:1997**

**Waste water – Determination of boron content – UV spectrometric method**

Price Code: Gr. 3

6 pages

Replaces: ZWS Z21: 1972 (clause 33)

Reprinted 2004

Describes the UV spectrometric method for the determination of boron content in waste water.

**ZWS 586:1997**

**Waste water – Determination of cadmium content Dithizone method**

Price Code: Gr.4

11 pages

Replaces: ZWS Z21: 1972 (clause 34)

Reprinted 2004

Describes the dithizone method for the determination of cadmium in waste water.

**ZWS 587:1997**

**Waste water – Determination of chlorides content**

**Part 1: Titrimetric method**

Price Code: Gr. 3

5 pages

Replaces: ZWS Z21: 1972 (Clause 35)

Reprinted 2004

Describes the titrimetric method for the determination of chlorides content in waste water.

**Part 2:Mercuric nitrate method**

Price Code: Gr 4

7 pages

Describes the mercuric nitrate method for the determination of chlorides content in waste water.

**ZWS 588:1997**

**Water quality- Determination of residual chlorine**

**Part 1: Amperometric titration method**

Price Code: Gr. 4

10 pages

Reprinted 2005

Describes the amperometric titration method for the determination of residual chlorine in water.

**Part 2: DPD colorimetric method**

Price Code: Gr. 5

15 pages

Reprinted 2005

Describes an N, N – Diethyl – p – phenylenediamine (DPD) colorimetric method for the determination of residual chlorine in water.

**ZWS 589:1997**

**Waste water-Determination of total chromium content (as Cr)**

Price Code: Gr. 4

8 pages

Replaces: ZWS Z21: 1972 (Clause 37)

Describes a method for the determination of total chromium (as Cr) in waste water.

**ZWS 590:1997**

**Waste water: Determination of copper content – UV spectrometric method after complexation**

Price Code: Gr. 4

7 pages

Replaces: ZWS Z21: 1972 (Clause 38)

Reprinted 2005

Describes a method for the determination of copper in waste water using UV spectrometry.

**ZWS 591:1997**

**Waste water – Determination of cyanides content**

**Part 1: UV spectrometric method**

Price Code: Gr. 3

6 pages

Replaces: ZWS Z21: 1972 (Clause 39)

Reprinted 2005

Describes the UV spectrometric method for the determination of cyanides content in waste water.

**Part 2: Titrimetric method**

Price Code: Gr. 5

15 pages

Reprinted 2005

Described the titrimetric method for the determination of cyanides content in waste water.

**ZWS 592:1998****Water quality – Determination of anionic surfactants by measurement of the methylene blue index (MBAS)**

Price Code: Gr. 5

16 pages

Based on ISO 7875: Part 1: 1996

Reprinted 2004

Specifies a spectrometric method for the determination of anionic surfactants by measurement of the methylene blue index (MBAS) in aqueous media.

**ZWS 593:1997****Water quality – Determination of non-ionic surfactants using Dragendorff reagent**

Price Code: Gr. 5

16 pages

Based on ISO 7875: Part 2: 1984

Reprinted 2005

Specifies a method for the determination of non-ionic surfactants in aqueous media using Dragendorff reagent.

**ZWS 594:1997****Waste water – Determination of fluoride content****Part 1: Ion-selective electrode method**

Price Code: Gr. 5

14 pages

Reprinted 2005

Describes the ion selective electrode method for the determination of fluoride content in waste water.

**Part 2: Nessler tube method**

Price Code: Gr. 3

6 pages

Reprinted 2005

Describes the Nessler tube method for the determination of fluoride content in waste water.

**ZWS 595:1997****Waste water – Determination of lead content – UV spectrometric method using dithizone**

Price Code: Gr. 4

11 pages

Replaces ZWS Z21: 1972 (Clause 43)

Reprinted 2005

Describes the UV spectrometric method for the determination of fluoride content in waste water.

**ZWS 596:1997****Water quality – Determination of manganese content – Persulfate colorimetric method**

Price Code: Gr. 4

10 pages

Reprinted 2005

Specifies a method for the determination of manganese content in water.

**ZWS 597:1997****Waste water – Determination of mercury content****Part 1: Cold vapour atomic absorption spectrometry**

Price Code: Gr. 4

9 pages

Reprinted 2004, 2005

Specifies a cold vapour atomic absorption spectrometric method for the determination of mercury content in waste water.

**Part 2: UV Spectrometric method**

Price Code: Gr. 4

9 pages

Replaces ZWS Z21: 1972 (Clause 45)

Describes the UV spectrometric method for the determination of mercury in waste water.

**ZWS 598:1997****Waste water – Determination of nickel content – UV spectrometric method after complexation with dimethylglyoxime**

Price Code: Gr. 4

9 pages

Replaces ZWS Z21: 1972 (Clause 46)

Reprinted 2005

Describes the UV spectrometric method after complexation with dimethylglyoxime for the determination of nickel content in waste water.

**ZWS 599:1997****Waste water – Determination of total nitrogen content kjeldahl distillation using selenium catalyst**

Price Code: Gr. 4

8 pages

Replaces: ZWS Z21: 1972 (Clause 47)

Describes the kjeldahl distillation method using selenium catalysts for the determination of the total nitrogen content in waste water.

**ZWS 600:1997****Waste water – Determination of phenolic compounds contents (as phenol) – UV spectrometric analysis**

Price Code: Gr. 3

6 pages

Replaces: ZWS Z21: 1972 Clause 48)

Reprinted 2005

Describes the UV spectrometric method for the determination of phenolic compounds (as phenol) content in waste water.

**ZWS 601:1997****Waste water – Determination of sulfides content – titrimetric method**

Price Code: Gr. 3

6 pages

Replaces ZWS Z21: 1972: (Clause 51)

Reprinted 2005

Describes a titrimetric method for the determination of sulfides content in waste water.

**ZWS 602:1997****Water quality – Determination of zinc content – UV spectrometric method**

Price Code: Gr. 4

8 pages

Reprinted 2005

Describes the UV spectrometric method for the determination of zinc content in water.

**ZWS 603:1997****Waste water – Determination of total phosphate content (as P)**

Price Code: Gr. 4

6 pages

Replaces: ZWS Z21: 1972 (Clause 49)

Reprinted 2005

Describes a method for the determination of total phosphates content in waste water.

**ZWS 604:1997**

**Water quality – Determination of total chromium (VI)**

Price Code: Gr. 4

11 pages

Reprinted 2005

Describes a method for the determination of total chromium (VI) in water.

**ZWS 605:1997**

**Water quality – Determination of selenium – Atomic absorption spectrometric method (hydride technique)**

Price Code: Gr. 5

13 pages

Based on ISO 9965: 1993

Reprinted 2005

Specifies a method for the determination of selenium and organically bonded selenium in drinking waters, ground waters and surface waters.

**ZWS 606:1997**

**Water quality – Determination of alkalinity – Titrimetric method**

Price Code: Gr. 5

16 pages

Reprinted 2005

Specifies the titrimetric method for the determination of the alkalinity of water.

**ZWS 608:1998**

**Respiratory protective devices for self-rescue – self-contained closed-circuit breathing apparatus-Chemical oxygen (KO<sub>2</sub>) escape apparatus-Requirements, testing and marking**

Price Code: Gr. 7

40 pages

Based on EN 401: 1993

Reprinted 2005

Covers self-contained closed- circuit breathing apparatus, chemical oxygen (KO<sub>2</sub>) type, for escape.

**ZWS 609: 2000**

**Bread**

**Part 1: White**

Price Code: Gr. 7

19 pages

First Reprint of ZWS 609: Part 1

Specifies the requirements for yeast-leavened white bread.

**Part 2: 2002 Brown and whole-wheat bread**

Price Code: Gr. 8

24 pages

Based on KS 05-172: 1972

Specifies the requirements for yeast-leavened brown and wholewheat bread.

**ZWS 610:1997**

**Salt - Determination of sodium chloride content**

Price Code: Gr. 3

6 pages

Based on ISO 2481: 1993

Reprinted 2015

Specifies a mercurimetric method for the determination of sodium chloride content in salt.

**ZWS 611:1997**

**Salt - Determination of cadmium content**

Price Code: Gr. 4

11 pages

Based on BS 7319: part 6: 1990

First reprint 2015 as ZWS 611

Describes a flame atomic absorption spectrometric (AAS) method for the determination of total cadmium in common salt.

**ZWS 612:1997**

**Salt - Determination of copper content**

Price Code: Gr. 4

8 pages

Based on BS 7319: Part 7: 1990

Reprint 2015 as ZWS 612

Describes a photometric method, using zinc dibenzylthiocarbamate for the determination of copper in common salt.

**ZWS 613:1997**

**Salt - Determination of lead content**

Price Code: Gr. 4

10 pages

Based on BS 7319: Part 8: 1990

First reprint 2016

Describes a flame atomic absorption spectrometric (AAS) method for the determination of total lead in salt.

**ZWS 614:1997**

**Salt - Determination of mercury content**

Price Code: Gr. 4

11 pages

Based on BS 7319: Part 9: 1990

Reprinted 2015

Describes a cold vapour atomic absorption spectrometric method for the determination of total mercury in common salt.

**ZWS 615:1997**

**Salt - Determination of pH and total alkalinity**

Price Code: Gr. 4

7 pages

Based on BS 7319: Part 10: 1990

First reprint 2016

Specifies a potentiometric method for the measurement of the pH of sodium chloride solution, of concentration 100g/l and for the determination of total alkalinity.

**ZWS 616:1997**

**Salt - Determination of iron content**

Price Code: Gr. 4

9 pages

Based on BS 7319: Part 11: 1990

First reprint 2016

Specifies a photometric method, using 1,10-phenanthroline, for the determination of iron in salt.

**ZWS 617:1997**

**Salt - Determination of anti-caking additives content of salt for food use**

Price Code: Gr. 4

8 pages

Based on BS 7319: Part 12: 1990



First reprint 2016

Specifies two methods for the determination of water-soluble hexacyano-ferrate (II) (anti-caking additives) in salt for food use.

**ZWS 618:1997**

**Salt - Determination of arsenic - Silver diethyldithiocarbamate photometric method**

Price Code: Gr. 4

10 pages

Based on Codex Standard 150: 1985

First reprint 2016

Describe a silver diethyldithiocarbamate method for the determination of arsenic in common salt.

**ZWS 619:1997**

**Salt - Determination of total iodine - Titrimetric method with sodiumthiosulfate**

Price Code: Gr. 4

8 pages

Based on Codex Standards 150: 1985

First reprint 2016

Describes a titrimetric method for the determination of total iodine (iodides and iodates) in common salt.

**ZWS 620: 1985**

**Flexible polyvinyl chloride garden hose (Metric units)**

Price Code: Gr. 4

11 pages

Replaces K27: 1971

First reprint 2016

Covers requirements for two types of flexible PVC garden hose for use with water.

**ZWS 622:1997**

**Salt - Determination of matter insoluble in water or in acid and preparation of principal solutions for other determinations**

Price Code: Gr. 4

9 pages

First reprint 2016

Specifies a method for determining insoluble matter in common salt.

**ZWS 623:1997**

**Salt - Determination of sulfate content - Barium sulphate gravimetric Method**

Price Code: Gr. 4

7 pages

Based on ISO 2480: 1972

First reprint 2016

Specifies a gravimetric method for the determination of sulfate content of common salt.

**ZWS 624:1997**

**Salt - Determination of calcium and magnesium contents – EDTA complexometric methods**

Price Code: Gr. 4

9 pages

Based on ISO 2482: 1973

Reprint 2015

Specifies complexometric methods for determining the calcium and magnesium contents in common salt.

**ZWS 625:1997**

**Salt - Determination of moisture content**

Price Code: Gr. 3

5 pages

Based on ISO 7319: Part 2: 1990

Reprint 2015

Specifies a method for the determination of moisture content of common salt.

**ZWS 626:1997**

**Water quality – Determination of iron, manganese, potassium and sodium content – Direct air-acetylene flame method**

Price Code: Gr. 7

28 pages

Reprinted 2005

Describes the direct air-acetylene flame method for the determination of iron, manganese, potassium and sodium content in water.

**ZWS 627:1997**

**Waste water – Determination of sodium content – Flame photometric method**

Price Code: Gr. 3

5 pages

Replaces ZWS Z21: 1972 (Clause 28)

Reprinted 2005

Describes the flame photometric method for the determination of sodium in waste water.

**ZWS 628:1997**

**Water quality – Determination of potassium content – Flame photometric method**

Price Code: Gr. 4

8 pages

Reprinted 2005

Describes the flame photometric method for the determination of potassium method.

**ZWS 629:1997**

**Water quality – Detection and enumeration of coliform organisms, thermotolerant organisms and presumptive *Escherichia coli***

**Part 1: 1997 Membrane filtration method**

Price Code: Gr. 6

16 pages

Based on ISO 9308: Part 1: 1990

First reprint 2016

Specifies a method for the detection and enumeration in water of coliform organisms, thermotolerant coliform organisms and presumptive *Escherichia coli* (presumptive *E. coli*) after filtration through a membrane.

**Part 2: 1997 Multiple tube (most probable number) method**

Price Code: Gr. 6

19 pages

Based on ISO 9308: Part 2: 1990

First reprint 2016

Specifies a method for the detection and enumeration in water of coliform organisms thermotolerant coliform organisms and presumptive *Escherichia coli* (presumptive *E. coli*) by culture in a liquid medium in multiple tubes and calculation of their most probable numbers in the sample.

**Part 3:2004 Defined substrate technology (Colilert) method**

Price Code: Gr. 3

6 pages

First reprint 2015 as ZWS 629.3

Specifies a method for the detection and enumeration of coliform organisms, thermotolerant coliform organisms and presumptive *Escherichia coli* (*E. coli*) by the defined substrate technology.

**ZWS 631:1998**

**Bakery products – Determination of total solid content**

Price Code: Gr. 2

4 pages

Based on TZS 102: 1983 (Annex C)

First reprint 2016

Describes a method for the determination of total solid content in bakery products.

**ZWS 632:1998**

**Bakery products - Determination of pH**

Price Code: Gr. 3

5 pages

Based on TZS 102: 1983 (Annex D)

First reprint 2016

Describes a method for the determination of pH of aqueous extracts for bakery products.

**ZWS 633:1998**

**Bakery products - Determination of acid insoluble ash**

Price Code: Gr. 3

5 pages

Based on TZS 102: 1983 (Annex E)

First reprint 2016

Specifies a method for the determination of insoluble ash in bakery products.

**ZWS 634:1998**

**Bakery products - Determination of crude fibre**

Price Code: Gr. 3

6 pages

Based on TZS 102: 1983 (Annex F)

First reprint 2016

Specifies a method for the determination of crude fibre in bakery products.

**ZWS 636:1998**

**Bakery Products - Determination of fat content**

Price Code: Gr. 3

5 pages

Based on AOAC official Methods of analysis

First reprint 2018

Specifies an ether extraction method for the determination of fat content in bakery products.

**ZWS 637:1998**

**Bakery Products - Determination of volume/mass ratio**

Price Code: Gr. 2

5 pages

Based on TZS 102: 1983 (Annex B)

First reprint 2016

Specifies a method for the determination of volume/mass ratio of bread.

**ZWS 639:1999**

**Plastering cement**

Price Code: Gr. 5

15 pages

Based on BS 7583: 1996

First reprint 2016

Specifies requirements for the composition, manufacture as well as the chemical and physical properties of plastering cement.

**ZWS 641:1997**

**Water quality – Determination of total hardness of water – Ethylene diamine tetra tra-acetic acid (EDTA) method**

Price Code: Gr. 4

8 pages

Based on SABS: Method 215: 1971

First reprint 2016

Specifies a method of determining the total hardness of water using ethylene diamine tetra acetic acid (EDTA) as the complexing agent.

**ZWS 642:1998**

**Water quality – Determination of calcium content – Direct flame atomic absorption**

Price Code: Gr. 4

8 pages

Based on SABS Method 216: 1990

Specifies a method of determining the calcium content of water and waste water, using an air acetylene flame and direct flame atomic absorption.

**ZWS 643:1997**

**Water quality – Determination of electrical conductivity**

Price Code: Gr. 3

5 pages

Based on SABS Method 1057: 1981

Reprinted 2005

Specifies a method to determine the electrical conductivity of water using a conductivity meter.

**ZWS 645:2002**

**Safety on construction sites**

**Part 1: Format documents**

Price Code: Gr. 7

33 pages

Gives recommendations for the management of safety on construction sites.

**Part 2: Safe working practice**

Price Code: Gr. 8

58 pages

Gives advice for specific construction activities.

**ZWS 647:1999**

**Refined sugar - Determination of polarization by polarimetry**

Price Code: Gr. 3

6 pages

Based on Laboratory manual of South African Sugar Factories

First reprint 2018

Specifies a method for determination of polarization (pol) of refined sugar for household use.

**ZWS 649:2000****The inspection and repairs of boilers**

Price Code: Gr. 10

101 pages

Based on AS 3788: 1999

Specifies the requirements for the inspection, repairs and alteration of in-service boiler and gives guidance in the execution of such inspection.

**ZWS 650:1997****Efficacy of cleaning plant, equipment and utensils - Swab technique**

Price Code: Gr. 3

6 pages

Identical to SABS Method 763: 1974

Covers the sampling and testing of plant, equipment and utensils for efficacy of cleaning and disinfecting using the swab technique.

**ZWS 651:1997****Efficacy of cleaning plant, equipment and utensils - Strip technique**

Price Code: Gr. 4

7 pages

Identical to SABS Method 764: 1974

Covers the sampling and testing of plant, equipment and utensils for efficacy of cleaning and disinfecting, using the strip technique.

**ZWS 652:1997****Efficacy of cleaning plant, equipment and utensils - Agar sausage technique**

Price Code: Gr. 4

7 pages

Identical to SABS Method 765: 1974

Covers the sampling of plant, equipment and utensils for efficacy of cleaning and disinfecting, using the agar sausage technique.

**ZWS 653:1998****Protective Devices – Definitions**

Price Code: Gr. 4

11 pages

Based on EN 132: 1990

Refers to respiratory protective devices. It contains definitions for commonly used terms of this subject area.

**ZWS 654:1998****Respiratory protective devices - Classification**

Price Code: Gr. 4

7 pages

Based on EN 133: 1990

Covers the classification of respiratory protective devices.

**ZWS 655:1998****Respiratory protective devices: Nomenclature of components**

Price Code: Gr. 8

25 pages

Based on EN 134: 1998

Covers respiratory protective devices.

**ZWS 656:1998****Respiratory protective devices – List of terms**

Price Code: Gr. 4

10 pages

Based on EN 135: 1991

Contains a list of terms which are commonly used in the field of respiratory protection.

**ZWS 657:1998****Respiratory protective devices – Full face masks for special use**

Price Code: Gr. 4

10 pages

Based on EN 136: Part 10: 1992

Specifies requirements for full face masks for special use such as fire fighting and mining.

**ZWS 658:1998****Respiratory protective devices – Fresh air hose breathing apparatus for use with full face mask, half mask or mouth piece assembly – Requirements, testing and marking**

Price Code: Gr. 7

31 pages

Based on EN 138: 1990

Specifies minimum requirements for fresh air hose breathing apparatus for use with a full face masks, a half mask or a mouth piece assembly as a respiratory protective device.

**ZWS 659:1998****Respiratory protective devices – Compressed air line breathing apparatus for use with a full face mask, half mask or a mouthpiece assembly – Requirements, testing and marking**

Price Code: Gr. 7

38 pages

Based on EN 139:1995

Specifies minimum requirements for compressed air line breathing apparatus for use with a full face mask, half mask or a mouth piece assembly as a respiratory protective device.

**ZWS 660:1998****Respiratory protective devices – Gas filters and combined filters**

Price Code: Gr. 7

29 pages

Based on EN 141: 1991

Covers gas filters and combined filters for use as components in unassisted respiratory protective devices with the exception of escape apparatus and filtering facepieces.

**ZWS 661:1998****Respiratory protective devices - Particle filters – Requirements, testing and marking**

Price Code: Gr. 7

35 pages

Based on EN 143: 1990

Refers to particle filters and components in unassisted respiratory protective devices, except escape apparatus and filtering facepieces.

**ZWS 662:1998****Respiratory protective devices – Gas cylinder valves thread connection for insert connector**

Price Code: Gr.4

10 pages

Based on EN 144 Part 1: 1991

Applies to the connection between a gas cylinder valve and a gas cylinder for respiratory protective devices.

**ZWS 663:1998****Respiratory protective devices – Powered particle filtering devices incorporating helmets or hoods**

Price Code: Gr. 7

28 pages

Based on EN 146: 1992

Specifies minimum requirements for powered particle filtering devices incorporating helmets or hoods used as respiratory protective device.

**ZWS 664:1998****Respiratory protective devices – Power assisted particle filtering devices incorporating full face masks, half masks or quarter masks – Requirements, testing and marking**

Price Code: Gr. 7

29 pages

Based on EN 147: 1991

Specifies minimum requirements for power assisted respiratory protective devices which incorporated full face mask, half mask or quarter mask –together with a particle filter.

**ZWS 665:1998****Respiratory protective devices – Threads for face pieces – Thread connection M 45 x 3**

Price Code: Gr. 3

6 pages

Based on EN 148: Part 3: 1992

Applies to self – contained compressed air breathing apparatus designed as positive pressure breathing apparatus.

**ZWS 666:1998****Respiratory protective devices – Powered fresh air hose breathing apparatus incorporating a hood – Requirements, testing and marking**

Price Code: Gr. 7

31 pages

Based on EN 269: 1994

Specifies minimum requirements for powered fresh air hose breathing apparatus incorporating a hood as a respiratory protective device.

**ZWS 667:1998****Respiratory protective devices – Compressed air line breathing apparatus incorporating hood – Requirements, testing and marking**

Price Code: Gr. 7

35 pages

Based on EN 270: 1995

Specifies minimum requirements for compressed air line breathing apparatus incorporating a hood as a respiratory protective device.

**ZWS 668:1998****Respiratory protective devices – Compressed air line or powered fresh air hose breathing apparatus incorporating a hood for use in abrasive blasting operations – Requirements, testing and marking**

Price Code: Gr. 6

21 pages

Based on EN 271: 1995

Specifies minimum requirements for compressed air line and powered fresh air hose breathing apparatus incorporating a hood used to provide protection when undertaking blasting work using solid abrasives.

**ZWS 669:1998****Respiratory protective devices – AX gas filters and combined filters for use against low boiling organic compounds – Requirements, testing and marking**

Price Code: Gr. 4

11 pages

Based on EN 371: 1992

Specifies gas filters and combined filters used against low boiling organic compounds.

**ZWS 670:1998****Respiratory protective devices – SX gas filters and combined filters against specific named compounds – Requirements, testing and marking**

Price Code: Gr. 4

11 pages

Based on EN 372: 1992

Specifies requirements for gas filters and combined filters against specific named compounds for unassisted respiratory protective devices.

**ZWS 671:1999****Non-destructive testing of winding equipment Part 1: Main drive shaft(s) (Hollow or solid design)**

Price Code: Gr. 6

20 pages

Covers full cover inspection (FCI) of the main drive shaft(s) using acceptable non-destructive testing (NDT) techniques.

**Part 2: Gearboxes**

Price Code: Gr. 4

12 pages

Specifies a full cover inspection (FCI) of gearboxes used on or as part of hoisting or winding system using acceptable non destructive testing (NDT) techniques.

**ZWS 672:1998****Respiratory protective devices for escape – Self contained open-circuit compressed air breathing apparatus with full face mask or mouthpiece assembly-Requirements, testing and marking**

Price Code: Gr. 7

31 pages

Based on EN 402: 1993

Refers to self-contained open circuit compressed air breathing apparatus with full face mask or mouthpieces assembly for escape.

**ZWS 673:1998****Cereals and cereal products - Determination of ash**

Price Code: Gr. 4

8 pages

Based on ICC Standards 104/ 1: 1990

Describes a method for the determination of ash in cereals and cereal products for human consumption.

**ZWS 674:1998****Petroleum product – Determination of inorganic acidity – Colour indicator titration method**

Price Code: Gr. 3

6 pages

Based on IP 182: 1993

Intended to provide a measure of the inorganic (strong) acid content of used and unused lubricating oils, fuel oils and petrolatums.

**ZWS 675:1998**  
**Wheat flour - Determination of total carbon dioxide**  
Price Code: Gr. 4  
11 pages  
Based AACC: Method 12.21: 1961

Describes a method for the determination of total carbon dioxide in prepared mixes and self-raising flours.

**ZWS 676:1998**  
**Code of practice for the application of pesticides in the food industry**  
Price Code: Gr. 8  
50 pages  
Based on SABS 0133:1977

Covers the methods of safe application of pesticides registered as suitable for use in food handling, food processing and catering establishments.

**ZWS 677:1999**  
**Wheat flour - Determination of particle size**  
Price Code: Gr. 3  
5 pages  
Based on AOAC test method 965: 1999

Specifies a method for determination of particle size of wheat flour.

**ZWS 678:2013**  
**Development, maintenance and management of ground water resources**  
**Part 1: Glossary of Terms**  
Price Code: Gr.5  
8 pages  
Replaces ZWS 678.1:2009

Covers the terms and definitions applicable to water boreholes.

**Part 2: The location and siting of water boreholes**  
Price Code: Gr. 6  
11 pages  
Replaces ZWS 678.2:2009

Covers requirements for the location and siting of water boreholes. Whenever a borehole is considered for conversion to a production borehole the relevant clauses of this Part of ZWS 678 shall apply.

**Part 3: The design, construction and drilling of boreholes**  
Price Code: Gr 7  
30 pages  
Replaces ZWS 678.3:2009

Covers the requirements for the drilling design and construction water wells/ boreholes.

**Part 4: Pumping test of water wells/boreholes**  
Price Code: Gr. 6  
23 pages

Covers requirements for the pumping test of a water wells/borehole in order to obtain information about its possible long-term pumping rate.

**Part 5: The design, selection and performance of pumping equipment for production wells/boreholes**  
Price Code: Gr. 7  
38 pages

Covers the design, selection and performance of pumping equipment intended for production boreholes.

**Part 6: The installation and commissioning of pumping equipment for production wells/boreholes**  
Price Code: Gr. 7  
15 pages

Covers the installation and commissioning of pumping equipment intended for production boreholes.

**Part 7: The rehabilitation of water wells/boreholes**  
Price Code: Gr. 5  
6 pages

Specifies methods to be applied for the rehabilitation of water boreholes.

**Part 8: The management of water wells/boreholes**  
Price Code: Gr. 6  
8 pages

Covers the design, selection and performance of pumping equipment intended for production boreholes.

**Part 9: The decommissioning of water wells/boreholes**  
Price Code: Gr. 6  
7 pages

Covers the methods to be applied for the decommissioning of all types of water boreholes to protect ground water resources.

**ZWS 679:1999**  
**Power lawn-mowers, lawn tractors, lawn and garden tractors, professional lawn mowers and lawn and garden tractors with lawn mowing attachments – Definitions, safety requirements and test procedures**  
Price Code: Gr. 8  
72 pages  
Based on ISO 5395: 1990  
Replaces ZWS B4

Specifies safety requirements and test procedures applicable powered rotary and cylinder mowers.

**ZWS 680:1998**  
**Part 1:1999 Conductors**  
**Materials of insulated electric cables and flexible cords**  
Price Code: Gr. 7  
26 pages  
Based on SABS 1411: Part 1: 1986, IEC 60228: 1978

Covers the requirements for fire classes of conductors in insulated electric cables and flexible cords.

**Part 2:1999 Polyvinyl chloride (PVC)**  
Price Code: Gr. 7  
13 pages  
Based on SABS 1411: Part 11: 1987  
Covers requirements for PVC components in insulated electric cables and flexible cords.

**Part 3:1999 Elastomers**  
Price Code: Gr. 7  
31 pages  
Based on SABS 1411: Part 3: 1990

Covers the requirements for elastomer components in insulated electric cables and flexible cords.

**Part 4:1999 Cross-linked polyethylene (XLPE)**

Price Code: Gr. 3

6 pages

Based on SABS 1411: Part 4: 1984

Specifies the requirements for cross linked polyethylene (XLPE) insulation of electric cables.

**Part 5:1999 Halogen-free materials**

Price Code: Gr. 4

9 pages

Based on SABS 1411: Part 5: 1987

Specifies the requirements for non metal components (of electric cables and flexible cords) that do not contain halogens in their chemical composition.

**Part 6:1998 Armour**

Price Code: Gr. 4

8 pages

Based on SABS 1411: Part 6 1987

Covers requirements for three types of metal armour materials that are components of insulated electric cables and that provide protection against mechanical damage both during installation of cables and in services.

**ZWS 681:2001**

**Water quality-Determination of atrazine and other nitrogen and phosphorus containing pesticides in water by gas chromatography with nitrogen-phosphorus detector**

Price Code: Gr. 6

17 pages

Reprinted 2005

Describes a gas chromatographic (GC) method applicable to the determination of certain nitrogen and phosphorus containing pesticides in ground water and finished drinking water.

**ZWS 682:1999**

**Water quality – Determination of organochlorine pesticides-Liquid-liquid extraction gas chromatographic method**

Price Code: Gr. 6

21 pages

Based on Standard method for the examination of water and waste water method 66308B. Describes a liquid-liquid extraction gas chromatographic method for determination of organochlorine pesticides in water.

**ZWS 683:2000**

**Water quality – Determination of N-Methylcarbamoyloximes and N-Methylcarbamates-Direct aqueous injection HPLC with post column derivatization**

Price Code: Gr. 5

15 pages

Reprinted 2005

Describes a high performance liquid chromatographic (HPLC) method for the determination of certain N-Methylcarbamoyloximes and N - methylcarbamates in water.

**ZWS 684:1998**

**Petroleum jelly (petrolatum)**

Price Code: Gr. 4

10 pages

Based on SABS 1755:1997

Specifies requirements for refined petroleum jelly in 3 colour grades (white, snow-white and yellow) which is intended for use in pharmaceutical and cosmetic application.

**ZWS 685:1998**

**Petroleum jelly – Determination of pH value**

Price Code: Gr. 2

1 page

Based on SABS 1755: 1997

Describes the measurement of the pH of petroleum jelly.

**ZWS 686:1998**

**Petroleum jelly – Determination of evaporation loss**

Price Code: Gr. 3

5 pages

Based on SABS 175: 1997 (Clause 5.4)

Describes a method of determining evaporation loss of petroleum jelly.

**ZWS 687:1998**

**Petroleum jelly – Determination of arsenic content – Gutzeit method**

Price Code: Gr. 4

9 pages

Based on SABS 1755: 1997

Describe a method for the determination of arsenic content in petroleum jelly.

**ZWS 688:1998**

**Petroleum jelly – Determination of oil dissociation**

Price Code: Gr. 3

5 pages

Based on SABS 1755: 1997: (Clause 5.6)

Describes the method of determining oil dissociation of petroleum jelly.

**ZWS 689:1998**

**Petroleum products – Determination of drop melting point**

Price Code: Gr. 4

7 pages

Identical to IP 133: 1994

Describes a method for the determination of the drop melting point of petroleum products.

**ZWS 690:1998**

**Petroleum products – Determination of cone penetration**

Price Code: Gr. 4

7 Pages

Identical to IP 179: 1994

Describes the method for measuring with a penetrometer, the penetration of petroleum products as an empirical measure of consistency.

**ZWS 691:1998**

**Petroleum products – Determination of acidity and neutralisation value – colour indicator titration method**

Price Code: Gr. 9

10 pages

Based on IP 139: 1994

Specifies method for the determination of the acidity of unused lubricating oil, fuel oil and petroleum.

**ZWS 692:1998****Petroleum products – Determination of sulfated ash**

Price Code: Gr. 4

9 pages

Based on IP 163: 1994

Describes a method for determining the sulfated ash from un-used lubricating oils containing additives from concentrates used in compounding.

**ZWS 693:1998****Petroleum products – Determination of matter insolubles in toluene by membrane filtration method**

Price Code: Gr. 4

9 pages

Based on ASTM D4055: 1981

Describes a method for the determination of toluene insolubles by particles exceeding 0.8 um in new and used lubricating oils.

**ZWS 694:1998****Petroleum products – Determination of lead content – Dithizone extraction colorimetric method**

Price Code: Gr. 4

12 pages

Based on IP 224: 1994

Describes a method for the determination of trace amounts of lead in petroleum products in the range ug/l to mg/l.

**ZWS 695:1998****Petroleum products – Determination of saponification number – titration method**

Price Code: Gr. 4

11 pages

Based on IP 136: 1994

Describes a method for test for the determination of constituents in petroleum products that will saponify under the conditions of the test.

**ZWS 696:1998****Petroleum jelly – Determination of light absorption of a 0.05 % (by mass fraction) solution in trimethyl pentane or iso-octane at 290 nm maximum**

Price Code: Gr. 3

5 pages

Based on British Pharmacopoeia Volume 1:1993

Describes the method for the determination of light absorption of a 0.05 % (by mass fraction) solution for petroleum jelly in either trimethyl pentane or iso-octane at 290 nm maximum.

**ZWS 697:1998****Petroleum products – Determination of polycyclic aromatic hydrocarbons (PCAs)**

Price Code: Gr. 3

6 pages

Based on British Pharmacopoeia Volume 1:1993

Describes a method for the determination of polycyclic aromatic hydrocarbons in petroleum products.

**ZWS 698:1998****Petroleum products – Determination of colour – lovibond tintometer method**

Price Code: Gr. 4

11 pages

Based on IP 17: 1994

Describes a method for determining the colour of practically all petroleum products (dyed or undyed) except black oils and bitumens.

**ZWS 699:2000****Waste water – Determination of residual organo phosphorus pesticides gas – Gas chromatographic method**

Price Code: Gr. 4

10 pages

Reprinted 2005

Describes a method for the determination of residual chromatographic pesticides in waste water using gas chromatography.

**ZWS 700:1998****Protective helmets for motor cyclists**

Price Code: Gr. 7

35 pages

Replaces Z16: 1971

Based on SABS 799: 1983

Covers the requirements for the general design, construction, performance, marking, labelling and testing of protective helmets for use by motor cyclists on the roads.

**ZWS 701:1999****Radiological protection in dentistry**

Price Code: Gr. 4

11 pages

Reprinted 2010

Based on International Commission on Radiological Protection (ICRP) Publication of 1991, the 1990 Recommendation of the ICRP, ICRP Vol. 21 .Covers requirements for radiological protection in dental practice.

**ZWS 702****The use of radioactive materials in medical practice****Part 1:2000 Unsealed sources**

Price Code: Gr. 6

20 pages

Reprinted 2010

Provides guidance to users of unsealed radioactive materials in hospitals and medical laboratories.

**Part 2:2000 Sealed sources**

Price Code: Gr. 4

10 pages

Reprinted 2010

Contains guidance on the use of sealed or other solid sources for diagnostic purposes.

**ZWS 703:2000****Radiation protection in veterinary radiology**

Price Code: Gr. 6

24 pages

Reprinted 2010

Based on international basic safety standards for protection against ionizing radiation and for the safety of radiation sources, safety series no 151 and Radiation protection in veterinary radiology, Irish Nuclear Energy Board Code of Practice.

Specifies requirements for radiation protection in veterinary practice.

**ZWS 704:2000****Radioactive waste management**

Price Code: Gr. 7  
40 pages  
Reprinted 2010

Covers the management of liquid (aqueous and organic) solid and gaseous radioactive waste and spent sealed sources at the users' premises.

**ZWS 705:2000****The safe use of X-rays in medical diagnosis**

Price Code: Gr. 8  
Reprinted 2010  
68 pages  
Based on the National Radiation laboratory of New Zealand Specification

Covers the safe use of X-rays in medical diagnosis.

**ZWS 706:2001****Canned ox tongue in gelatine and stewed steak in gravy**

Price Code: Gr. 7  
37 pages  
Based on SABS 1675: 1997

Specifies requirements for the manufacture, production processing and treatment of canned ox tongue in gelatine and stewed steak in gravy in order to ensure a safe, sound and wholesome product.

**ZWS 707:1999****Refined sugar - Determination of colour and turbidity**

Price Code: Gr. 4  
7 pages  
Based on Laboratory manual for South Africa Sugar Factories  
Specifies a method for determination of colour of refined sugar for household use.

**ZWS 708:1999****Refined sugar - Determination of grain size**

Price Code: Gr. 3  
5 pages  
Based on Laboratory manual for South Africa Sugar factories

Specifies method for the determination of grain size in refined sugar.

**ZWS 709:1998****Bow and skewness in woven textile fabric**

Price Code: Gr. 3  
6 pages  
Identical to SABS Method 91: 1982

Specifies a method for the determination of bow and skewness in woven textile fabrics.

**ZWS 710:1999****Fluidity of cotton and certain cellulosic man-made fibres in cuprammonium solution (Modified Method)**

Price Code: Gr. 5  
11 pages  
Based on SABS Method 115: 1980

Specifies a method for the determination of the fluidity of cotton and certain man-made fibres in cuprammonium solution.

**ZWS 711:2000****Water quality – Determination of chlorinated phenoxy acids and other acidic herbicides by gas chromatography**

Price Code: Gr. 6  
19 pages  
Based on method 6251B for Examination of water and wastewater(19<sup>th</sup>Ed)

Describes the method for the determination of chlorinated phenoxy acids and other acidic herbicides by gas chromatography.

**ZWS 712:1999****Newsprint**

Price Code: Gr. 4  
8 pages  
Based on MS 855: 1983

Specifies requirements for newsprint, suitable for printing duplicating and pen and ink writing.

**ZWS 717:2008****The manufacture and erection of timber trusses**

Price Code: Gr. 9  
107 pages  
Based on SANS 10243:04

Gives guidance on the manufacture, erection and bracing of timber roof trusses, including nail plated trusses and bolted trusses with lapped members.

**ZWS 718:2017****Blankets suitable for use in the public sector**

Price Code: Gr. 5  
6 pages  
Standard specifies requirements for the synthetic fibre blankets suitable for use in the public sector. Requirements for adults', children's and infants' blankets are specified

**ZWS 719:2012****Biodiesel fuel blend stock (B100) for middle distillate**

Price Code:Gr. 7  
9 pages  
Identical to ASTM 6751:2000  
Amended by AMD 674:2014

Covers four grades of biodiesel (B100) for use as a blend component with middle distillate fuels.

**ZWS 720:2003****Meat and meat products – Determination of nitrates and nitrites – Xylenol method**

Price Code: Gr. 3  
5 pages  
Based on AOAC official methods of analysis: 1990

Describes the determination of nitrates and nitrites in meat and meat products.

**ZWS 721:2001****Meat and meat products – Determination of nitrogen and protein – Block digestion method**

Price Code: Gr. 3  
5 pages  
Based on AOAC

Describes the method for the determination of nitrogen and protein in meat and meat products.



**ZWS 722:1998****Water quality – Determination of sodium by atomic absorption spectrometry**

Price Code: Gr. 4

8 pages

Based on ISO 9964: Part 1: 1993

Specifies a method for the determination of dissolved sodium (Na) by flame atomic absorption spectrometry (AAS). It is intended for the analysis of raw and drinking water.

**ZWS 723:1998****Water quality – Determination of phenol index-4-aminoantipyrine spectrometric method after distillation**

Price Code: Gr. 6

17 pages

Identical to ISO 6439:1990

Specifies methods of determining the phenol index in drinking water and waste waters.

**ZWS 725:1999****Ostrich feed**

Price Code: Gr. 4

8 pages

Specifies the requirements for ostrich feed.

**ZWS 728:1999****Wheat flour - Determination of colour**

Price code: Gr. 2

4 pages

Based on Henry Simon and the Kent Jones test methods

Covers the determination of colour of wheat flour by the Henry Simon or the Kent Jones method.

**ZWS 729:1999****Wheat flour - Determination of bran mass fraction**

Price Code: Gr. 3

5 pages

Specifies a method for determination of bran mass in wheat flour.

**ZWS 730:2015****The manufacture of sanitary pads**

Price Code: Gr. 7

24 pages

Covers the manufacturing and performance requirements for sanitary pads used during menstruation.

**ZWS 731:1999****Woodcutting bandsaw blades**

Price Code: Gr. 5

13 pages

Based on BS 4411: 1969

Relates to the terminology, manufacture, properties, dimensions, and tolerances of both “narrow” and “wide” bandsaw blades, either supplied in coil or cut to length joined ready for use.

**ZWS 732:2001****Electrical cables – Flexible cords and flexible cables**

Price Code: Gr. 7

41 pages

Based on SABS 1574:1992

Specifies the characteristics of single-core flexible insulated wires and multicore flexible cords and flexible cables of rated operating volt-

age up to and including 600 V to earth and 1 000 V between conductors and intended for use with electrical appliances. Insulating and sheathing materials of both PVC and rubber are covered.

**ZWS 733:2000****Shaped refractory bricks**

Price Code: Gr. 5

16 pages

Based on SABS 35: 1982

Covers four categories of shaped refractory bricks intended for use as a construction material or lining.

**ZWS 734:2000****Leaded petrol**

Price Code: Gr.5

13 pages

Based on SABS 299: 1995

Species an inland grade of leaded petrol with research octane number (RON) of 93 suitable for use in spark-ignition internal-combustion engines other than aviation piston engines.

**ZWS 735:2000****Refractory bricks – Determination of dimensions**

Price Code: Gr. 3

13 pages

Based on SABS 299: 1995

Specifies methods for determining the dimensions of refractory bricks.

**ZWS 736:2000****Refractory bricks – Determination of warpage and squareness**

Price Code: Gr. 4

8 pages

Specifies method for determination of warpage and squareness of refractory bricks.

**ZWS 738:2000****Refractory bricks – Determination of bulk density, bulk volume, apparent porosity and apparent relative density**

Price Code: Gr. 4

11 pages

Specifies a method for determination of bulk density, bulk volume, apparent porosity and apparent relative density of refractory bricks.

**ZWS 739:2000****Refractory bricks – Determination of the pyrometric cone equivalent (refractoriness)**

Price Code: Gr. 4

8 pages

Specifies a method for determination of the pyrometric cone equivalent (refractoriness) of refractory bricks.

**ZWS 740:2000****Shaped refractory bricks – Determination of permanent changes in dimensions on heating**

Price Code: Gr. 4

10 pages

Specifies a method for determining the permanent change in dimensions on heating.

**ZWS 741:2000**  
**Shaped refractory bricks – Determination of cold crushing strength**  
Price Code: Gr. 4  
8 pages

Specifies a method for determination of cold crushing strength of shaped refractory bricks.

**ZWS 742:2000**  
**Precast concrete post and panel walls**  
Price Code: Gr. 6  
17 pages  
Based on SABS 1372: 1983  
Reprinted 2004

Covers precast concrete components of the following types for use in free standing posts (a) Posts (b) Plain panels (c) Decorative panels.

**ZWS 743:2000**  
**Paper and board – Determination of thickness and apparatus – bulk density**  
Price Code: Gr. 5  
15 pages  
Technically identical to ISO 534: 1988  
Reprinted 2004

Specifies two methods of measuring the thickness of paper and board and of calculating the apparent bulk.

**ZWS 744:2003**  
**Installation of solar water heaters**  
Price Code: Gr. 9  
92 pages  
Based on AS/NZS 3500: 4:2: 1997

Sets out the requirements for the installation of domestic-type water heaters using portable water. Includes aspects of the installation from and including the valve(s) on cold water inlet to the isolation valve fitted immediately prior to the point at which the system is connected to the hot water reticulation.

**ZWS 746:2004**  
**Fruit jams, jellies and marmalades**  
Price Code: Gr.7  
26 pages  
Replaces ZWS S4: 1968

Covers the manufacture, production, processing or treatment of fruit jams, fruit jellies and marmalades.

**ZWS 747:2003**  
**Canned fruits**  
Price Code: Gr. 8  
70 pages  
A revision of ZWSS7: 1971  
Amended by MD597:1999

Specifies the manufacture, production, processing or treatment of canned fruits of different types and grade.

**ZWS 748:2021**  
**Vegetable cooking oil**  
Price Code: Gr. 4  
9 pages  
Replaces ZWSS22: 1969  
Reprinted 2004  
Second Revision of ZWS 748:2001

This Standard applies to the vegetable oils described in Clause 3.1 presented in a state for human consumption. Provision is also made for mixed oil, containing any of the above pure oils in any proportion. Where this Zimbabwe Standard conflicts in any way with the relevant Government Acts and Regulations and the local Municipal By-laws, the requirements of the Government Acts and Regulations and of the local. Municipal By-laws take precedence over those in this standard.

**Note.** The titles of the publications referred to in this standard are listed in the Foreword.

**ZWS 749:2024**  
**Requirements for a Hazard Analysis and Critical Control Point (HACCP) system**  
Price Code: Gr. 9  
27 pages  
Based on SABS 0330: 1999 and Codex guidelines on HACCP  
First published 2001, as ZWS 749,  
First reprinted 2004, as ZWS 749,  
First revision 2009, as ZWS 749,  
Reconfirmed 2018, as ZWS 749,  
Second revision 2023, as ZWS 749  
Third revision 2024, as ZWS 749.

This Zimbabwe Standard specifies the requirements for a HACCP system for the development, implementation and effective management of a functional process hazard control programme in the food supply chain to enhance food safety. Where this Zimbabwe Standard conflicts in any way with the relevant Government Acts, Regulations and Local Municipal By-laws, the requirements of the Government Acts and Regulations, and of the local Municipal By-laws take precedence over those in this standard.

**ZWS 750:2002**  
**Absorbent cotton wool**  
Price Code: Gr. 4  
9 pages  
Based on SABS 228: 2000  
Specifies requirements for the grades of absorbent cotton wool.

**ZWS 751:2024**  
**Automotive diesel fuel**  
Price Code: Gr. 4  
5 pages  
Based on SANS 342  
First published 2000, as ZSW 751,  
First reprint 2012, as ZWS 751,  
First revision 2012, as ZWS 751,  
Second reprint 2017, as ZWS 751,  
Second revision 2024, as ZWS 751

This Zimbabwe Standard specifies one grade of automotive diesel fuel suitable for use in compression ignition engines including high-speed engines.

**ZWS 754:2012**  
**Window sills and copings**  
Price Code: Gr. 6  
22 pages

Specifies the requirements for window sills and copings of precast concrete and clayware.

**ZWS 755:2002**  
**Knee-high stockings and ankle socks**  
Price Code: Gr. 4  
11 pages  
Based on SABS 1118-9: 2000

Covers the requirements for two types of knee-high stockings and two types of ankle socks for school wear.

**ZWS 756:2002**

**Men's and women's hose for institutional use**

Price Code: Gr. 5

16 pages

Based on SABS 1382 Part 1: 1995

Specifies requirements for women's and men's hose.

**ZWS 758:2008**

**Use of masonry- Structural use of unreinforced masonry**

Price Code: Gr. 9

99 pages

Gives recommendations for the structural design of unreinforced masonry constructed of brick masonry, block masonry, masonry of square dressed natural stone and random rubble masonry.

**ZWS 759:2001**

**Dried salted fish**

Price Code: Gr. 4

11 pages

Based on KS 05:424: 1985

Species requirements and methods of test for dried salted fish.

**ZWS 761:2000**

**Burnt clay paving units**

Price Code: Gr.7

16 pages

Reprinted 2004

Specifies the requirements for burnt clay pavers intended for use in the construction of paved surfaces subject to vehicle loading and pedestrian traffic.

**ZWS 762:2017**

**Steel door frames**

Price Code:

Gr.5

17 pages

Based on SANS 1129:2002

Reprinted 2004

This specification covers steel door frames (with or without fanlight frames) for walk-through doors.

**ZWS 763:1999**

**Peanut butter**

Price Code: Gr. 4

12 pages

Replaces S31: 1971

Amended by 602:1999

Reprinted 2004

Covers the manufacturing, production, processing or treatment of peanut butter.

**ZWS 764:2001**

**Cables and conductors – Dimensions of the components of electric cables – flexible cables and flexible cords**

Price Code: Gr. 5

5 pages

Based on SABS Method495: 1990

Specifies a method of test for determining the dimensions of the components of electric cables, flexiblecords and flexible cables.

**ZWS 765:2001**

**Cables and conductors – Flexing test on flexible cords**

Price Code: Gr. 3

7 pages

Based on SABS Methods 515: 1980

Specifies a method of test for flexing on flexible cords.

**ZWS 766:2001**

**Cables and conductors – Kink resistance of circular flexible cords**

Price Code: Gr. 4

10 pages

Based on SABS Method 516: 1990

Specifies a method of test for kink resistance of circular flexible cords.

**ZWS 767:2001**

**Cables and conductors – Conductor resistance**

Price Code: Gr. 4

8 pages

Based on SABS Method 523:1992

Specifies a method of testing the conductor resistance of cables.

**ZWS 768:2001**

**Cables and conductors – Alternating current spark test on electric cables and cords**

Price Code: Gr.3

5 pages

Based on SABS Method 524: 1980

Specifies a method of determining the alternating current spark test on electric cables and conductors.

**ZWS 769:2001**

**Cables and conductors – Power frequency voltage test on electric cables**

Price Code: Gr. 3

6 pages

Based on SABS Method 525: 1980

Specifies a method of testing the power frequency voltage on electric cables.

**ZWS 770:2001**

**Cables and conductors – Dielectric resistance on electric cables**

Price Code: Gr. 3

5 pages

Based on SABS Method 526: 1980

Specifies a method of testing the dielectric resistance of electric cables.

**ZWS 771:2001**

**Cables and conductors – Heat resistance of cables and flexible cords**

Price Code: Gr. 3

5 pages

Based on SABS Method 1204: 1992

Specifies a method for testing the electrical and mechanical integrity of a cable or flexible cord when in direct contact with a hot surface while under electrical high tension.

**ZWS 772:2001**

**Cables and conductors – flexing test for extensible leads**

Price Code: Gr.

4

7 pages

Based on SABS 1205: 1996

Specifies a method of testing the ability of extensible lead to withstand flexing.

**ZWS 773:2001**

**Cables and conductors – Wear resistance of braided and unkinkable cords**

Price Code: 3

5 pages

Based on SABS Method 1200: 1996

Specifies a method of testing the ability of braided and unkinkable cords to withstand wear.

**ZWS 774:2001**

**Cables and conductors – Bending test for highly flexible cords such as tinsel cords**

Price Code: Gr.3

5 pages

Based on SABS Method 1207: 1992

Specifies a method for testing the ability of highly flexible cords to bend.

**ZWS 775:2001**

**Cables and conductors – Extension test for extensible leads**

Price Code: Gr. 3

5 pages

Based on SABS Method 1208: 1992

Specifies a method of testing the extensibility of extensible leads.

**ZWS 776:2001**

**Cables and conductors - Overall dimensions and ovality of electric cables and cords**

Price Code: Gr. 3

5 pages

Based on SABS Method 1209: 1992

Specifies a method determining the overall dimensions and ovality of electric cables and cords.

**ZWS 777:2001**

**The Safety of water treatment chemicals for use in the food industry**

Price Code: Gr. 4

12 pages

Based on SABS 1822: 2000

Sets minimum requirements for the safety of water treatment chemicals, intended for use in portable/process water or boiler feed waters, where the treated water or steam produced might come into contact with food or food products.

**ZWS 778:2012**

**Cleaning chemicals for use in the food industry**

Price Code: Gr. 5

15 pages

Based on SABS 1828: 2000

Reprinted 2009

Specifies general requirements for cleaning chemicals intended for use in the food industry. Sets minimum requirements for the safety of such cleaning materials, which are intended for use on food processing equipment and might come into contact with food products.

**ZWS 779:2001**

**Tobacco wrapping paper (moisture-barrier coated)**

Price Code: Gr. 4

8 pages

Specifies tobacco wrapping paper coated in such a way as to effectively prevent the egress of moisture (i.e. loss of tobacco condition during transit).

**ZWS 780:2001**

**Wooden clothes pegs**

Price Code: Gr. 5

12 pages

Based on SABS 1397:1983

Covers the material, finish, dimensions and performance of wooden clothes pegs.

**ZWS 781:2001**

**Safety matches**

Price Code: Gr. 7

25 pages

Specifies requirements for the safety, performance, classification and marking of matches, together with their match containers.

**ZWS 782:2003**

**Pasteurized milk and pasteurized homogenized milk**

Price Code: Gr.4

7 pages

Based on MS 410: 1983

Described the requirements and the methods of sampling and testing for pasteurized milk pasteurized homogenized milk intended for human consumption.

**ZWS 783:2005**

**Carbon steel welded horizontal cylindrical storage tanks**

Price Code: Gr. 6

20 pages

Based on BS 2594: 1975

Specifies requirements for design and construction of carbon steel fusion welded horizontal cylindrical storage tanks with dished and flanged ends for the storage of liquids. It includes both above – ground tanks with saddle supports and underground tanks.

**ZWS 784:2001**

**Adhesive for fixing ceramic tiles**

Price Code: Gr. 7

42 pages

Specifies performance requirements for organic-based adhesive, cement – based adhesives and cement-based mortars containing organic additives used as adhesives for the installation of ceramic wall and floor tiles and mosaics.

**ZWS 785:2010**

**Electrical Security Installations – Electric Security Fences (Non – Lethal)**

Price Code: Gr. 7

25 pages

Based on SANS 10222-3: 2003

Gives the basic requirements for the planning, erection, installation and commissioning of electric fences. The requirements of this standard are in line with those in international electric fence standards but this standard gives additional requirements for situations that are unique to Zimbabwean conditions.

**ZWS 786:1973**  
**Sizes of paper**  
Price Code: Gr. 6  
18 pages  
Reprint of ZWS P1: 1973

Covers trimmed sizes of paper used for administrative, commercial, and technical purposes and for certain classes of printed matter.

**ZWS 787:2003**  
**Skimmed milk powder/low fat dried milk**  
Price Code: Gr. 3  
6 pages  
Based on MS 760: 1992

Specifies the requirements and methods of sampling and tests for skimmed milk powder/ low-fat dried milk, intended for human consumption.

**ZWS 788:2003**  
**Whole milk powder**  
Price Code: Gr. 3  
6 pages  
Based on Codex standard no. 207: 1999

Specifies the requirements and methods of sampling and tests for whole milk powder, intended for human consumption.

**ZWS 789:2003**  
**Sterilized milk**  
Price Code: Gr. 3  
6 pages  
Based on SABS 1678: 1997

Specifies the requirements and the methods of sampling and testing for sterilized milk intended for human consumption

**ZWS 790:2003**  
**Ultra high temperature milk**  
Price code: Gr. 4  
7 pages  
Based on MS 411: 1986

Specifies the requirements for milk and homogenized milk which has been treated by the ultra high temperature method, either by the direct aulinary steam injection into the milk or by indirect heating.

**ZWS 791:2015**  
**Packaged drinking water other than natural mineral water**  
Price Code: Gr. 7  
10 pages

The standard specifies the description, treatment, testing, packaging and labelling of water that is not natural mineral water. Thewater maybe offered as packaged non-carbonated(still) water or as packaged carbonated (sparkling) water with or without permitted substances

**ZWS 792:2015**  
**Yoghurt (yogurt)**  
Price Code: Gr. 4  
5 pages  
Based on codex alimentarius standard A-11 (a) 1975  
First published 2003  
First revision 2015

Specifies the requirements and the methods of sampling and testing for yoghurt.

**ZWS 794:2016**  
**Cultured milk**  
Price Code: Gr. 4  
3 pages  
Based on codex alimentarius standard A-11 (a) 1975  
First revision 2016

Specifies the requirements and methods of sampling and testing for cultured milk.

**ZWS 795:1970**  
**Genuine pure soap**  
Price Code: Gr. 3  
5 pages

Applies to genuine pure soap such as is supplied in bars, cakes or tablets to the general public.

**ZWS 796:2003**  
**Ice-creams and ice cream mixes**  
Price Code: Gr. 4  
9 pages  
Based on standard no: 137: 1983

Specifies the requirements and the methods of testing and for sampling of ice-cream and mixes in liquid or powder form. Also applies to ice-cream part of foods which contain ice-cream as an ingredient.

**ZWS 797:2003**  
**Cream (for direct consumption)**  
Price Code: Gr. 4  
8 pages  
Based on Codex Alimentanus standard no. A-9: 1976

Specifies the requirements for cream, half-cream, whipping cream, whipped cream subjected to pasteurization, sterilization, ultra-high temperature (UHT) or ultra pasteurization intended for direct consumption.

**ZWS 798:2003**  
**Butter**  
Price Code: Gr. 4  
7 pages  
Based on Codex standard A-1: 1971

Specifies the requirements and methods of sampling and testing of butter intended for further processing.

**ZWS 799:2003**  
**Condensed milk**  
Price Code: Gr. 4  
7 pages  
Based on MS 25: 1983

Specifies the requirements of methods of analysis of condensed milk.

**ZWS 800:2003**  
**Cheese**  
Price Code: Gr.4  
8 pages  
Based on Codex Alimentarius standard A- 6: 1996

Applies to all products intended for direct consumption or further processing in conformity with the definition of cheese in the standard.

**ZWS 802:2004****Edam cheese**

Price Code: Gr. 3

6 pages

Based on Codex Alimentarius standard C- 4: 1966

Prescribed the requirements and methods of sampling and testing for Edam cheese intended for human consumption.

**ZWS 803:2004****Parmesan cheese**

Price Code: Gr. 4

7 pages

Based on Codex Alimentarius standard C- 1: 1968

Specifies the requirements and methods of sampling and testing for Parmesan cheese intended for human consumption.

**ZWS 804:2003****Cottage cheese and cream cheese**

Price Code: Gr. 4

7 pages

Based on Codex Alimentarius standard C -16: 1968

Specifies the requirements for cottage cheese and cream cheese.

**ZWS 805:2004****Hard cheese**

Price Code: Gr. 4

7 pages

Based on Codex Alimentarius standard C -16: 1999

Prescribes the requirements and the methods of sampling and testing for hard cheese intended for human consumption.

**ZWS 806:2021****Hazardous Waste Management**

Price Code: Gr. 8

10 pages

First Revision of ZWS 806:2012

Specifies the minimum requirements for hazardous waste management (may also be applied in some part to the management of waste management of waste in general). It sets out the required procedures and practice on the safe management of hazardous waste.

**ZWS 808:2002****Method of testing materials for resistance to fungal growth – Resistance of dried or cured adhesives and glues to fungal growth**

Price Code: Gr. 3

6 pages

Based on AS 1157: Part 10: 1979

Described procedures for determining the resistance of water resistant and water sensitive adhesives and glues to fungal growth.

**ZWS 809:2002****Adhesives – Glossary of terms used in the adhesives industry**

Price Code: Gr. 7

39 pages

Based on As 1309: 1974

Covers glossary of terms in the adhesives industry.

**ZWS 810:2002****Ceramic floor and wall tiles– Determination of water absorption**

Price Code: Gr. 3

5 pages

Based on EN 99: 1991

Defines a method of test for determining the water absorption of ceramic tiles.

**ZWS 812:1972****Gypsum plasterboard (metric units)**

Price Code: Gr. 4

11 pages

Based on SABS 266: 1971

Reprint of ZWS A42: 1972

Reprinted 2001

Reprinted 2004

Covers gypsum plasterboards for use as a building board in the interior buildings.

**ZWS 813:1980****Portable fire extinguishers – Hand – operated fire extinguishers for aircraft and other purposes**

Price Code: Gr. 4

11 pages

Reprint of ZWS A31: Part 5: 1974

Reprinted 2001

Reprinted 2004

Specifies performance requirements for hand-operated portable fire extinguishers for use in aircraft and other forms of transport.

**ZWS 814:1968****Concrete pipe fittings including manholes and inspection covers**

Price Code: Gr. 5

14 pages

Reprint of ZWS A29: 1968

Reprinted 2001

Covers fittings, including concrete collars and concrete junctions suitable for use with concrete pipes to ZWS 315, together with manholes and concrete inspection chambers for drainage purposes.

**ZWS 815:1974****Materials for soil stabilization**

Price Code:

Gr. 5

12 pages

Reprint of ZWS A19 1974

Reprinted 2001

Covers two types of materials, hydrated (high –calcium content) lime and cement, those being the two main materials presently used in soil stabilization.

**ZWS 816:1968****Precast reinforced box culverts**

Price Code:

Gr. 5

16 pages

Reprint of ZWS A28: 1968

Reprinted 2001

Applies to precast reinforced concrete rectangular box culverts primarily intended for conveying highway vehicle loadings.

**ZWS 817:2013****Coffins and caskets**

Price

Code:

Gr.

6

19 pages

Covers the requirements for the materials, construction, basic dimensions, finish and performance of the following two types (each of six classes) of coffins/caskets for human remains.

**ZWS 818:1964**  
**Building limes**  
Price Code: Gr. 6  
20 pages  
Reprint of ZWS A15: 1963  
Reprinted 2002

Covers four grades of hydrated lime and two grades of quick-lime intended for use in plastering and rendering.

**ZWS 819:2010**  
**Toothpaste**  
Price Code: Gr. 6  
21 pages  
Based on SABS 1302:2008

Covers the requirements and test methods for toothpastes (Flouridated and non-flouridated) intended for use with a tooth brush in the cleaning of natural teeth to promote oral hygiene.

**ZWS 820:1968**  
**Silver - plated copperware**  
Price Code: Gr.5  
12 pages  
Amended by MD 74:1968  
Reprinted 2008

Specification lays down requirements for copperware electroplated with silver primarily intended for domestic use but excluding cutlery. It does not cover design except as far as serviceability is concerned.

**ZWS 822:1969**  
**Damp-proofing of buildings**  
Price Code: Gr. 5  
14 pages  
Based on BS CP 102  
Reprint of ZWS CA6: 1969  
Replaces ZWS H1:1962  
Reprinted 2001

Sets out methods and makes recommendation for the damp-proofing of walls and floors at or near ground level.

**ZWS 823:1975**  
**Underfeed stokers (ram or screw type)**  
Price Code: Gr. 4  
8 pages  
Reprint of ZWS B1: 1967  
Reprinted 2001

Specifies requirements for underfeed stokers of the ram or screw type, rated up to 550 kg or coal per hour and primarily intended for heating tobacco curing barns.

**ZWS 824:2012**  
**Files and Rasps**  
**Part 1 Rasps and engineer's file**  
Price Code: Gr.7  
33 pages  
Reprinted 2012

Relates to the manufacture, dimensions and testing of the following patterns of rasps and engineer's files.

**ZWS 825:1971**  
**Steel tubes for general engineering purposes**  
Price Code: Gr. 5  
11 pages  
Reprint of ZWS B3 1971

Reprinted 2002

Covers the dimensional, material and mechanical requirements of plain carbon steel tubes not exceeding 0.165 m in outside diameter for general engineering purposes.

**ZWS 826:1973**  
**Industrial open type metal flooring and stair treads**  
Price Code: Gr. 5  
14 pages  
Reprint of ZWSB9 1973  
Amended by MD 258: 2002  
Reprinted 2002

Specifies requirements for the design, construction and testing of industry open metal flooring panels and stair treads.

**ZWS 827:1960**  
**Mastic asphalt for roads and footways (limestone aggregated)**  
Price Code: Gr. 4  
10 pages  
Reprint of A4 1960  
Based on BS 1447: 1948  
Reprinted 2001

Gives requirements for mastic asphalt with limestone aggregate for roads and footways.

**ZWS 828:2002**  
**Dimensions of hosiery**  
Price Code: Gr. 2  
4 pages  
Based on SABS Method 369: 1973

Specifies a test method for dimensions of hosiery.

**ZWS 829:1973**  
**Rubber reel hose for fire fighting purposes**  
Price Code: Gr. 8  
8 pages  
Reprint of ZWS A26: 1971  
Based on BS 3169: 1978  
Reprinted 2001

Specifies requirements for materials, construction and dimension for four types of rubber reel hose of 19 mm internal diameter for the fighting purposes.

**ZWS 830:1979**  
**Glazing putty for wood and steel sashes**  
Price Code: Gr.5  
14 pages  
Reprint of ZWS A24: 1967  
Based on SABS 680: 1959  
Reprinted 2002

Covers two types of putty for glazing window frames.

**ZWS 831:2003**  
**Cream powder**  
Price Code: Gr. 4  
6 pages  
Based on Codex standard 207: 1999

Specifies the requirements and methods of sampling and testing for cream powder intended for human consumption.

**ZWS 832:1968****Distribution miniature circuit-breaker boards for low and medium voltages****Part 1: Single phase boards (80A max incoming load)**

Price Code: Gr. 4

11 pages

Reprint of ZWS C9: Part 1: 1968

Reprinted 2002

Relates to single –phase distribution boards using miniature circuit breakers intended for use in alternating current electricity distribution systems.

**ZWS 833:1971****Tubular steel poles**

Price Code: Gr. 4

10 pages

Amended by MD 650: 2003

Reprint of ZWS C14: 1971

Reprinted 2002

Covers tubular steel poles and fittings for telephone and electric supply lines and similar purposes

**ZWS 834:1972****Enamelled copper conductors (polyvinyl) acetal base with high mechanical properties****Part 1: Round wire**

Price Code: Gr. 7

36 pages

Reprint of ZWS C15: 1972

Reprinted 2002

Specifies requirements and dimensions for round copper wire covered with a synthetic enamel with high mechanical properties based on a vinyl acetal resin.

**ZWS 835:1971****Three-phase induction motors**

Price Code: Gr. 7

40 pages

Reprint of ZWS C17: 1971

Reprinted 2003

Covers three phase alternating current induction motors of rating not exceeding 150 kW 1000 r.p.m for alternative voltages not exceeding 660 V between lines at a frequency of 50 Hz.

**ZWS 836:1972****Electric kettles and similar appliances**

Price Code: Gr. 7

26 pages

Reprint of ZWS C18: 1972

Reprinted 2002

Covers electrical kettles and similar portable electrical appliances for heating water and non-corrosive aqueous solutions intended for operation at voltages not exceeding 250 V to earth and having current ratings not exceeding 15 A.

**ZWS 837:1972****Electrically-heated laboratory drying ovens**

Price Code: Gr. 4

11 pages

Reprint of ZWS C19: 1972

Based on BS 2648: 1955

Reprinted 2002

Specifies the performance requirements of electrically heated laboratory ovens used for the determination of moisture by drying within the temperature range 95 °C to 110°C.

**ZWS 838:1972****Bottle coolers**

Price Code: Gr. 6

18 pages

Reprint of ZWS C20: 1972

Reprinted 2002

Refers to refrigerated cabinets designed for storage and display of soft drink at temperature between 5 and 10 °C.

**ZWS 839:1970****Exhaust silencers for passenger cars**

Price Code: Gr. 6

7 pages

Reprint of ZWS D6: 1970

Reprinted 2002

Covers the basic constructional requirements and materials used in the manufacture of exhaust silencers for passenger motor cars.

**ZWS 840: 2002****Conditioning of textiles and standard temperature atmosphere for determining their physical and mechanical properties (metric units)**

Price Code: Gr. 2

3 pages

Based on SABS Method 70: 1972

Describes a method for conditioning of textiles.

**ZWS 841:1972****Safety razor blades**

Price Code: Gr. 4

10 pages

Reprint of ZWSS36: 1972

Reprinted 2002

Set out the requirements for two qualities of safety razor blades.

**ZWS 842:1971****Flexible vinyl flooring**

Price Code: Gr. 6

19 pages

Reprint of ZWS A45: 1971

Amended by AM 649:2003

Reprinted 2002

Covers two thickness of flexible vinyl flooring (single –ply and laminated) in the form of sheeting and straight-sided tiles).

**ZWS 843:1964****Internal plastering on solid ground**

Price Code: Gr. 6

18 pages

Reprint of ZWS CA5: 1964

Reprinted 2002

Lays down recommendations for the proportioning of normal types of plaster and the application of the plaster or internal back-ground.



**ZWS 844:2014**  
**Paper serviettes/napkins**  
Price Code: Gr. 3  
7 pages  
Based on KS 2000:2007

Specifies requirements and test methods for paper serviettes/napkins in sheet form for hygienic purposes.

**ZWS 845:1971**  
**Reflex –reflecting vehicle number plates**  
Price Code: Gr. 6  
18 pages  
Reprint of ZWS D8 1971  
Reprinted 2002

Specifies requirements for reflex-reflecting number plates for fitting to vehicles.

**ZWS 846:1973**  
**Tobacco tying twine**  
Price Code: Gr. 3  
6 pages  
Reprint of ZWS N10: 1973  
Reprinted 2002

Covers three tobacco tying twine.

**ZWS 847:1972**  
**Limestone flour for use in animal feeding stuffs**  
Price Code: Gr. 4  
11 pages  
Reprint of ZWS N8: 1972  
Reprinted 2002

Covers the chemical composition, sampling, packing, marking and methods of test for limestone flour for use in animal feeding stuffs.

**ZWS 848:1973**  
**Portable and mobile screw conveyors for agricultural use**  
Price Code: Gr. 4  
11 pages  
Reprint of ZWS N9: 1973  
Reprinted 2002

Covers requirements for portable and mobile screw conveyors of the tubular type constructed of mild steel.

**ZWS 849:1969**  
**Knapsack sprayers**  
Price Code: Gr. 5  
15 pages  
Amended by MD 649: 2003  
Reprint of ZWS N6: 1969  
Reprinted 2002

Applies to knapsack sprayers equipped with hand operated pump, pressure container and discharge line with a cut off device.

**ZWS 850:1969**  
**Solid copperware**  
Price Code: Gr. 3  
4 pages  
Reprint of ZWS H5: 1969  
Reprinted 2002

Lays down requirements for solid copperware primarily intended for domestic use.

**ZWS 851:2002**  
**Cane Spirit and Vodka**  
Price Code: Gr. 3  
5 pages  
First reprint of CAS S28:2002  
Reprinted 2009

Covers quality of alcohol content, sweetening chemical, physical, packaging and marking requirements for canned spirit and vodka

**ZWS 853:1974**  
**Beehives**  
Price Code: Gr. 5  
15 pages  
Reprint of ZWS N4: 1974  
Reprinted 2002

Give the dimensions essential to secure interchangeability of the parts of beehives of the langstroth design.

**ZWS 854:1974**  
**Coated knitted fabrics for upholstered furniture (PVC) types**  
Price Code: Gr. 5  
11 pages  
Reprint of ZWS L 10 1972  
Reprinted 2002

Specifies requirements for coated fabric for upholstered furniture.

**ZWS 855:1971**  
**Loomstate cotton duck**  
Price Code: Gr. 6  
16 pages  
Reprint of ZWS L 8: 1971  
Reprinted 2002

Covers twelve qualities of plain woven cotton fabric in the loomstate suitable for tents, tarpaulins and equipage.

**ZWS 856:1965**  
**General purpose blankets for departmental and institutional use**  
Price Code: Gr. 4  
9 pages  
Reprint of ZWS L6: 1965  
Reprinted 2002

Covers blankets with all wool weft and all cotton warp.

**ZWS 857:1964**  
**Printers metal**  
Price Code: Gr. 6  
24 pages  
Reprint of ZWS H2:1964  
Reprinted 2002

Covers six grades of printers metal for mechanical type-casting machines.

**ZWS 858:2005**  
**Timber drums for insulated electric cables and bare conductors**  
Price Code: Gr. 7  
26 pages  
Based on AS/NZS: 2857: 1996  
Amended No MD 662: 2009

Specifies requirements for timber drums up to 5t capacity lot transport and storage of insulated electric cables, bare conductors and other products for which drums are suitable.

**ZWS 860:1967****Soft solders**

Price Code: Gr. 4

9 pages

Reprint of H3: 1967

Reprinted 2002

Sets out requirements for antimonial and non-antimonial soft solders for general use and those for higher temperature.

**ZWS 861:2003****Farm implements – Animal drawn plough shares**

Price Code: Gr. 6

17 pages

Specifies the requirements of both the upset and flat shares.

**ZWS 862:2004****The product, processing, labeling and marketing of organically produced foods**

Price Code: Gr. 8

46 pages

Based on Codex GL, 32:1999, Rev 1: 2001

Standard applies to some products including unprocessed plants, live-stock, processed agricultural crops etc. which carry or are intended to carry, descriptive labeling referring to organic production methods.

**ZWS 863:2002****Micro-concrete roofing tiles**

Price Code: Gr. 6

18 pages

Based on GS 529: 1994

Specifies the requirements for micro-concrete roofing tiles. It specifies the quality of raw materials, dimensional and performance requirements.

**ZWS 864:2004****Quality assurance of pharmaceuticals – Good manufacturing practices and inspection****Part 1: Main principles for pharmaceutical products**

Based on WHO Quality Assurance of Pharmaceuticals Vol 2: Good manufacturing practices and inspection: 1999

Replaces ZWS K30: 1971

Price Code: Gr. 8

65 pages

Shall be used to justify good manufacturing practices (GMP) status, which constitute one of the elements of WHO certification scheme on quality of pharmaceutical products moving in international commerce, through the assessment of applications for manufacturing authorizations and as basis for the inspection of manufacturing facilities.

**Part 2: Starting Materials**

Price Code: Gr.7

30 pages

Outlines procedures and practices that manufacturers should employ to ensure that the methods, facilities and controls used for the production of active pharmaceutical excipients are operated or managed so that such products have quality and purity appropriate for their use in finished pharmaceutical products.

**Part 3: Specific pharmaceutical products**

Price Code: Gr. 7

42 pages

Stresses specific points for the manufacture of specific pharmaceutical products to minimize the risk of microbiological particulate and pyrogen contamination.

**Part 4: Inspection**

Price Code:

Gr. 7

35 pages

Gives guidelines for the inspection of pharmaceutical manufacturers.

**ZWS 865:1966****Black and white disinfectant fluids**

Price Code: Gr. 4

7 pages

Reprint of ZWS K16: 1966

Reprinted 2002

Sets out the general requirements for disinfectant fluids of the coal tar type.

**ZWS 866:2003****Fertilizers – Magnesium nitrate**

Price Code: Gr. 3

6 pages

Specifies the requirements for magnesium nitrate for use as a fertilizer.

**ZWS 867:2015****Fertilizers – Potassium sulfate**

Price Code: Gr. 4

3 pages

Based on ES 268: 1990

First published 2003

First revision 2015

Specifies the requirements for potassium sulfate intended for use as a fertilizers

**ZWS 868:2017****Fertilizers – Magnesium sulfate anhydrous**

Price Code: Gr. 4

4 pages

Specifies the requirements for magnesium sulfate anhydrous intended for use as a fertilizer.

**ZWS 869:2015****Fertilizers – Calcium Nitrate**

Price Code: Gr. 4

3 pages

First published 2008

First revision 2015

Specifies the requirements for calcium nitrate intended for use as a fertilizer.

**ZWS 870:2015****Fertilizers – Potassium nitrate (nitrate of potash)**

Price Code: Gr. 4

3 pages

Based on ES 397: 2000

First revision 2015

Specifies the requirements for potassium nitrate (nitrate potash) intended for use as a fertilizer.

**ZWS 871:2015****Fertilizers – Ammonium nitrate**

Price Code: Gr. 4

2 pages

Based on ES 202: 1990

First revision 2015

Specifies the requirements for ammonium nitrate (coated) intended for use as a fertilizer.

**ZWS 872:2024**

**Fertilizers – Monoammonium phosphate (MAP)**

Price Code: Gr. 4

4 pages

Based on ES 196: 2000

First published 2003, as ZWS 872,

First revision 2015, as ZWS 872;

First Reprint 2024, as ZWS 872.

This Zimbabwe Standard specifies the requirements for monoammonium phosphate (MAP) intended for use as a fertilizer.

**ZWS 873:2015**

**Fertilizers – Zinc sulfate monohydrate**

Price Code: Gr. 4

3 pages

First published 2003

First revision 2015

Specifies the requirements for zinc sulfate monohydrate intended for use as a fertilizer.

**ZWS 874:2015**

**Fertilizers – Urea**

Price Code: Gr. 4

3 pages

Based on ES 264: 1990

Specifies the requirements for urea intended for use as a fertilizer.

**ZWS 875:2015**

**Potassium chloride (muriate of potash) Fertilizer**

Price Code: Gr. 4

3 pages

Specifies the requirements for potassium chloride (muriate of potash) intended for use as a fertilizer.

**ZWS 878:2003**

**Snatch blocks**

Price Code: Gr. 5

14 pages

Based on ZWS 1819: 2001

Specifies the requirements for snatch blocks intended for use in conjunction with scraper scoops in the underground mining and surface operations

**ZWS 880:2010**

**Water quality – detection and enumeration of vibro cholera**

Price Code :Gr.6

Based on SANS 6315:2003

16 pages

Specifies a method for the detection and enumeration of *Vibrio cholerae* in water.

**ZWS 881:2013**

**B – Type bush pump**

Price Code: Gr. 8

75 pages

Based on the Swiss Centre for Development Cooperation in Technology and Management-Hand pump Technology Network (SKAT-HTN), Bush pump Deep Hand pump: The B-type deep well hand pump suitable for lifting water from depths of 3 to 80m. However, pumps can be operated when installed up to 100m depth, although this

puts a greater strain on the parts. For very deep installations the pump head is modified with 16mm side arms and modified pivot pins with a longer 3m handle.

**ZWS 882:2005**

**Pipe threads for tubes and fittings where pressure –tight joint are made of the threads (metric dimensions)**

Price Code: Gr. 7

29 pages

Based on BS 21: 1985

Specifies requirements for jointing threads and long screw threads. Gives methods of verification of jointing thread dimensions and form using recommended gauging systems.

**ZWS 883:1970**

**White metal bearing alloy ingots**

Price Code: Gr. 4

9 pages

Reprint of ZWS H6: 1970

Reprinted 2003

Specifies requirements for white metal bearing alloys in ingot form.

**ZWS 884:2003**

**Magnetic particle flaw detection**

Price Code: Gr. 8

2 pages

Based on BS 6072: 1981

Specifies techniques and procedures for magnetic particle flaw detection of ferromagnetic materials.

**ZWS 886:1969**

**Laboratory glassware**

Price Code: Gr. 3

6 pages

Reprint of ZWS R2: 1969

Reprinted 2003

Gives the requirements for general laboratory glassware, and the more detailed requirements for specific types of glassware in common use.

**ZWS 887:2014**

**Ready to eat breakfast cereals**

Price Code: Gr. 3

6 pages

Reprint of ZWSS3: 1967

Reprinted 2003

First revision 2014

Covers the preparation and packaging of the described types of breakfast cereals in a ready to eat condition.

**ZWS 888:1972**

**Mayonnaise, salad cream or dressing and sandwich spread**

Price Code: Gr. 5

13 pages

Reprint of ZWS S2 1972

Replaced S2

Amended by 593:1999, MD 637:2001

Reprinted 2003

Lays down the requirements for the manufacturing, sampling, labelling and testing of mayonnaise, salad cream or dressing and sandwich spread. Each of which shall be of one type and grade.

**ZWS 889:2004****Conductors for overhead electrical transmission lines****Part 1: Stranded aluminum conductors**

Price Code: Gr. 5

15 pages

Based on SABS 182-2: 2001

Applies to insulated, hard-drawn aluminum conductors for overhead transmission lines.

**Part 2: Aluminum conductors, steel reinforced**

Price Code: Gr. 6

15 pages

Based on SANS 182-3: 2001

Applies to uninsulated stranded hard-drawn aluminum conductors steel reinforced, for overhead transmission lines.

**ZWS 890:2005****High voltage busbars and busbar connections**

Price Code: Gr. 7

25 pages

Reprint of BS 159: 1992

Specifies requirements for both enclosed and open busbars and busbar connection which are components of a.c. high voltage electrical systems (above 1kV) and are composed of metal such as copper or aluminium, with air oil, gas, solid or semi solid materials as principal insulation.

**ZWS 900:2004****Structured wall pipes and fittings of unplasticized poly (vinyl chloride) (PVC-U) for buried drainage and sewage systems**

Price Code: Gr. 7

43 pages

Based on SANS: 1601: 2003

Covers unplasticized poly (vinyl chloride) wall pipes (including pipe fittings) with an essentially smooth inside surface, of nominal diameter 110 mm upto and including surface, of nominal diameter 110 mm upto and including 1000 mm. and intended for buried gravity drainage and sewage pipe systems for the transportation of soil and waste discharge of domestic and industrial origin.

**ZWS 904:2008****Guidelines for the design of control measures for street vended foods in Zimbabwe**

Price Code: Gr. 7

27 pages

Specify the general hygienic requirements and practices to be recommended for inclusion in Codes of Practice for the preparation and sale of street foods.

**ZWS 905:1972****Ready – to – cook samosas**

Price Code: Gr. 4

8 pages

Reprint of ZWS S15: 1972

Reprinted 2003

Covers the manufacture, packaging, labelling, sampling and testing of ready to cook samoosas.

**ZWS 906:2010****Small domestic septic tanks and soil absorption systems**

Price Code: Gr.10

87 pages

Revision of R.N.S No CA1:1973

Amended by MD 666:2010

Replaces ZWS 334:2008

Reprinted 2010

Sets out recommendations for the design, layout, construction and maintenance of septic tank installations, including disposal of tank effluent by means of absorption trenches. It is applicable to houses, flats etc where the contributors do not exceed 12 persons. It is not intended to include the treatment of sewage from groups of houses, large institutions, hospitals or the like.

**ZWS 913.1:2012****The petroleum industry****Part 1: Storage and distribution of petroleum products in above ground bulk installations**

Price Code: Gr. 7

86 pages

Identical to SANS 10089.1:2008

Supersedes ZWS CZ1:1963

Covers the layout and design of petroleum bulk depots and the installation of equipment of the tyres normally used for the handling storage and distribution of petroleum products and their derivatives other than equipment that is used for storage and dispensing on consumer premises (including service stations).

**ZWS 913.2:2020****Petroleum Industry****Part 2: The installation of underground tanks, pumps/dispensers and pipework at service stations and consumer installations**

Price Code: Gr.7

34 pages

Based on SANS 10089.3:1999

Covers provisions for the installation of underground storage tanks of individual capacity not exceeding 40 000l , pumps or dispensers and pipework at service stations and consumer installations.

**ZWS 913.3:2011****Petroleum Industry – Requirements for above ground tanks with integral secondary containment and dispensers**

Price Code: Gr.8

48 pages

Identical to AS 1940:2004

Sets out requirements for the safe storage and handling of flammable liquids of dangerous goods Class 3, as classified in the UN Recommendation for the Transport of Dangerous Goods.

**ZWS 915:2014****Zimbabwe Organic Farming**

Price Code: Gr. 8

72 pages

Applies to the following products which carry or are intended to carry, descriptive labeling referring to organic production methods.

**ZWS 916:2011****Disposable portable condensed aerosol fire extinguishers**

Price Code: Gr. 6

16 pages

Specifies the minimum requirements of disposable portable condensed aerosol fire extinguishers of charge mass not exceeding 1 000g and suitable for use on Class A,B,C and E fires.

**ZWS 919:2011**  
**Writing Equipment – Ballpoint Pens**

Price Code: Gr. 6  
18 pages  
Replaced by ZWS X2:1968  
Identical to SANS 785:2006

Specifies the requirements for single-cartridge ballpoint pens, replacement refills and direct-fill ballpoint pens which have black, blue green or red inks.

**ZWS 922:2011**  
**Safety tyre bands**

Price Code: Gr.5  
9 pages

Covers requirements for safety tyre bands construction, dimensions, material composition and performance for wheel rim sizes 13 inches to 20 inches and 22,5 inches for light truck and bus tyres.

**ZWS 923:2012**  
**Sustainable Plantation Forest Management**

Price Code: Gr. 7  
33 pages

Applicable to all forest plantations within Zimbabwe seeking local and/or international certification.

**ZWS 924:2012**  
**Invert bitumen emulsions**

Price Code: Gr. 4  
7 pages  
Identical to SANS 1260:2004

Covers the requirements for one type of invert bitumen emulsion intended for use as a primer on dry, firm and dust-free road bases and especially where rapid drying (within 48h) characteristics are requirements.

**ZWS 925:2012**  
**Cationic bitumen road emulsions**

Price Code: Gr. 4  
11 pages  
Identical to SANS 548:2003

Covers the requirements for three types (of the appropriate grade (s) given in Table 1) of cationic bitumen road emulsions suitable for the preparation and treatment of road and other surfaces carrying wheeled and foot traffic.

**ZWS 926:2012**  
**Anionic bitumen road emulsions**

Price Code: Gr. 5  
13 pages  
Identical to SANS 309:2004

Covers the requirements for three types (each of grade 60) of anionic bitumen road emulsions suitable for the preparation and treatment of road and other surfaces carrying wheeled and foot traffic.

**ZWS 927:2012**  
**Hardwood furniture timber**

Price Code: Gr. 7  
24 pages  
Identical to SANS 1099:2008

Covers three basic grades (i.e. clear grade, semi-clear grade and knotty grade) of rough-sawn hardwood timber and timber derived from trees of the *Podocarpus spp.*, of density (at a moisture content of 12 (m/m)) at least 400kg/m<sup>3</sup> and intended for use in the manufacture of furniture.

**ZWS 928:2012**  
**Cold mix premix**

Price Code: Gr. 4  
11 pages  
Identical to AS 4283:1995

Specifies requirements for cold mix premix for use as a road maintenance patching and minor pavement construction material that is suitable for stockpiling prior to use. In particular this standard includes requirements for materials, typical mix proportions, production temperatures and sampling and testing methods.

**ZWS 929.1:2012**  
**Fibreboard products**  
**Part 1: Uncoated fibreboards**

Price Code: Gr. 5  
16 pages  
Identical to SANS 540.1:2009

Specifies the characteristics of uncoated fibreboards.

**Part 2: Coated fibreboards**

Price Code: Gr. 4  
10 pages  
Equivalent to SANS 540.2:2009

Specifies the characteristics of coated fibreboard.

**ZWS 930:2012**  
**Fibreboard – Measurement of dimensions of test specimens**

Price Code: Gr. 2  
4 pages  
Identical to SANS 6174

Specifies a method of measuring the length, width and thickness of conditioned test specimens of fibreboard and fibreboard products.

**ZWS 931:2012**  
**Insulation board – Determination of bitumen content**

Price Code: Gr. 3  
5 pages  
Identical to SANS 6177:2004

Specifies a method of determining the bitumen content of bitumen insulation board.

**ZWS 932:2012**  
**Thickness swelling and water absorption of fibre boards on immersion in water**

Price Code: Gr. 3  
6 pages  
Identical to SANS 6012:2004

Covers the determination of thickness swelling and water absorption of particle board specimens when immersed in water.

**ZWS 933:2012**  
**Modulus of elasticity and modulus of rupture in static bending of fibreboards**

Price Code: Gr. 4  
9 pages  
Identical to SANS 6015:2004

Covers the determination of the apparent and of the true modulus of elasticity and of the modulus of rupture in static bending of fibreboard.

**ZWS 934:2012****Fibreboard – Determination of density**

Price Code: Gr. 2

4 pages

Identical to SANS 6175:2004

Specifies a method of determining the density of fibreboard and fibre-board products.

**ZWS 935:2012****Edge straightness of wooden board products**

Price Code: Gr. 3

4 pages

Identical to SANS 5970:2004

Covers the determination of edge straightness of wooden board products.

**ZWS 936:2012****Flatness of wooden board products**

Price Code: Gr. 3

5 pages

Identical to 5969:2004

Covers the determination of flatness of wooden board products such as plywood and composite board and decorative melamine-faced boards.

**ZWS 937:2012****Timber based board products – Squareness**

Price Code: Gr. 3

5 pages

Identical to SANS 5970:2004

Specifies a method of measuring the squareness of timber-based board products.

**ZWS 938:2012****Screw holding strength of wood based panels**

Price Code: Gr. 3

5 pages

Identical to SANS 6018:2005

Covers the determination of the resistance to axial withdrawal of wood screws of a standard type inserted into the face and into the edge of wood-based panels.

**ZWS 939:2012****Fibreboard – Determination of lateral nail holding strength**

Price Code: Gr. 3

5 pages

Identical to SANS 5970:2004

Specifies a method of determining the lateral nail-holding strength of a fibreboard panel. The test simulates the condition encountered when forces tend to pull paneling or sheathing from a wall.

**ZWS 940:2012****Fibreboard – Preparation of test specimens**

Price Code: Gr. 4

9 pages

Identical to SANS 6173:2004

Specifies a method of selecting, cutting and identification marking of test specimens of fibreboard.

**ZWS 941:2012****Fibreboard – Determination of linear expansion as a result of water absorption**

Price Code: Gr. 3

4 pages

NS 6176:2004

Specifies a method of determining the linear dimensional changes of fibreboard as a result of water absorption.

**ZWS 950:2012****Dimensional and mass stability of fibre boards with varying humidity**

Price Code; Gr. 4

6 pages

Equivalent to SANS 6013:2004

Covers the determination of the changes in dimensions (length and width) and in mass (equilibrium moisture content) of fibreboard exposed to two extremes of relative humidity.

**ZWS 951:2012****Coated fibreboard – Determination of resistance to staining**

Price Code: Gr.4

6 pages

Equivalent to SANS 6180:2004

Specifies a method of determining the resistance of coated fibreboard to staining.

**ZWS 952:2012****Coated fibreboard – Determination of resistance to steam**

Price Code: Gr. 3

5 pages

Identical to SANS 6181:2004

Specifies a method of determining the resistance of coated fibreboard to steam.

**ZWS 953:2020****Unleaded petrol**

Price Code: Gr. 5

5 pages

Identical to SANS 1598

Specifies one grade of unleaded petrol with research octane number (RON) OF 93 and suitable for use in spark-ignition internal combustion engines other than aviation piston engines.

**ZWS 954:2014****Ball studs and ball socket assemblies**

Price Code: Gr. 4

8 pages

Identical to SAE J 491:1987

Established for the purpose of providing design criteria and suggested dimensional proportions which may be used for ball studs and ball stud socket assemblies as used on steering systems or control mechanisms of passenger vehicles trucks and off road equipment.

**ZWS 956:2014****Ball joints**

Price Code: Gr. 4

10 pages

Identical to SAE J 490:2012

Covers the general and dimensional data for various types of ball joints with inch threads commonly used on control linkages in automotive, marine and construction and industrial equipment applications.

**ZWS 958:2012****Fibreboard – Determination of transverse internal bond strength**

Price Code: Gr. 3

4 pages

Specifies a method of determining the transverse internal bond strength of fibreboards.

**ZWS 960:2012****The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations****Part 1: Liquefied petroleum gas installations involving gas storage containers of individual water capacity not exceeding 500L and a combined water capacity not exceeding 3 000L per installation**

Price Code: Gr. 8

73 pages

Based on SANS 10087.1:2008

Specifies requirements for the materials, the methods of construction and the installation of equipment used in liquefied petroleum gas applications for domestic and commercial installations that involve gas storage containers of individual water capacity not exceeding 500 litres and of a combined water capacity not exceeding 3000 litres.

**Part 2: Liquefied petroleum gas installations involving storage vessels of individual water capacity not exceeding 500 litres**

Price Code:Gr. 8

55 pages

Based on SANS 10087.3:2008

Specifies requirements for the layout, design and installation of butane, propane and liquefied petroleum gas equipment and of storage vessels of individual water capacity exceeding 500 litres and associated vaporizers, pipework and fitting up to the outlet of the first pressure reduction stage in the line.

**Part 3: Storage and filling premises for refillable liquefied petroleum gas (LPG) containers of gas capacity not exceeding 9 KG and the storage of individual gas containers not exceeding 48 KG**

Price Code: Gr.7

35 pages

Based on SANS 10087.7:2011

Specifies the minimum requirements for the location and installation of and operations at filling premises for the filling of liquefied petroleum gas (LPG) containers of gas capacity not exceeding 48 kg.It identifies safe methods of filling and storing refillable containers and makes recommendations towards safe working procedures that cover all aspects of the storage of containers.

**Part 4:2016: The transportation of LP Gas including the design, construction, inspection, fittings, filling, maintenance and repair of LP gas bulk vehicles and rail tank cars**

Price Code: Gr. 7

Identical to SANS 10087-4

Standard gives requirements for the design, construction, inspection, fittings and the filling ratio of pressure vessels including ISO containers and skid tanks, used in the transportation of LPG the design of vehicles and ancillary equipment, and operating practice.

**ZWS 962:2022****Denatured fuel ethanol for blending with gasolines for use as automotive spark ignition engine fuel**

Price Code: Gr. 5

9 pages

Identical to ASTM D4806 -11a:2011

First published 2012, as ZWS 962

First revision 2022, as ZWS 962

This specification covers nominally anhydrous denatured fuel ethanol intended to be blended with unleaded or leaded gasolines at 1 to 10 volume % for use as automotive spark-ignition engine fuel covered by Specification D4814.

**ZWS 963:2012****Illuminating paraffin**

Price Code:Gr. 5

9 pages

Based on SANS 342

Specifies illuminating paraffin.Illuminating paraffin (IP) is used extensively for heating and lighting in domestic and industrial sectors.IP is also used as a solvent in manufacturing processes of certain products such as paints, varnish, polish, insecticides and so on.

**ZWS 964:2012****Ethanol****Part 1: E5**

Price Code:Gr. 8

13 pages

Based on SANS 1598

Specifies one grade of ethanol blend with research octane number (RON) of 93 and suitable for use in spark-ignition internal combustion engines other than aviation piston engines. The grade shall contain oxygenates in the form of ethanol.

**Part 2: E10**

Price Code:Gr. 8

14 pages

Based SANS 1598

Specifies one grade of ethanol blend with research octane number (RON) of 93 and suitable for use in spark-ignition internal combustion engines other than aviation piston engines. The grade shall contain oxygenates in the form of ethanol.

**Part 3:E20**

Price Code:Gr. 7

13 pages

Based SANS 1598

Specifies one grade of ethanol blend with research octane number (RON) of 95 and suitable for use in spark-ignition internal combustion engines other than aviation piston engines. The grade shall contain oxygenates in the form of ethanol.

**Part 4: E85**

Price Code: Gr. 8

10 pages

Based ASTM D5798:2011

Covers the requirements for automotive fuel blends of ethanol and gasoline for use in ground vehicles equipped with flexible-fuel spark-ignition engines.Fuel produced to this specification contains 51 to 83 volume % ethanol. This fuel is for use in flexible-fuel vehicles and is sometimes referred to as “Ethanol Flex-Fuel”.

**Part 5:2013****E 15**

Price Code: Gr. 9

13 pages

Amended by AMD 672:2014

Specifies one grade of ethanol blend with research octane number (RON) of 95 and suitable for use in spark-ignition internal combustion engines other than aviation piston engines. The grade shall contain oxygenates in the form of ethanol.

**ZWS 965:2012**  
**Liquefied petroleum gases**  
Price Code: Gr. 4  
10 pages  
Based on SANS 1774:2007

Specifies requirements for liquefied petroleum gas mixture, commercial propane and commercial butane.

**ZWS 966:2014**  
**Civil engineering test methods**  
**Part 1: Penetration grade bitumen**  
Price Code: Gr. 3  
7 pages  
Identical to SANS 4001-BT 1:2012

Applies to bituminous materials and covers the requirements for four penetration grades of bitumen suitable for road construction and similar purposes.

**ZWS 967:2013**  
**Quality management systems for fuel quality in the petroleum industry – Guidelines and requirements**  
Price Code: Gr. 10  
18 pages

Applicable to all fuel industry players including fuel terminals, fuel importers/wholesalers, biofuel producers and retail sites who operate in Zimbabwe.

**ZWS 968:2014**  
**Diesel fuel oil, biodiesel blend (B5 TO B20)**  
Price Code: Gr. 10  
19 pages  
Identical to ASTM D7467:2010

Covers fuel blend grades 6 to 20 volume percent (%) biodiesel with the remainder being a light middle or middle distillate diesel fuel, collectively designated as B6 To B 20. These grades are suitable for various types of diesel engines.

**ZWS 969:2017**  
**Mixtures of CCA compounds for Timber preservatives**  
Price Code: Gr. 6  
10 pages

Standard covers mixtures of copper-chromium-arsenic compounds (in the form of a powder, a granular powder, a paste, or a liquid) for timber preservation.

**ZWS 970:2020**  
**Guidelines for retail service stations for liquid fuels**  
Price Code: Gr. 7  
26 pages  
Supersedes ZWS 970:2017

Applicable to all fuel industry organizations including retail service stations and own use filling stations which are operated in Zimbabwe.

**ZWS 972:2019**  
**Selection, Installation and Maintenance of First-Aid Fire Extinguishers**  
Price Code: Gr. 7  
24 Pages  
Based on IS 2190 (fourth Edition):2010

Lays down recommendations for selection, installation, maintenance and testing of first aid fire extinguishers.

**ZWS 973:2013**  
**Fuel wholesalers – Guidelines and requirements**  
Price Code: Gr. 10  
22 pages

Stipulates the requirements and guidelines for fuel importers, wholesalers and biofuel producers.

**ZWS 974:2014**  
**Tomato sauce / ketchup**  
Price Code: Gr. 5  
16 pages  
Based on SANS 301

Specification covers tomato sauce and ketchup of one type and grade.

**ZWS 975:2014**  
**Water for irrigation purposes**  
Price Code: Gr. 6  
19 pages

Specifies requirements for the water used for irrigation purposes in relationship to the crops, soils and safety people handling the water.

**ZWS 976:2015**  
**Expanded polystyrene – Modular precast composite concrete panels building system**  
Price Code: Gr. 6  
17 pages

Specifies guidelines on erecting built structures using the Expanded polystyrene – Modular precast composite concrete panels building system erected under the control of a registered engineer constructed in accordance with the manufacturer's detailed specifications and quality management manual

**ZWS 977:2015**  
**Air quality and emissions**  
Price Code: Gr. 6  
24 pages

Specifies the minimum requirements for air quality and air emissions. It sets out the required limit values and also procedures for those aspects that may impact on air quality.

**ZWS 984:2015**  
**Breath alcohol testing devices other than those used for forensic law enforcement.**  
Price Code: Gr. 8  
41 pages

The standard specifies requirements for the performance, testing and marking of disposable and reusable breath alcohol testing devices other than those devices covered by OIML R126:2012, used for forensic law enforcement.

**ZWS 985:2015**  
**Paprika**  
Price Code: Gr. 4  
5 pages

Specifies requirements for the water for paprika (*Capsicum annum* Linnaeus) whole pods without calyx sold, without preparation or grading, called "non processed" NP paprika.



**ZWS 987:2017**  
**Microbiological water purifiers**  
Price Code: Gr. 5  
23 pages  
Based on NFS Protocol P231

Microbiological water purifiers use chemical, mechanical, and/or physical technologies to filter and treat waters of unknown microbiological quality but are presumed portable.

**ZWS 988:2015**  
**Milk fat products**  
Price Code: Gr. 4  
4 pages

The standard applies to anhydrous milk fat, milk fat, anhydrous butter oil, butter oil and ghee, which are intended for further processing or culinary use.

**ZWS 989:2015**  
**Cereal legume blend**  
Price Code: Gr. 5  
5 pages

The standard specifies requirements and the methods of test for cereal-legume blend

**ZWS 990:2016**  
**Cream Cheese**  
Price Code: Gr. 5  
8 pages

This standard applies to cream cheese intended for direct consumption or further processing in conformity with the description in clause 2.

**ZWS 991:2015**  
**The design, construction and maintenance of domestic waste water treatment system using biodigesters**  
Price Code: Gr. 6  
13 pages

The standard specifies minimum requirements for the design, construction, operation and maintenance of domestic waste water treatment systems using bio-digesters

**ZWS 992:2019**  
**HIV and Wellness Management Systems (HWMS)**  
Price Code: Gr. 10  
16 pages

The standard specifies requirements for HWMS to any organization.

**ZWS 993:2016**  
**Fertilizers – Sampling of solid fertilizers**  
Price Code: Gr. 3  
2 pages

The standard specifies the sampling of solid fertilizers in bulk bins and bags.

**ZWS 994:2016**  
**Transportation of liquid fuels – Operational requirements for road tank vehicles**  
Price Code: Gr. 7  
27 pages

The standard establishes guidelines for the safe operation and handling of road vehicles that are used for the conveyance of liquid fuels that is loading, driving and unloading.

**ZWS 995:2016**  
**Road tank vehicles for transportation of liquid fuels - Requirements**  
Price Code: Gr.8  
40 pages

Standard covers the requirements for tank vehicles intended for use on public roads, for transportation, at temperatures below their boiling point, of normally stable liquid fuels

**ZWS 996:2016**  
**Fresh and frozen whole fish**  
Price Code: Gr. 4  
4 pages

This standard specifies requirements and methods of sampling and test for fresh and frozen whole fish.

**ZWS 999:2023**  
**Mahevu**  
Price Code: Gr. 4  
8 pages  
First published 2016, as ZWS 999,  
First Revision 2023, as ZWS 999.

This standard specifies the requirements for commercially produced Mahevu.

**ZWS 1000:2016**  
**Cyanide use, storage and disposal in small scale mining - Requirements**  
Price Code: Gr. 4  
6 pages

Specifies minimum requirements for safe manufacture, purchase, use, handling, storage and disposal of cyanide in small scale mining.

**ZWS 1001:2017**  
**Small scale mining mineral ore processing**  
Price Code: Gr. 4  
7 pages

The code gives the minimum requirements for small scale mineral ore processing. It covers gold and diamond mineral ore processing at a small scale level.

**ZWS 1003:2016**  
**Blend of skimmed milk and vegetable fat in powdered form**  
Price Code: Gr. 4  
5 pages

The standard applies to a blend of skimmed milk and vegetable fat in powdered form, intended for direct consumption, or further processing, in conformity with the description in clause 2 of this standard.

**ZWS 1004:2016**  
**Dairy fruit juice blend**  
Price Code: Gr. 4  
4 pages

This standard specifies the requirements and methods of sampling and testing for a ready to drink blend of milk and fruit concentrate intended for direct human consumption

**ZWS 1005:2017**  
**Small scale surface mining**

Price Code: Gr. 7

27 pages

The code provides minimum guidelines for the small-scale mining in Zimbabwe with special emphasis on gold.

**ZWS 1006:2016 / IS 2189:2008**

**Selection, installation and maintenance of automatic fire detection, alarm system and Automatic fire extinguishing systems (IS 2189:2008 Selection, installation and maintenance of automatic fire detection and alarm system code of practice, MOD)**

Price Code: Gr. 8

28 pages

Standard covers the planning, design, selection, installation and maintenance of automatic fire detection, alarm system and automatic fire extinguishing systems. It covers systems capable of providing signal to initiate, in the event of a fire, the operation of ancillary services, such as fire extinguishing systems and other necessary precautions but it does not cover the ancillary services.

**ZWS 1007:2016**

**Performance of range tops**

Price Code: Gr. 4

9 pages

These test methods cover the energy consumption and performance of range tops. The food service operator can use this evaluation to select a range top and understand its energy consumption.

**ZWS 1008:2016**

**Induction cooktops, counter tops, drop-in mounted or floor standing**

Price Code: Gr. 4

4 pages

This standard covers cooktops which utilize induction as a means for cooking and warming food in commercial and institutional food service establishments. Included are tabletop units, drop-in units and floor standing equipment with integral induction hobs.

**ZWS 1009:2016**

**Vehicle security – Whole of vehicle marking Datadot systems**

Price Code: Gr. 6

20 pages

This standard describes the characteristics and methods of application of unique identification carriers, called Datadots, to vehicles and also the processes required to ensure the integrity, authenticity and confidentiality of the entire Datadot production, supply, storage, and application systems

**ZWS 1010:2016**

**Mercury use, storage and disposal in small scale mining**

Price Code: Gr. 4

6 pages

This standard specifies minimum guidelines for the purchase, use, handling, storage and disposal of mercury in small-scale mining.

**ZWS 1011:2016**

**Design, dewatering support of mining shafts in small scale mining**

Price Code: Gr. 4

5 pages

This standard gives minimum guidelines for design, dewatering support of mining shafts in small scale mining.

**ZWS 1012:2019**

**Requirements for certification of refrigeration and air conditioning practitioners**

Price Code:

Gr. 6

12 pages

This standard specifies the competence profiles and establishes procedures for assessing the competence of personnel who carry out refrigeration and air conditioning activities.

**ZWS 1013:2017**

**Tomatoes**

Price Code: Gr. 3

3 pages

This standard specifies the requirements and methods of sampling and testing for whole tomatoes of varieties (cultivars) grown from *Lycopersicon esculentum* Mill. Of the Solanaceae family supplied fresh to the consumer.

**ZWS 1014:2023**

**Preservative-treated timber**

Price Code: Gr. 7

29 pages

This standard specifies preservative treatment requirements (other than the method of treatment) for preservative-treated timber and timber products (other than for composite board products), that have an expected service life at various levels of preservative treatment which are considered to be acceptable for a range of hazard conditions.

**Note.** Timber used in ground contact and exterior above ground exposure, should have an expected life span of at least 20 years when treated in accordance with the requirements applicable to the exposure classes (see table 1). This standard is not applicable to treatment with fire retardants or to treatments aimed at improving the physical properties of timber and timber products, nor does it cover the inherent quality of timber or timber products, or properties other than in respect of preservative treatment).

**ZWS 1015:2017**

**Illuminating candles**

Price Code: Gr. 4

5 pages

Identical to SANS 1896:2013

This standard specifies the requirements for candles suitable for illuminating purposes, but does not cover decorative candles.

**ZWS 1016:2017**

**The installation, maintenance, repair and replacement of Domestic Solar Water heating systems**

Price Code: Gr. 7

28 pages

Direct adoption of SANS 10106

This standard covers requirements for the safe installation, retrofitting, maintenance, repair and replacement of domestic solar water heaters.

**ZWS 1017:2017**

**Domestic Solar Water heaters – Mechanical Qualification Test Methods**

Price Code: Gr. 5

9 pages

This standard specifies test methods for domestic solar water heaters.

**ZWS 1018:2017****Ice**

Price Code: Gr. 4

2 pages

This standard specifies the requirements for processing, testing, packaging, labelling, transportation and storage of ice intended for human consumption.

**ZWS 1019:2017****Zimbabwe Horticulture – Good Agricultural practice (GAP)**

Price Code: Gr. 7

20 pages

Provides general requirements for good Agricultural Practices for use in the handling of fresh fruits and vegetables cultivated for human consumption in order to ensure a safe and wholesome product..

**ZWS 1020:2017****Biogas systems****Part 1- Design, installation,operation and maintenace of biogas systems**

Price Code: Gr. 4

27 pages

This Zimbabwean Code of Practice provides requirements for design, installation operation and maintenance of stand alone biogas systems. This standard shall be read in conjunction with ZWS 1020: Part 2.

**ZWS 1020:2018****Biogas systems****Part 2- Micro grids**

Price Code: Gr. 4

9 pages

This Zimbabwean Standard provides guidelines for the supply of biogas to third parties via micro grid connected to biogas plant(s) with one or more users in pipes. Shall be read together with ZWS 1020:part 1.

**ZWS 1021:2016****The safety of water treatment chemicals for use in the food industry**

Price Code: Gr. 3

9 pages

The standard sets minimum requirements for the safety of water treatment chemicals, intended for use in potable/process waters or boiler feed waters, where the treated water or steam produced might come into contact with food or food products.

**ZWS 1022:2018****Agriculture biotechnology products (ABPS)**

Price Code: Gr. 5

9 pages

This document specifies requirements for Agricultural biotechnology products for plant applications.

**ZWS 1023:2017****Re-usable sanitary Pads**

Price Code: Gr. 6

19 pages

This specification covers the manufacturing and performance requirements for reusable sanitary pads used during menstruation and post-delivery.

**ZWS 1024:2017****Interlocking stabilized soil block (ISSB) building system**

Price Code: Gr. 6

19 pages

The standard contains guidelines on erecting built structures using the interlocking soil block system.

**ZWS 1025:2017****Domestic Storage Solar Heating Systems**

Price Code: Gr. 6

25 pages

This standard specifies the requirements for integral ,close-coupled and split domestic storage solar water heating systems and includes specific requirements for solar collectors for water heating systems.

**ZWS 1026:2017****Fixed Electric Storage water Heaters**

Price Code: Gr. 8

58 pages

Replaces ZWS 213

This standard specifies the characteristics of thermostatically controlled fixed electric storage water heaters intended for indoor and outdoor domestic use and for operation on a.c supplies at voltages not exceeding 250V for single-phase and 418V for other appliances.

**ZWS 1027:2017****Good Agricultural Practice For Animal Production Food Safety (ZSGAPAFS)**

Price Code: Gr. 7

25 pages

This standard shall address all those hazards whose control at farm level can have a beneficial or even decisive effect on the food safety of products of animal origin (including :milk and milk products). It shall apply to all types of farming systems and shall cover all livestock and animal products at farm level in Zimbabwe .

**ZWS 1028:2017****Good Agricultural Practice –Risk Assessment on social practice**

Price Code: Gr. 4

7 pages

Provides guidance for producers or farm managers who are implementing a social management system according to the G.A.P GRASP GR 4.

**ZWS 1029:2017****Thermostats For Electric Storage Water Heaters**

Price Code: Gr. 6

12 pages

This standard covers two types of thermostat that have breakers of the air-break type ,for use in thermostatically controlled electric storage water heaters.The thermostats are intended for use in circuits at voltages not exceeding 250V to earth and current ratings not exceeding 30A.

**ZWS 1030:2021****Water supply and distribution system components – Drain corks for water storage**

Price Code: Gr. 6

7 pages

Identical to SANS 1808:53:2012

This standard specifies dimensional and performance requirements for copper alloy drain cocks that are suitable for the draining of hot water storage containers that comply with ZWS 1026.

**ZWS 1031:2017**  
**The Installation, Maintenance, Replacement and Repair Of Fixed Electric Storage Water Heating Systems**  
Price Code: Gr. 7  
28 pages

This standard covers requirements for the safe installation of new and replacement of fixed electric storage water heaters, complete with all the relevant and applicable safety and hydraulic control units.

**ZWS 1032 Part 1:2017**  
**Domestic Solar Water heaters –Thermal Performance Test Using Outdoor Method**  
Price Code: Gr. 6  
13 pages

This part of ZWS 1032 describes an outdoor test method for the determination of the thermal performance of domestic solar heaters.

**ZWS 1032 Part 2:2017**  
**Domestic Solar Water heaters –Thermal Performance Test Using Indoor Method**  
Price Code: Gr. 5  
6 pages

This part of ZWS 1032 specifies an indoor test method for the determination of the thermal performance of domestic solar water heating systems for potable water and storage capacity not exceeding 0,3m<sup>3</sup>

**ZWS 1033:2017**  
**Energy Efficiency Of Electrical And Electronic Apparatus**  
Price Code: Gr. 4  
8 pages

This standard covers energy efficiency requirements, measures methods and energy efficiency of the following electrical and electronic apparatus.

**ZWS 1034:2017**  
**Appliances operating on Liquefied Petroleum Gas (LPG) or Natural Gas (NG) – Safety Aspects**  
Price Code: Gr. 8  
63 pages  
Identical to SANS 1539:2012

This standard covers the safety of appliances that operate on Liquefied Petroleum Gas (LPG) or Natural Gas (NG) at a consumption rate not exceeding 10kg/h for appliances operating on LPG and 500 MJ/h for appliances operating on NG.

**ZWS 1036:2018**  
**Animal Fats**  
Price Code: Gr 5  
7 pages  
Based on Codex STAN 211-2015

This standard applies to pure rendered lard, lard subject to subject to processing, rendered pork Fat

**ZWS 1037:2018**  
**Maximum road Speed governors For Motor vehicles- Requirements**  
Price Code: Gr. 6  
12 pages  
Based on Rwandan Standard RS 291:2015

Specifies requirements for the performance and installation of designed to control the speed and limit the maximum road speed of motor vehicles by control of engine power.

**ZWS 1038:2018**  
**Motor Vehicles, Tyres and Rims-Dimensions and Loads**  
**Part 1: General**  
Price Code: Gr. 6  
10 pages  
Identical to SANS 1038-1:2017

Specifies the general requirements for motor vehicle pneumatic tyres, giving the basic definitions, details of the parameters used for tyre marking requirements and a test method for the measurement of tyre dimensions. It does not cover pedal cycles, motorcar racing or motorcycle racing applications.

**Part 2: Passenger Car Tyre**  
Price Code: Gr. 4  
1 page  
Identical to SANS 1550-2:2017

Specifies requirements for passenger car tyres. It does not cover motor racing applications.

**Part 3: Commercial Vehicle Tyres**  
Price Code: Gr. 5  
8 pages  
Identical to SANS 1550-3:2017

Covers commercial vehicles tyres.

**Part 4: Motorcycles and Scooter Tyres**  
Price Code: Gr. 3  
1 page  
Identical to SANS 1550-3:2017  
Covers motorcycles and scooter tyres.

**ZWS 1038:2019**  
**Part 5: Off-the-road Vehicle Tyres**  
Price Code: Gr. 4  
2 pages  
Identical to SANS 1550-5:2017

Covers off-the-road vehicle tyres.

**Part 6: Agricultural Vehicle Tyres**  
Price Code: Gr. 3  
2 pages  
Identical to SANS 1550-6:2017

Covers off-the-road vehicle tyres

**Part 7: Industrial Vehicles Tyres**  
Price Code: Gr. 3  
2 pages  
Identical to SANS 1550-7:2017

Covers industrial vehicle tyres.

**Part 10: Rim Contours**  
Price Code: Gr. 4  
2 pages  
Identical to SANS 1550-10:2017

Covers contours and dimensions of rims for the range of tyre sizes available.

**ZWS 1039:2018**  
**Solid Organic Fertilizers**  
Price Code: Gr. 5  
8 pages

This Standard specifies requirements and methods of sampling and test for solid organic fertilizers.

**ZWS 1040 :2021**  
**Leafy vegetables**  
Price Code: Gr. 5  
6 pages

Applies to leafy vegetables of varieties (cultivars) the following species to be supplied fresh to the customer, leafy vegetables for industrial processing being excluded; covo, rape, lettuce, chomoulier, kale, green mustard/tsunga cucurbit, broccoli.

**ZWS 1045:2019**  
**Installation, commissioning and maintenance of fire hose reels**  
Price Code: Gr. 6  
17 pages

This Standard specifies requirements for installation, commissioning and maintenance of fire hose reels.

**ZWS 1047 :2021**  
**Re-qualification of Liquefied Petroleum Gas (LPG) cylinders**  
Price Code: Gr. 5  
9 pages  
Based on AIGA 090/14

It guides on the key aspects of periodic inspection and retesting of liquefied petroleum gas cylinders and gives a structure for the retesting activity.

**ZWS 1048 :2020**  
**Fresh Onions**  
Price Code: Gr. 6  
16 pages

Applies to onions of varieties grown from *Allium cepa* L. to be supplied to the consumer in the natural state ,green onions with full leaves and onions for industrial processing being executed.

**ZWS 1049:1970**  
**Carbolic soap**  
Price Code: Gr. 6  
9 pages

Applies to soap containing additions of phenolic substances, such as cresylic acid, in bar cake or tablet form.

**ZWS 1050:2022**  
**Instant cereal and pulse based porridge**  
Price Code: Gr. 5  
8 pages

This Zimbabwe Standard applies to instant cereal and pulse based porridge product. This product can be fortified or unfortified.

**ZWS 1051:2020**  
**Good Agricultural Practices For free range poultry production**  
Price Code: Gr. 6  
11 pages

Gives guidance on free range poultry production.

**ZWS 1053:2022**  
**Ceramic wall and floor tiles**  
Price Code: Gr. 8  
44 pages  
Identical to SANS 1449:2012

This standard specifies the requirements for glazed and unglazed ceramic wall and floor tiles. The standard does not cover unglazed dust-pressed tiles that have a water absorption exceeding 10%.

**ZWS 1054:1971**  
**Tennis shoes for adults**  
Price Code: Gr. 3  
11 pages  
First reprint of CAS Z15:1971

This standard relates to men's and women's quality tennis shoes having rubber soles and canvas uppers.

**ZWS 1055:1969**  
**Men's quality shoes for town and office wear**  
Price Code: Gr. 4  
12 pages  
First reprint of CAS Z11:1969

This specification covers two types of footwear for men's sizes 5 to 12, as follows:

**Type 1:** Oxford shoe with or without toe-cap.

**Type 2:** Gibson/Derby shoe with plain vamp, or with a straight or wing toe-cap or with vamp.

**ZWS 1056:1961**  
**Minimum requirements for youths' and men's footwear**  
Price Code: Gr. 4  
10 pages  
First reprint of R.N.S. Z1:1961

This standard lays down the minimum requirements for materials and construction of youths' and men's footwear of the normal recognized types including the following: Goodyear welted; stitch-down, staple welted; direct vulcanized and premoulded stuck-on soles. It does not include slippers, vulcanized rubber footwear, rope-soled footwear or footwear made on the California principle.

**ZWS 1057:2022**  
**Manned security services – cash and valuables in transit services (collection and delivery)**  
Price Code: Gr. 6  
14 pages

This Zimbabwe Standard gives recommendations for the organization, staffing, operation and management of companies providing a cash and valuables-in-transit (CVIT) service (collection and delivery) on a contracted basis.

**Note.** It is recognized that CVIT companies might provide a wide range of services that are not specifically covered by this standard (e.g. ATM replenishment, cash processing)..

**ZWS 1058:2020**  
**General Washable Face Masks**  
Price Code: Gr. 6  
11 pages

This specification covers the manufacturing and performance requirements for general washable/reusable barrier masks.

**ZWS 1060: Part 1:2022****Adhesives for wood****Part 1: Terminology**

Price Code: Gr. 6

14 pages

This part of ZWS 1060 provides definitions of terms relating to adhesives for wood.

**ZWS 1060: Part 2:2022****Adhesives for wood****Part 2: Requirements for structural application**

Price Code: Gr. 6

9 pages

This part of ZWS 1060 specifies requirements for adhesives to be used in load-bearing structures.

**ZWS 1061:2022****Health, safety and environmental guidelines for the construction and operation of timber treatment plants**

Price Code: Gr. 8

37 pages

This standard serves as a practical guide on occupational health and safety and environmental aspects in and around timber treatment plants with the intention to manage health and safety and environmental risks. It is applicable to any treatment process in which waterborne preservatives, flame-retardants, anti-sapstain chemicals, organic solvent-based preservatives or oil-borne preservatives are used.

**ZWS 1062:2022****The preservative treatment of timber**

Price Code: Gr. 7

26 pages

This standard covers the classification of timber preservatives, hazard conditions for timber, the solvents used for timber preservatives, the preparation of timber for treatment, the various treatment processes and the use of preservative-treated timber. Recommendations relating to the handling and safety of preservative-treated timber are also given. This standard does not cover the treatment of timber with fire retardants.

**ZWS 1065:2024****Noise and Vibration**

Price Code: Gr. 6

11 pages

This Zimbabwe Standard gives the minimum emissions of noise and vibration into the environment which are necessary to preserve and maintain public health and environment in Zimbabwe, focussing on the following sources and environments:

- a) Sources
  - Industrial facilities
  - Mining facilities
  - Vehicles/mobile equipment
  - Hand tools/ entrepreneur machines
  - Religious and entertainments facilities
- b) Environments
  - Sensitive areas
  - Residential areas
  - Commercial areas/zones
  - Industrial areas /zones
  - Mixed zones

**Note 1.** This standard does not deal with calculation procedures for noise and vibration levels.

**Note 2.** The noise and from agriculture equipment at farmlands is not covered by this standard.

**Note 3.** The titles of the publications referred to in this standard are listed in the Foreword.

**ZWS 1068:2023****Reusable menstrual cups**

Price Code: Gr. 6

14 pages

This specification covers the manufacturing, distribution and performance requirements for reusable menstrual cups.

**ZWS 1069:1994****Canned tomato juice, canned tomato juice cocktail and canned tomato cocktail**

Price Code: Gr. 5

22 pages

Amended by MD 457: 1979: MD 599: 1999

First published 1970, as CAS S24,

First Reprinted 2021, as ZWS 1069.

The specification covers the manufacture, production, processing and canning of tomato juice, tomato juice cocktail and tomato cocktail. No methods are given for bacteriological control. In this country, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centres of population, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1070:1999****Canned orange juice and canned grapefruit juice**

Price Code: Gr. 4

15 pages

Amended by MD 601: 1999

First published 1971 as CAS S30,

First reprint 2021, as ZWS 1070

The specification covers the production, processing and canning of orange juice and grapefruit juice. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centres of population. For the purposes of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1073:2001****Canned vegetables**

Price Code: Gr. 4

74 pages

First published 1970 as CAS S5,

First reprint 2022, as ZWS 1073

This specification covers the manufacture, production, processing or treatment of canned vegetables (including spaghetti) of the following kinds and of the types and grades described herein: Asparagus, Beans (baked beans in tomato sauce, Beans (baked beans in tomato sauce with pork, Butter beans, Green beans, Beetroot, Carrots, Carrots and peas, Cauliflower, Green peas, Mixed vegetables, Mixed vegetables and meat, Mushrooms, Potatoes, Mashed potatoes, Sauerkraut, Spaghetti, Spaghetti and meat balls in gravy, Spaghetti bolognese, Sweetcorn - cream style, Sweetcorn - whole kernel, Tomatoes, Tomato-and-pimento concentrate, Tomato concentrate, Tomato paste, Tomato puree, Turnips. issued by such laboratories shall be deemed satisfactory.

**ZWS 1074:1999****Vinegar**

Price Code: Gr. 7

6 pages

First published, 1972 as CAS S41,

Second reprint 1999, as ZWS 1074

Replaces CAS S41:1972

This specification covers three distinct types of vinegar as follows: Malt vinegar; Fruit vinegar (cider, grape, etc.) and Spirit vinegar. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent population and in the laboratories of the Association, using internationally accepted methods.

**ZWS 1075:1999****Quick frozen vegetables**

Price Code: Gr. 6

10 pages

First published May 1967 as CAS S6,

Second reprint 2022, as ZWS 1075

Replaces CAS S6:1972

This specification covers the manufacture, production, processing or treatment of quick-frozen vegetables. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centres of population and in the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1076:1964****Concrete pipe laying design**

Price Code: Gr. 8

46 pages

Endorsement of AS CA33:1962

First reprinted 2022

Sets out recommended design practice for the laying of precast concrete drainage pipes. Includes methods of calculating loads according to installation conditions and gives the relevant load factors.

**ZWS 1077:1979****Binder distributors for road surface dressing**

Price Code: Gr. 7

27 pages

Reprinted 2006

First reprint, 2022

Covers the design, testing and calibration of road binder distribution apparatus.

**ZWS 1078:1974****Test methods for bitumen**

Price Code: Gr. 8

66 pages

Replaces: ZWS A11: 1961

First reprinted, 2022

This Zimbabwe standard gives methods of test for bitumens in bitumen containing compositions used for building, road engineering and electrical purposes.

**ZWS 1079:2022****Uniform provisions concerning the approval of M2 and M3 small capacity vehicles with regard to their general construction**

Price Code: Grade 5

61 pages

This Regulation applies to single-deck rigid vehicles of categories M2 and M3 designed and constructed for the carriage of seated or standing persons and having a capacity not exceeding 22 passengers in addition to the driver.

**ZWS 1080:2022****Nicotine-containing tobacco free oral product 3-(1- methyl, 2- Pyrroldinyl) Pyridine**

Price Code: Grade 6

14 pages

This Zimbabwean Standard gives guidance on ingredient requirements, nicotine limits, product information and labelling and product certification requirements for Tobacco-Free, Nicotine Containing Oral Products exclusively intended for oral use, where the recommended method of consumption results in uptake of the nicotine via the oral mucosa.

**ZWS 1081:2022****Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train**

Price Code: Grade 8

87 pages

**Part I:** Safety requirements with respect to the electric power train of road vehicles of categories M and N, with a maximum design speed exceeding 25 km/h, equipped with one or more traction motor(s) operated by electric power and not permanently connected to the grid, as well as their high voltage components and systems which are galvanically connected to the high voltage bus of the electric power train. Part I of this regulation does not cover post-crash safety requirements of road vehicles.

**Part II:** Safety requirements with respect to the Rechargeable Energy Storage System (REESS), of road vehicles of categories M and N equipped with one or more traction motors operated by electric power and not permanently connected to the grid. Part II of this Regulation does not apply to REESS(s) whose primary use is to supply power for starting the engine and/or lighting and/or other vehicle auxiliaries systems.

**ZWS 1082:2022****Uniform provisions concerning the approval of passenger cars powered by an internal combustion engine only, or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or measurement of electric energy consumption and electric range, and or categories M<sub>1</sub> and N<sub>1</sub> vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range**

Price Code: Grade 8

110 pages

This Regulation applies to vehicles of categories M1 and N1 with regard to: The measurement of the emission of carbon dioxide (CO<sub>2</sub>) and fuel consumption and/or to the measurement of electric energy consumption and electric range of vehicles powered by an internal combustion engine only or by a hybrid electric power train, And to the measurement of electric energy consumption and electric range of vehicles powered by an electric power train only. It does not apply to a category N1 vehicle if both: The engine type fitted to that type of vehicle has received type approval pursuant to Regulation No. 49, and The total annual worldwide production of N1 vehicles of the manufacturer is less than 2,000 units.

**ZWS 1083:2023****Uniform provisions concerning the approval of:****I. Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system****II. Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion System**

Price	Code:	Gr.	11
218 pages			

This Regulation applies to:

**Part I:** Specific components for vehicles of category M and N using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system;**Part II:** Vehicles of category M and N1 with regard to the installation of specific components, for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) for propulsion, of an approved type.**ZWS 1085:2022****Uniform provisions concerning the approval of specific LPG (liquefied petroleum gases) retrofit systems to be installed in motor vehicles for the use of LPG in their propulsion system and specific CNG (compressed natural gas) retrofit systems to be installed in motor vehicles for the use of CNG in their propulsion system**Price Code: Grade. 8  
58 pages

This Regulation applies to:

**Part I:** Specific LPG retrofit systems to be installed in motor vehicles for the use of LPG in the propulsion system.**Part II:** Specific CNG retrofit systems to be installed in motor vehicles for the use of CNG in the propulsion system.**ZWS 1087:2022****Structural timber – characteristic values of strength-graded timber – sampling, full-size testing and evaluation**Price Code: Grade 7  
36 pages

This standard provides requirements for sampling, testing and assessing the characteristic values of structural properties for specific grades and sizes of sawn timber, including finger-jointed timber and laminated timber. This standard does not apply to custom-designed laminated products, plywood or sleepers..

**ZWS 1088:1975****Jelly powders**Price Code: Gr. 5  
3 pages

First published 1968, as CAS S16,

First reprint 2022, as ZWS 1088.

Replaces CAS S16:1968

This specification applies to jelly powders made from gelatine, sugar, flavours and colouring materials, which may contain salts, fruit acids and buffering agents.

**ZWS 1089:1999****Baking powder**

Price Code: Gr. 5

5 pages

Replaces CAS S35:1999

This specification covers the manufacture, packing, labelling and testing of baking powder. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laborato-

ries of the main centres of population and the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1090:1999****Icing sugar**

Price Code: Gr. 5

6 pages

First reprint 2022, as ZWS 1090

Replaces CAS S40:1999

This specification sets out the physical, chemical, microbiological packing, marking and sampling requirements for one grade of icing sugar. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centres of population and in the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1092:2023****Requirements for power operated threshing and shelling equipment**

Price Code: Gr. 4

4 pages

This standard specifies the general requirements for power operated threshing and shelling equipment. This standard does not apply to manual threshers and shellers.

**ZWS 1093:1974****Gravy Powder**

Price Code: Gr. 4

6 pages

Replaces, ZWS S38

First Reprint 2022, as ZWS 1093

This specification covers the manufacture, packing, labelling and testing of gravy powder. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centre s of population and in the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.

**ZWS 1094:1973****Chutney**

Price Code: Gr. 6

10 pages

Replaces, ZWS S37

First Reprint 2022, as ZWS 1094

This specification covers the complete range of hot and mild condiments known as chutneys prepared from a wide variety of fruits and vegetables. No methods are given for bacteriological control. Locally, bacteriological testing of food products is regularly carried out by competent bacteriologists in the Public Health Laboratories of the main centres of population and in the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory.



**ZWS 1096:2023****Laundry detergent (for use in non – automatic domestic washing machines)**

Price Code: Gr. 4  
7 pages

This Zimbabwe standard specifies characteristics of the type of laundry detergent intended for the washing (by hand and in non-automatic domestic washing machines) in either hard or soft water of textiles made of cotton or of cotton and synthetic fibre yarns.

**ZWS 1097:2023****Distribution transformers**

Price Code: Gr. 8  
54 pages

This standard specifies requirements for single-phase and three-phase distribution transformers of the oil-immersed type, that

- Are category-sized in accordance with IEC 60076-1 up to and including 3150 kVA,
- Have rated maximum voltages (Um) that do not exceed 36 kV,
- Have uniformly insulated windings,
- Have a high-voltage and a low-voltage winding or, in the case of an auto-transformer, a series and a common winding and, in each case, if necessary, a stabilizing winding or an auxiliary winding, and
- Are suitable for de-energized tap changing only.

This standard covers transformer that have any combination of rated primary and secondary voltages.

**ZWS 1098:2023****Boot and shoe laces**

Price Code: Gr. 6  
8 pages

First published 1973, as CAS Z23,  
First Reprint 2023, as ZWS 1098  
Replaces CAS Z23

This specification applies to various types of flat or tubular laces, including was-finished laces, braided from yarns of nylon, vinyl, rayon or cotton or from a combination of these materials. It lays down the requirements for make-up, colour, packing, sampling and methods of tests.

**ZWS 1100:2023****Men's heavy Oxford style shoes for services use**

Price Code: Gr. 6  
13 pages

First Published in 1972 as CAS Z18  
First Reprint 2023 as ZWS 1100

This specification covers men's heavy shoes, in sizes 5 to 14 by half sizes and fitting 6, as follows:  
Oxford type shoes, with straight toe caps, good quality side leather uppers, leather, synthetic or fabric quarter linings and vamp linings, leather outer soles, and leather heels with rubber top pieces.

**ZWS 1101:2023****Men's military style service boots**

Price Code: Gr. 6  
8 pages

First published 1972 as CAS Z20,  
First Reprinted 2023 as ZWS 1101  
Replaces CAS Z20

This Zimbabwe specification covers the following six types of men's military style boots of the Derby pattern, made according to the chain or lockstitch principle, or with stuck-on leather soles, or with rubber soles, or with vulcanized and bonded soles, in sizes 5 to 14 inclusive.

**ZWS 1102:2023****Requirements for Agricultural/ General Purpose Tractors**

Price Code: Gr. 4  
7 pages

This specification covers the requirements for general purpose or agricultural tractors. This specification does not apply to:

- Tractors that have been previously registered in Zimbabwe;
- Experimental or prototype agricultural tractors that have been constructed or imported for the purpose of testing, assessment or development; and
- Industrial tractors, earthmoving tractors and purpose-built forestry tractors. Where a Zimbabwean national standard or an international standard is incorporated by reference into this specification, only the technical requirements/specifications for the tractor, and the tests to verify compliance, apply. This standard specifies the terminology for agricultural tractors designed primarily for safe use in agricultural operations for the production of food and fiber. This specification is intended to establish uniformity for general purpose or agricultural tractors.

**ZWS 1103:2023****Redeposition index of laundry detergents**

Price Code: Gr. 4  
5 pages

This test method specifies a method for the determination of the redeposition index of laundry detergents.

**ZWS 1104:2023****Fluorescent whitening agent content of laundry detergents**

Price Code: Gr. 4  
4 Pages

This test method specifies a method for the determination of the fluorescent whitening agent content of laundry detergents.

**ZWS 1105:2023****Chemical damage to cotton fibres by laundry detergents**

Price Code: Gr. 4  
2 Pages

This test method specifies a method for the determination of the chemical damage to cotton fibres by laundry detergents.

**ZWS 1106:2023****Water-insoluble matter content of laundry detergents**

Price Code: Gr. 4  
1 Page

This standard specifies a method for the determination of the water-insoluble matter content of laundry detergents.

**ZWS 1107:2023****Cleaning efficiency of high-foam laundry detergents**

Price Code: Gr. 4  
5 Pages

This test method specifies a method for the determination of the cleaning efficiency of high-foam laundry detergents.

**ZWS 1108:2023****London dry gin**

Price Code: Gr. 2  
2 pages

Amended by MD 643: 2002  
Incorporates AMD 695

This specification covers quality of alcohol, alcohol content, flavouring, chemical, physical, packing and marking requirements of London Dry Gin.

**ZWS 1111:2023**  
**Cleaning efficiency of low-foam laundry detergents**  
Price Code: Gr. 4  
5 Pages

This test method specifies a method for the determination of the cleaning efficiency of low-foam laundry detergents.

**ZWS 1113:2024**  
**Vitamin-mineral supplement licks**  
Price Code: Gr. 6  
12 Pages

This Zimbabwe Standard to provide guidance on the production and feeding of the vitamin-mineral supplement licks to ruminant (sheep, goats and cattle) and game animals.

**Note.** The titles of the publications referred to in this standard are listed in the Foreword.

**ZWS 1114:2023**  
**Marking articles made of gold**  
Price Code: Gr. 4  
4 Pages

Identical to R.N.S Z2:1961.

First published, 1961 as R.N.S Z2,

First reprint, 2023 as ZWS 1114

This specification covers the marking of gold articles manufactured in Zimbabwe.

**ZWS 1117:2024**  
**Chili Sauce**

Price Code: Gr. 6  
10 Pages

Technically equivalent to Codex STAN 306:2021.

This Standard applies to chili sauce, as defined in Section 2 below, and offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

**ZWS 1118:2024**  
**Processed Tomato Concentrates**  
Price Code: Gr. 6  
8 Pages

Technically equivalent to Codex STAN 57-1981.

This Standard applies to processed tomato concentrate and offered for direct consumption, including for catering purposes or for repacking if required. This Standard also applies to the product when indicated as being intended for further processing. The Standard does not include products that contain seeds and skins such as “pizza toppings” and other “homestyle” products as well as products commonly known as tomato sauce, chilli sauce, and ketchup, or similar products which are highly seasoned products of varying concentrations containing characterising ingredients such as pepper, onions, vinegar, etc., in quantity that materially alter the flavour, aroma and taste of the tomato component.

**ZWS 1119:2024**  
**Requirements and Guidance for Establishing Containerized/Portable Fuel Retail Stations in Rural and Remote Areas**  
Price Code: Gr. 6  
18 Pages

This standard is applicable to all containerized/portable fuel retail stations installed in certain areas with the approval of relevant authorities subject the requirements contained in these guidelines.

**ZWS 1120:2023**  
**Aluminium sulphate for use in water treatment intended for human consumption**  
Price Code: Gr. 4  
14 Pages

Based on Rwanda Standard RS 353-1:2017

This Zimbabwe Standard describes the characteristics, specifies the requirements and gives reference to the analytical methods of aluminium sulphate. It gives information on its use in water treatment and also determines the rules relating to safe handling and use of aluminium sulphate. This standard is applicable only to aluminium sulphate used for treatment of water intended for human consumption.

**Note:**The titles of the publication referred to in this standard are listed in the Foreword.

**ZWS 1121:2024**  
**E-Vaping products**  
Price Code: Gr. 4  
15 Pages

This standard is applicable to electronic vaping products intended for the production of aerosol from e-liquids for consumption by inhalation. It is applicable to devices intended for use with or without nicotine content in the aerosol produced. This standard is also applicable to e-liquid containers, filling mechanisms and accessories, electrical and other, intended for use with ENDS. This standard specifies the minimum safety and technical requirements for vaping products, e-liquid containers, and associated accessories when operated and maintained in the manner prescribed by the manufacturer. This standard exclude any tobacco product and pharmaceutically regulated products in any form or manner. Thereby electronic tobacco delivery systems that heat tobacco to produce aerosols through tobacco sticks are excluded from these standards.

**ZWS 1122:2024**  
**Kombucha**  
Price Code: Gr. 2  
5 Pages

This Zimbabwe standard specifies the requirements and the methods of sampling and tests for Kombucha fermented beverages, both alcoholic and non-alcoholic. Where this Zimbabwe Standard conflicts in any way with the relevant Government Acts, Regulations and Local Municipal By-laws, the requirements of the Government Acts and Regulations, and of the local Municipal By-laws take precedence over those in this standard.

**ZWS 1128:2024**  
**Acetylene - Code of Safety**  
Price Code: Gr. 5  
9 Pages  
Based on Indian standard IS 14814

This standard describes properties of acetylene, the nature of hazards associated with it and essential information on storage, handling, packing, labelling, disposal of waste, spillage/leakages, training of personnel, personnel protective equipment and first-aid. This standard, however, does not deal with the specifications for design of buildings, chemical engineering plants, storage vessels and equipment for operation controls.

**ZWS 1129:2024**  
**Dissolved Acetylene (Gas)**  
Price Code: Gr. 6  
15 Pages  
Based on IS 308

This standard specifies the requirements, and methods of sampling and test for dissolved acetylene (gas).

**ZWS 1130:2024**  
**Nitrogen Gas**  
Price Code: Gr. 6  
28 Pages  
Based on IS 1747

This Zimbabwe standard specifies the requirements, and methods of sampling and testing for nitrogen (gas).

**ZWS 1131:2024**  
**Compressed and Liquid Oxygen for industrial use**  
Price Code: Gr. 6  
10 Pages  
Based on IS 309

This standard specifies requirements and methods of sampling and tests for compressed and liquid oxygen for industrial use. This draft standard does not cover aviation oxygen or medical oxygen.

**ZWS 1133:2024**  
**Potato crisps**  
Price Code: Gr. 5  
5 Pages  
First published in 1971 as CAS S33  
First Reprinted 2024 as ZWS 1133

This specification covers the manufacture, packing, labelling and testing of potato crisps. No methods are given for bacteriological control. Locally, bacteriological testing of food products is carried out by competent bacteriologists in the public health Laboratories of main centers of population and the laboratories of the Association, using internationally accepted methods. For the purpose of this specification, reports on bacteriological testing issued by such laboratories shall be deemed satisfactory. Where this Zimbabwe standard conflicts in any way with the relevant Government Acts and Regulations and local Municipal By-laws, the requirements of the Government Acts and Regulations and of the local Municipal By-laws take precedence over those in this standard.

# ZWS EN ADOPTIONS

## ZWS EN 196: 2000

### Cement

#### Part 1: Determination of strength

Price Code: Gr. 6

17 pages

Identical to EN 196-1: 1994

Amended by MD 634: 2001

Replaces ZWS 307: 1993

Describes a method of determining the compressive and flexural strengths of cement mortar.

#### Part 2: Chemical analysis of cement

Price Code: Gr. 6

21

pages

Identical to EN 196: Part 2: 1994

Replaces ZWS 307: 1993

Describes the procedures for chemical analysis of cement.

#### Part 3: Determination of setting time and soundness of cements

Price Code: Gr. 4

8 pages

Identical to EN 196: Part 3: 1994

Replaces ZWS 307: 1993

Describes the methods for determination setting time and soundness of cement.

#### Part 5: Pozzolanicity test for pozzolanic cements

Price Code: Gr. 3

6 pages

Identical to EN 1996: Part 5: 1994

Replaces ZWS 307: 1993

Describes the method of measuring the pozzolanicity of pozzolanic cements conforming to ENV 197-1.

#### Part 6: Determination of fineness

Price Code: Gr. 4

9 pages

Identical to EN 1996: Part 6: 1989

Replaces ZWS 307: 1993

Describes two methods of determining the fineness of cement.

#### Part 7: Methods of taking and preparing samples of cement

Price Code: Gr. 5

13 pages

Identical to EN 196: Part 7: 1989

Replaces ZWS 307: 1993

Describes only the equipment to be used, the methods to be followed and the provisions to be complied with for taking samples of cement representatives of given lots for testing the quality of products prior to, during or after delivery.

#### Part 21: Determination of the chloride, carbon dioxide and alkali content of cement

Price Code: Gr. 5

13 pages

Identical to EN 196: Part 21: 1989

Replaces ZWS 307: 1993

Lays down the methods for the determination of the chloride, carbon dioxide and alkali content of cement

## ZWS EN 197: Part 1:2011

### Cement

#### Part 1: Composition, specifications and conformity criteria for common cements

Price

Code:

Gr. 7

33 pages

Identical to EN 197: Part 1: 2011

Supersedes ZWS EN 197: Part 1:2000

Replaces ZWS 307: 1993

This European Standard defines and gives the specifications of 27 distinct common cements, 7 sulfate resisting common cements as well as 3 distinct low early strength blast furnace cements and 2 sulfate resisting low early strength blast furnace cements and their constituents. The definition of each cement includes the proportions in which the constituents are to be combined to produce these distinct products in a range of nine strength classes. The definition also includes requirements which the constituents have to meet. It also includes mechanical, physical, and chemical requirements. Furthermore, this standard states the conformity criteria and the related rules. Necessary durability requirements are also given. In addition to those sulfate resisting cements defined in the present document, other cements conforming either to this standard or to other standards, European or national, have been nationally demonstrated to have sulfate resisting properties. These cements which are listed in Annex A, are considered by different CEN Member countries as sulfate resisting within the limits of their territory.

## ZWS EN 197: Part 2:2014

### Cement

#### Part 2: Conformity evaluation

Price Code: Gr. 7

22 pages

Identical to EN 197: Part 2: 2014

Supersedes ZWS EN 197:2000

Replaces ZWS 307: 1993

This European Standard specifies the scheme for the assessment and verification of constancy of performance (AVCP) of cements to their corresponding product specification standards, including certification of constancy of performance by a product certification body. The standard provides technical rules for factory production control by the manufacturer, including autocontrol testing of samples, and for the tasks of the product certification body. It also provides rules for actions to be followed in the event of non-conformity, the procedure for the AVCP and requirements for dispatching centres. In this European Standard, the word "cement" is used to refer both to common cements as defined in EN 197 1 and to other cements and binders for which the relevant product specification standard makes reference to this European Standard and which are submitted for certification. Such a cement is produced at a given factory and belongs to a particular type and a particular strength class, as defined and specified in the relevant product specification standard.

## ZWS EN 197: Part 5:2021

### Cement

#### Part 5: Portland-composite cement CEM II/C-M and composite cement CEM VI

Price Code: Gr. 7

6 pages

Identical to EN 197: Part 5: 2021

This document deals with Portland-composite cement CEM II/C-M, not covered by EN 197-1, and a different type of Composite cement

CEM VI, also not covered by EN 197-1, whose intended use is the preparation of concrete, mortar, grout etc. This document does not cover: Common cement covered by EN 197-1; very low heat special cement covered by EN 14216; supersulfated cement covered by EN 15743; calcium aluminate cement covered by EN 14647; and masonry cement covered by EN 413-1.

#### **ZWS EN 413: Part 1:2011**

##### **Masonry cement**

##### **Part 1: Composition, specifications and conformity criteria**

Price Code: Gr. 7

21 pages

Identical to EN 413: Part 1:2011

Superseeds ZWS ENV 413-1:2004

Replaces ZWS A22: 1967

This European Standard specifies the definition and composition of masonry cements as commonly used in Europe for the production of mortar for bricklaying and blocklaying and for rendering and plastering. It includes physical, mechanical and chemical requirements and defines strength classes. EN 413-1 also states the conformity criteria and the related rules. Necessary durability requirements are also given.

##### **Part 2: Test methods**

Price Code: Gr. 5

13 pages

Identical to ENV 413: Part 2: 1994

Replaces ZWS A22: 1967

Describes reference and alternative test methods to be used when testing masonry cement to assess the conformity to ZWS ENV Part 1. It gives the tests on fresh mortar for consistence water retention, an contact and workability.

#### **ZWS EN 1435:2002**

##### **Non-destructive examination of welds –Radiographic examination of welded joints**

Price Code: 6

21 pages

Identical to EN 1435: 1997

Specifies fundamental techniques of radiography.

#### **ZWS EN 1561:2003**

##### **Founding – grey cast irons**

Price Code: Gr. 6

17 pages

Identical EN 1561: 1997

Specifies the properties of unalloyed and low-alloyed grey cast iron used for castings, which have been manufactured in sand moulds or in moulds with comparable thermal behavior.

#### **ZWS EN 1659:2023**

##### **In vitro diagnostic systems - culture media for microbiology – Terms and definitions**

Price Code: Gr. 4

3 pages

Identical EN 1659:1996

This European Standard provides terms for different classifications of culture media used in microbiology (bacteriology and mycology).

#### **ZWS EN 12322:1999**

##### **In vitro diagnostic medical devices – Culture media for microbiology – Performance criteria for culture media**

Price Code: Gr. 7

20 pages

Identical to EN 12322:1999

This European Standard specifies requirements for the performance of culture media. It is concerned with the traceability, comparability, reproducibility and suitability of culture media used in microbiological laboratories. These characteristics are achieved by applying the quality criteria outlined in this standard. This European Standard is applicable to :

Commercial organizations distributing media to microbiology laboratories in ready-to-use form, as dehydrated media or as semi-finished media (see 2.5 in EN 1659 : 1996);

Non commercial organizations that distribute media to satellite locations;

Laboratories that prepare culture media for their own use.

Cell culture media are not covered by this standard.

#### **ZWS EN 12350: Part 1:2019**

##### **Testing fresh concrete**

##### **Part 1: Sampling and common apparatus**

Price Code: Gr. 4

5 pages

Identical to EN 12350-1:2019

This document specifies two procedures for sampling fresh concrete, by composite sampling and by spot sampling.

**NOTE 1:** The requirement for remixing the sample before tests on the fresh concrete, or before making test specimens, is included in the relevant standards. When mixing and sampling concrete is done in a laboratory, different procedures may be required.

**NOTE 2:** In this case Clause 6, item g) applies.

Additionally, this standard lists common apparatus mentioned in two or more standards of EN 12350 series and EN 12390-2.

##### **Part 2: Slump test**

Price Code: Gr. 4

5 pages

Identical to EN 12350-2:2019

This document specifies a method for determining the consistence of fresh concrete by the slump test. The slump test is sensitive to changes in the consistence of concrete, which correspond to slumps between 10 mm and 210 mm. Beyond these extremes the measurement of slump can be unsuitable and other methods of determining the consistence should be considered. If the slump continues to change over a period of 1 min after withdrawing of the cone, the slump test is not suitable as a measure of consistence. The test is not suitable when the declared value of D of the coarsest fraction of aggregates actually used in the concrete (D<sub>max</sub>) is greater than 40 mm.

**ZWS EN 12390:2012**

**Testing hardened concrete**

**Part 1: Shape, dimensions and other requirements for specimens and moulds**

Price Code: Gr. 4

16 pages

Identical to EN 12390-1: 2012

This European Standard specifies the shape, dimensions and tolerances of cast concrete test specimens in the form of cubes, cylinders and prisms, and of the moulds required to produce them.

**NOTE:** The tolerances specified in this European Standard are based on the needs of strength testing, but they can be applicable to tests for other properties.

**Part 2:2009: Making and curing specimens for strength tests**

Price Code: Gr. 4

4 pages

Identical to EN 12390-2:2009

This European Standard specifies methods for making and curing test specimens for strength tests. It covers the preparation and filling of moulds, compaction of the concrete, levelling the surface, curing of test specimens and transporting test specimens.

**Part 3:2009 Compressive strength of test specimens**

Price Code: Gr. 6

18 pages

Identical to EN 12390-3:2009

This European Standard specifies a method for the determination of the compressive strength of test specimens of hardened concrete.

**Part 4:2019 Compressive strength – Specification for testing machines**

Price Code: Gr. 7

12 pages

Identical to EN 12390-4:2019

This document specifies the requirements for the performance of compression testing machines for the measurement of the compressive strength of concrete.

**Part 7:2019 Density of hardened concrete**

Price Code: Gr. 5

8 pages

Identical to EN 12390-7:2019

This document specifies a method for determining the density of hardened concrete. It is applicable to light-weight, normal-weight and heavy-weight concrete. It differentiates between hardened concrete in the following states:

- 1) as-received;
- 2) water saturated;
- 3) oven-dried.

The mass and volume of the specimen of hardened concrete are determined and the density calculated.

Specifies construction ,design ,performance requirements and test methods for medical face masks intended to limit the transmission of infective agents from staff to patients during surgical procedures.

**ZWS EN 14683:2019**

**Medical face masks –Requirements and Test Methods**

Price Code: Gr. 7

11 pages

Identical to EN 14683

# ZWS IEC ADOPTIONS

## ZWS IEC 76:1998

### Part 5: Ability to withstand short circuit

Price Code: Gr. 4

12 pages

Identical to IEC 76 Part 5: 1982

Contains requirements with regards to ability to withstand short circuit and demonstration of thermal and dynamic ability to withstand short circuit.

## ZWS IEC 335-2-24:1998

### Safety of household and similar electrical appliances

#### Part 2-24: Particular requirements for refrigerators, food freezers and ice-makers

Price Code: Gr. 7

37 Pages

Identical to IEC 335: Part 2: 24: 1992

Specifies the essential characteristics for household frozen food storage cabinets and food freezers which are wholly factory assembled.

## ZWS IEC 432:1995

### Safety specifications for incandescent lamps

#### Part 1: Tungsten filament lamps for domestic and similar general lighting purposes

Price Code: Gr. 7

80 pages

Identical to IEC 432: Part 1: 1993

Specifies the safety and interchangeability requirements of tungsten filament incandescent lamps for general lighting service.

## ZWS IEC 439

### Low-voltage switchgear and control gear assemblies

#### Part 1: 1996: Type-tested and partially type-tested assemblies

Price Code: Gr. 9

103 pages

Amended by MD 1: 1998

Identical to IEC 439: Part 1: 1992

Applies to low voltage switchgear and control gear assemblies, type-tested assemblies (TTA) and partially type-tested assemblies (PTTA), the rated voltage of which does not exceed 1 000 V A.C at frequencies not exceeding 1 000Hz or 1 500 V D.C.

## ZWS IEC 439

### Part 2:1998 Particular requirements for bus bar trunking systems (busways)

Price Code: Gr. 6

18 pages

Identical to IEC 439: Part 2: 1996

Applies to busbar trunking systems intended to supply luminaires.

### Part 2:1998 Particular requirements for bus bar trunking systems (busways)

Price Code: Gr. 6

18 pages

Identical to IEC 439: Part 2: 1996

Applies to busbar trunking systems intended to supply luminaires.

### Part 3: 1998: Particular requirements for low-voltage switchgear and controlgear assemblies to be installed in places where unskilled persons have access to their use – Distribution boards

Price Code: Gr. 9

31 pages

Identical to IEC 439: Part 3: 1990

Give supplementary requirements for such enclosed distribution boards (DBU), which are stationary, type tested assemblies (TTA) for indoor use.

### Part 4:1998 Particular requirements for assemblies for construction sites (ACS)

Price Code: Gr. 8

46 pages

Identical to IEC 439 Part 4: 1990

Applies to type-tested assemblies (TTA) intended for use on construction sites.

### Part 5: Particular requirements for assemblies intended to be installed outdoors in public places – Cable distribution cabinets (CDCs) for power distribution in networks

Price Code: Gr. 7

26 pages

Identical to IEC 439: Part 5: 1996

Gives supplementary requirements for cable distribution cabinets (CDCs), which are stationary, type-tested assemblies (TTA) for outdoor installation in places which are exposed to the public.

## ZWS IEC 947:1998

### Low-voltage switchgear and control gear

#### Part 1: General rules

Price Code: Gr. 10

307 pages

Identical to IEC 947: Part 1: 1996

Applies to switchgear and control gear intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V A.C or 1 500 V D.C.

#### Part 2: Circuit-breakers

Price Code: Gr. 9

127 pages

Replaces ZWS 299: 1991

Identical to IEC 947: Part 2: 1995

Applies to circuit-breakers the main contacts of which are intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V A.C or 1 500 V D.C.

#### Part 3: Switch-disconnectors, and fuse-combination units

Price Code: Gr. 8

54 pages

Identical to IEC 947: Part 3: 1990

Applies to switches, disconnectors, switch-disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V A.C.

## ZWS IEC 60034.1:2014

### Rotating electrical machine

#### Part 1: Rating and performance

Not for sale

140 pages

Identical to IEC 60034.1:2010

Applicable to all rotating electrical machines except those covered by other IEC standards.

**Part 3:2017 Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines**

Not for sale

27 pages

Identical to IEC 60034.3:2007

Applies to three-phase synchronous generators, having rated outputs of 10MVA and above driven by steam turbines or gas turbines.

**Part 4:2017 Methods for determining synchronous machine quantities from tests**

Not for sale

75 pages

Identical to IEC 60034.4:2008

Applies to three-phase synchronous machines of 1kVA rating and larger with rated frequency of not greater than 500Hz and not less than 10 Hz.

**Part 5: Degree of protection provided by the integral design of rotating electrical machines (IP CODE) Classification**

Not for sale

41 pages

Identical to IEC 60034.5:2006

Applies to the classification of degrees of protection provided by enclosures for rotating electrical machines. It defines the requirements for protective enclosures that are in all other respects suitable for their intended use and which from the point of view of materials and workmanship ensure that the properties dealt with in this standard are maintained under normal conditions of use.

**Part 6: Methods of cooling (IC CODE)**

Not for sale

39 pages

Identical to IEC 60034.6:2010

**Part 7: Classification of types of construction, mounting arrangements and terminal box position (IM CODE)**

Not for sale

49 pages

Identical to IEC 60034.7:2010

Specifies the IM code a classification of types of construction, mounting arrangements and the terminal box position of rotating electrical machines.

**Part 8: Terminal marking and direction of rotation**

Not for sale

33 pages

Identical to IEC 60034.8:2010

Applies to a.c. and d.c. machines. Turbine type synchronous machines are excluded from this standard.

**Part 11: Thermal protection**

Not for sale

25 pages

Identical to IEC 60034.11:2004

Specifies requirements relating to the use of thermal protectors and thermal detectors incorporated into the stator windings or placed in other suitable positions in induction machines in order to protect them against serious damage due to thermal overloads.

**Part 22: AC Generators for reciprocating internal combustion (RIC) engine driven generating sets**

Not for sale

20 pages

Identical to IEC 60034.22:2009

Establishes the principal characteristics of a.c. generators under the control of their voltage regulators when used for reciprocating internal combustion (RIC) engine driven generating set applications and supplements the requirements.

**Part 23: Specification for the refurbishing of rotating electrical machines**

Not for sale

45 pages

Identical to IEC 60034.22:2009

Covers the activities necessary to ensure the satisfactory rewinding and refurbishment of all types and sizes of rotating electrical machines.

**ZWS IEC 60050:2017**

**International Electrotechnical Vocabulary**

**Part 601: Generation, transmission and distribution of electricity - General**

Not for sale

21 pages

Identical to IEC 60050-601:1985

**Part 602: Generation, transmission and distribution of electricity - Generation**

Not for sale

30 pages

Identical to IEC 60050-602:1983

**Part 603: Generation, transmission and distribution of electricity - Power system planning and management**

Not for sale

33 pages

Identical to IEC 60050-603:1986

**Part 605: Generation, transmission and distribution of electricity - Substations**

Not for sale

27 pages

Identical to IEC 60050-605:1983

**ZWS IEC 60071.2:2014**

**Insulation co-ordination**

**Part 1:2017 Definitions, principles and rules**

Not for sale

35 pages

Identical to IEC 60071.1:2006

Applies to three-phase a.c. systems having a highest voltage for: equipment above 1 kV. Specifies the procedure for the selection of the rated withstand voltages for the phase-to-earth, phase to phase and longitudinal insulation of the equipment and the installations of these systems.

**Part 2: Application guide**

Not for Sale

251 pages

Identical to IEC 60071-2: 1996

Deals with the selection of insulation levels of equipment or installations of three phase electrical systems. Gives guidance for the determination of the rated withstand voltages for ranges I and II of IEC 71-1 and to justify the association of these rated values with the standardized highest voltages for equipment.



**ZWS IEC 60076.2:2014****Power Transformers****Part 2: Temperature rise for liquid – immersed transformers**

Not for Sale

47 pages

Identical to IEC 60076-2: 2011

Identifies power transformers according to their cooling methods, defines temperature rise limits and gives the methods for temperature rise tests.

**ZWS IEC 60076.3:2017****Power Transformers****Part 3: Insulation levels, dielectric tests and external clearances in air**

Not for Sale

56 pages

Identical to IEC 60076-3: 2013

Gives details of the applicable dielectric tests and minimum dielectric test levels. Recommended minimum external clearances in air between live parts and earth are given for use when these clearances are not specified by the purchaser.

**ZWS IEC 60076.8:2014****Power Transformers****Part 8: Application guide**

Not for Sale

157 pages

Identical to IEC 60076-8: 1997

Provides information to users about certain fundamental service characteristics of different transformer connections and magnetic circuit designs with particular reference to zero-sequence phenomena.

**ZWS IEC 60076.10:2014****Power Transformers****Part 10: Determination of noise levels**

Not for Sale

69 pages

Identical to IEC 60076-10: 2001

Defines sound pressure and sound intensity measurement methods by which sound power levels of transformers, reactors and their associated cooling auxiliaries may be determined.

**ZWS IEC 60076-10-1:2017****Determination of sound levels – Application guide**

Not for sale

44 pages

Identical to IEC 60076-10-1:2016

Practical guidance on marking measurements is given, and factors influencing the accuracy of the methods are discussed. Indicates why values measured in the factory may differ from those measured in service.

**ZWS IEC 60076.14:2014****Power Transformers****Part 14: Liquid-immersed power transformers using high-temperature insulation materials.**

Not for Sale

57 pages

Identical to IEC 60076-14: 2013

Applies to liquid-immersed power transformers employing either high-temperature insulation or combinations of high-temperature and conventional insulation, operating at temperatures above conventional limits.

**ZWS IEC 60193:2017****Hydraulic turbines, storage pumps and pump-turbines – Model acceptance tests.**

Not for sale

569 pages

Identical to IEC 60193:1999

Applies to laboratory models of any type of impulse or reaction hydraulic turbine, storage pump or pump-turbine. Models of prototype machines either with unit power greater than 5 MW or with reference diameter greater than 3m.

**ZWS IEC 60282.1:2017****High-voltage fuses****Part 1: Current-limiting fuses**

Not for sale

83 pages

Identical to IEC 60282.1:2009

Applies to all types of high-voltage current-limiting fuses designed for use outdoors or indoors on alternating current systems of 50 Hz and 60 Hz and of rated voltages exceeding 1000 V.

**ZWS IEC 60335.1:2007****Household and similar electrical appliance safety****Part 1: General requirements**

Price Code: Gr. 12

147 pages

Identical to IEC 60335-1: 1991

Amended by MD621:2000: MD661:2008

Replaces ZWS 129: 1995

Deals with the safety of electrical appliance for household and similar purposes, their rated voltage being not more than 250 V for single phase appliances and 480 V for other appliances.

**Part 2.2:2013 Particular requirements for vacuum cleaners and water suction cleaning appliances**

Not for sale

58 pages

Identical to IEC 60335.2.2:2009

Deals with the safety of electric vacuum cleaners and water suction cleaning appliances for household and similar purposes, including vacuum cleaners for animal grooming their rated voltage being not more than 250V. It also applies to centrally sited vacuum cleaners and automatic battery powered cleaners.

**Part 2.3: Particular requirements for electric irons**

Not for sale

19 pages

Identical to IEC 60335.2.3:2013

Deals with the safety of electric dry irons and steam irons, including those with a separate water reservoir or boiler having a capacity not exceeding 5l, for household and similar purposes their rated voltage being not more than 250V.

**Part 2.5: Particular requirements for dishwashers**

Not for sale

21 pages

Identical to IEC 60335.2.5:2012

Deals with the safety of electrical dishwashers for household and similar purposes that are intended for washing and rinsing dishes, cutlery and other utensils their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances.

**Part 2.6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances**

Not for sale

78 pages

Identical to IEC 60335.2.6:2008

Deals with the safety of stationary electric cooking ranges, hobs, ovens and similar appliances for household use, their rated voltage being not more than 250V for single-phase appliances connected between one phase and neutral and 480V for other appliances.

**Part 2.7: Particular requirements for washing machines**

Not for sale

34 pages

Identical to IEC 60335.2.7:2012

Deals with the safety of electric washing machines for household and similar use that are intended for washing clothes and textiles their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances.

**Part 2.9: Particular requirements for grills, toasters and similar portable cooking appliances**

Not for sale

41 pages

Identical to IEC 60335.2.9:2012

Deals with the safety of electric portable appliances for household and similar purposes that have a cooking function such as baking, roasting and grilling their rated voltage being not more than 250V.

**Part 2.12: Particular requirements for warming plates and similar appliances**

Not for sale

13 pages

Identical to IEC 60335.2.12:2008

Deals with the safety of electric warming plates, warming trays and similar appliances intended to keep food or vessels warm, for household and similar purposes their rated voltage being not more than 250V.

**Part 2.14: Particular requirements for kitchen machines**

Not for sale

70 pages

Identical to IEC 60335.2.14:2012

Deals with the safety of electric kitchen machines for household and similar purposes, their rated voltage being not more than 250V

**Part 2.25: Particular requirements for microwave ovens, including combination microwave ovens**

Not for sale

31 pages

Identical to IEC 60335.2.25:2010

Deals with the safety of microwave ovens for household and similar use, their rated voltage being not more than 250V

**Part 2.30:2013 Particular requirements for room heaters**

Not for sale

30 pages

Identical to IEC 60335.2.30:2009

Deals with the safety of electric room heaters for household and similar purposes their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances.

**Part 2.41: Particular requirements for pumps**

Not for sale

18 pages

Identical to IEC 60335.2.41:2012

Deals with the safety of electricity pumps for liquids having a temperature not exceeding 90°C intended for household and similar purposes their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances.

**Part 2-76:2007 Particular requirements for electrical fence energizers**

Price Code: Gr. 9

91 pages

Identical to IEC 60335-2-76: 2006

Replaces ZWS 859

Deals with the safety of electrical fence energizers the rated voltage of which is not more than 250 V and by means of which fence wires in agricultural, domestic/feral animal control fences and security fences may be electrified or monitored.

**Part 2.80:2013 Particular requirements for fans**

Not for sale

15 pages

Identical to IEC 60335.2.80: 2008

Deals with the safety of electric fans for household and similar purposes their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances.

**ZWS IEC 60364:Part 4-42:2014**

**Low voltage electrical installations**

**Part 4-42 Protection for safety – protection against thermal effects**

Not for sale

4 pages

Identical to IEC 60364-4-42:2014

The particular requirements of this part of IEC 60364 apply to the electrical installations of PV power supply systems including systems with AC modules.

**ZWS IEC 60364:Part 4-44:2014/AMD 1:2015**

**Low voltage electrical installations**

**Part 4-44: Protection for safety - protection against voltage disturbances and electromagnetic disturbances**

Not for sale

236 pages

Identical to IEC 60364-4-44:2014

IEC 60364-4-44:2007+A1:2015 are intended to provide requirements for the safety of electrical installations in the event of voltage disturbances and electromagnetic disturbances generated for different specified reasons. This consolidated version consists of the second edition (2007) and its amendment 1 (2015). Therefore, no need to order amendment in addition to this publication.

**ZWS IEC 60364:Part 5-53:2019**

**Low voltage electrical installations**

**Part 5-53:2019: Selection and erection of electrical equipment- Devices for protection for safety, isolation, switching, control and monitoring**

Not for sale

369 pages

Identical to IEC 60364-5-53:2019

IEC 60364-5-53:2019+A1:2020 Deals with general requirements for isolation, switching and control and with the requirements for selection and erection of the devices provided to fulfil such functions. This fourth edition cancels and replaces the third edition published in 2001, Amendment 1:2002 and Amendment 2:2015. This edition constitutes a technical revision. This edition includes

the following significant technical changes with respect to the previous edition:

- a) revision of all clauses except 531 and 534;
- b) introduction of a new Clause 537 Monitoring;
- c) Clause 530 contains all normative references and all terms and definitions. This consolidated version consists of the fourth edition (2019) and its amendment 1 (2020). Therefore, no need to order amendment in addition to this publication.

#### **ZWS IEC 60364-7-710:2021**

##### **Low voltage electrical installations or location:**

##### **Part 7- 710: Requirement for special installations or location-medical location**

Not for sale

83 pages

Identical to IEC 60364-7-710:2021

IEC 60364-7-710:2021 applies to electrical installations in medical locations so as to provide safety of patients and medical staff. These requirements refer to:

– hospitals and clinics or equivalent institutions (including equivalent transportable and mobile locations);

which, subject to assessment (710.30), can also include:

- sanatoriums and health clinics;
- dedicated locations in homes for senior citizens and aged care homes, where patients receive medical care;
- medical centres, outpatients' clinics and departments, casualty wards;
- other outpatients' institutions (industrial, sports and others);
- medical and dental practices;
- dedicated medical rooms in the workplace;
- other locations where medical electrical equipment is used;
- veterinary clinics;
- rooms in existing installations where a change of utilization for medical applications occur.

This list is not exhaustive.

The requirements of this document do not apply to ME equipment or ME systems.

#### **ZWS IEC 60364-7-711:2018**

##### **Low voltage electrical installations or location**

##### **Part 7- 711: requirements for special installations or location- exhibitions, shows and stands**

Not for sale

44 pages

Identical to IEC 60364-7-711:2018

IEC 60364-7-711:2018 RLV contains both the official IEC International Standard and its Redline version. The Redline version is available in English only and provides you with a quick and easy way to compare all the changes between the official IEC Standard and its previous edition. IEC 60364-7-711:2018 gives requirements applying to the temporary electrical installations in exhibitions, shows and stands (including mobile and portable displays and equipment) to protect users. This second edition cancels and replaces the first edition published in 2007. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- a) in 711.3.1 and 711.3.2 addition of "outdoors" to the list of suitable locations;
- b) alignment with IEC 60364-4-41.

#### **ZWS IEC 60364-7-712:2002**

##### **Electrical installation of buildings**

##### **Part 7-712 Requirements for special installations of locations – Solar photovoltaic (PV) power supply systems**

Not for sale

23 pages

Identical to IEC 60364-7-712:2002

The particular requirements of this part of IEC 60364 apply to the electrical installations of PV power supply systems including systems with AC modules.

#### **ZWS IEC TS 60364: Part 8-3:2020**

##### **Low –voltage installations**

##### **Part 8-3: Functional aspects – operations of prosumer's electrical installations**

Not for sale

21 pages

Identical to IEC 60364-8.3:2020

IEC TS 60364-8-3:2020 (E) specifies requirements and recommendations for the safe and proper functioning of prosumers' electrical installations. It is intended for use by contractors, users, facility managers and similar of electrical low-voltage installations. This document also provides requirements and recommendations on technical parameters and their limiting values influencing:

- a) safety:
  - protection;
  - alarm;
- b) proper functioning:
  - stability (voltage, frequency, etc);
  - reliability (power quality, interoperability of communication, etc);
  - energy management (power, power factor, current, stored energy, etc);
  - ability to ensure correct operation of equipment.

This document also provides requirements and recommendations on data exchange models, and test procedures for the prosumer's electrical installations that could include the following applications:

- local generating sources (e.g. photovoltaic systems, rotating generators, wind turbines);
- energy storage units (e.g. stationary secondary batteries);
- electric vehicle charging and/or discharging;
- prosumer's energy measurement unit (PEMU);
- control and monitoring system;
- loads which can be controlled.

This part of IEC 60364 is intended to be applied in conjunction with the other parts of IEC 60364.

#### **ZWS IEC 60479: Part 4:2020**

##### **Effects of current on human beings and livestock: Part 4: effects of lightning strokes**

Not for sale

33 pages

Identical to IEC 60479-4:2020

IEC TR 60479-4:2020 (E) summarizes the basic parameters for lightning and its variability insofar as they apply to human beings and livestock. The possible direct and indirect interactions of strikes with bodies of living beings are indicated. The resulting effects caused by lightning currents for the organism are described. This document shows the differences of effects on human beings and livestock due to lightning strokes versus those effects of electric shocks derived from electrical systems. This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- a) lightning occurrence and climatory effects around the world are depicted;
- b) direct strike description is extended;
- c) step voltage effects are expanded;
- d) upward streamer explanation is enhanced;
- e) other direct or indirect related effects to lightning injuries to the human body are specified;
- f) various safety procedures and related possibilities with respect to the personal danger of lightning are presented.

**ZWS IEC 60545:2017**  
**Guide for commissioning, operation and maintenance of hydraulic turbines**  
Not for sale  
39 pages  
Identical to IEC 60545:1976

To establish, in general way, suitable procedures for commissioning hydraulic turbines and associated equipment, and to indicate how such turbines and equipment should be operated and maintained.

**ZWS IEC 60652:2014**  
**Loading tests on overhead line structures**  
Not for sale  
23 pages  
Identical to IEC 60652:2002

It codifies the methods of testing supports for overhead lines for voltage above 45kV. It can serve as reference to the testing of lower voltage supports.

**ZWS IEC 60826:2017**  
**Loading tests on overhead line structures**  
Not for sale  
23 pages  
Identical to IEC 60826:2003

Specifies the loading and strength requirements of overhead lines derived from reliability based design principles. These requirements apply to lines 45 kV and above, but can be applied to lines with a lower nominal voltage.

**ZWS IEC 60903:2017**  
**Loading tests on overhead line structures**  
Not for sale  
58 pages  
Identical to IEC 60903:2014

It is applicable to electrical insulating gloves and mitts that provide protection of the worker against electric shock.

**ZWS IEC 60904-9:2016**  
**Photovoltaic devices – Solar simulator performance requirements**  
Not for sale  
15 pages  
Identical to IEC 60904-9:7

Define classifications of solar simulators for use in indoor measurements of terrestrial photovoltaic devices, solar simulators are classified as A, B, or C for each of the three categories based on criteria of spectral distribution match, irradiance non-uniformity on the test plane and temporal instability.

**ZWS IEC 60921:2016**  
**Ballasts for tubular fluorescent lamps – Performance requirements**  
Not for sale  
63 pages  
Identical to IEC 60921:2004

Specifies performance requirements for ballasts, excluding resistance types, for use on a.c. supplies up to 1 000 V at 50 Hz or 60 Hz, associated with tubular fluorescent lamps with pre-heated cathodes operated with or without a starter or starting device and having rated wattages, dimensions and characteristics as specified in IEC 60081 and 60901.

**ZWS IEC 61000.4.30:2014**  
**Electromagnetic compatibility (EMC)**  
Not for sale  
62 pages  
Identical to IEC 61000.4.30: 2008

Defines the methods for measurement and interpretation of results for power quality parameters in 50/60 Hz a.c. power supply systems.

**ZWS IEC 61089:2013**  
**Amendment 1**  
**Round wire concentric lay overhead electrical stranded conductors.**  
Not for sale  
16 pages  
Identical to 61089:1997

Specifies the electrical and mechanical characteristics of round wire, concentric lay, overhead, electrical and stranded conductors made of combinations of any of the mentioned metal wires.

**ZWS IEC TS 61200: Part 102:2020**  
**Electrical installation guide**  
**Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network**  
Not for sale  
16 pages  
Identical to IEC TS 61200-102:2020

IEC TS 61200-102:2020(E) applies to low-voltage DC electrical installations entirely supplied by local power sources and having a nominal voltage lower or equal to the low-voltage limit. These installations can be connected to collective or shared private electrical installations. This document also applies to DC installations according to use cases TIER 2 and TIER 3 of the World Bank defined in ESMAP 008/15 report: Beyond Connections Energy Access Redefined

**ZWS IEC 61215:2016**  
**Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval**  
Not for sale  
47 pages  
Identical to IEC 61215:2005

It lays down IEC requirements for the design qualification and type approval of terrestrial photovoltaic modules suitable for long term operation in general open-air climates, as defined in IEC 60721-2-1.

**ZWS IEC 61284:2017**  
**Overhead lines –Requirements and tests for fittings**  
Not for sale  
131 pages  
Identical to IEC 61284:1997

Applies to fittings for overhead lines of nominal voltage above 45kV. It may also be applied to fittings for overhead lines of lower nominal voltage and to similar fittings for substations.

**ZWS IEC 61362:2017**  
**Guide to specification of hydraulic turbine governing systems**  
Not for sale  
66 pages  
Identical to IEC 61362:2012

Includes all relevant technical data necessary to describe hydraulic turbine governing systems and to define their performance. It will also serve as a basis for setting up technical guarantees.

**ZWS IEC 61378.3:2017**

**Converter transformers**

**Part 3: Application guide**

Not for sale

91 pages

Identical to IEC 61378.3:2015

Provides information to users about specific topics related to industrial and HVDC converter transformers with design, construction, testing and operating conditions differing from conventional transformers used in power systems.

**ZWS IEC 61439: Part 1:2020**

**Low voltage switchgear and Controlgear assemblies**

**Part 1: General rules**

Not for sale

504 pages

Identical to IEC IEC 61439-1:2020

IEC 61439-1:2020 RLV contains both the official IEC International Standard and its Redline version. The Redline version is available in English only and provides you with a quick and easy way to compare all the changes between the official IEC Standard and its previous edition. IEC 61439-1:2020 lays down the general definitions and service conditions, construction requirements, technical characteristics and verification requirements for low-voltage switchgear and controlgear assemblies. NOTE Throughout this document, the term assembly(s) (see 3.1.1) is used for a low-voltage switchgear and controlgear assembly(s). For the purpose of determining assembly conformity, the requirements of the relevant part of the IEC 61439 series, Part 2 onwards, apply together with the cited requirements of this document. For assemblies not covered by Part 3 onward, Part 2 applies. This third edition cancels and replaces the second edition published in 2011. It constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- a) clarification that power electric converter systems, switch mode power supplies, uninterruptable power supplies and adjustable speed power drive systems are tested to their particular products standard, but when they are incorporated in assemblies the incorporation is in accordance with the IEC 61439 series of standards;
- b) introduction of a group rated current for circuits within a loaded assembly and the refocusing of temperature-rise verification on this new characteristic;
- c) addition of requirements in respect of DC;
- d) introduction of the concept of class I and class II assemblies regarding protection against electric shock.

**ZWS IEC 61646:2016**

**Thin film terrestrial photovoltaic (PV) modules – Design qualification and type approval**

Not for sale

40 pages

Identical to IEC 61646:2008

It lays down IEC requirements for the design qualification and type approval of terrestrial thin-film photovoltaic modules suitable for long term operation in general open-air climates, as defined in IEC 60721-2-1.

**ZWS IEC 61683:2016**

**Photovoltaic systems – power conditioners – Procedures for measuring efficiency**

Not for sale

20 pages

Identical to IEC 61683:1999

Describes guidelines for measuring the efficiency of power conditioners used in stand alone and utility-interactive photovoltaic systems, where the output of the power conditioner is a stable a.c. voltage of constant frequency or a stable d.c. voltage. The efficiency is calculated from direct measurement of input and output power in the factory.

**ZWS IEC 61773:2014**

**Overhead lines –Testing of foundations for structures**

Not for sale

91 pages

Identical to IEC 61773: 2014

Provide procedures which apply to the investigation of the load-carrying capacity and/or the load response (deflection or rotation) of the total foundation as an interaction between the foundation and the surrounding soil and or rock.

**ZWS IEC 61850: Part 1:2013**

**Communication networks and systems for power utility automation**

**Part 1: Introduction and overview**

Not for sale

pages

Identical to IEC 61850-1:2013

**Part 2:2019 Glossary**

Not for sale

pages

Identical to IEC 61850-2:2019

**Part 3:2013 General requirement**

Not for sale

pages

Identical to IEC 61850-3:2013

**Part 4:2011 System and Project Management**

Not for sale

pages

Identical to IEC 61850-4:2011

**Part 5:2013 Communication requirements for functions and device models**

Not for sale

pages

Identical to IEC 61850-5:2011

**Part 6:2018 Configuration description language for communication in electrical substations related to IEDs**

Not for sale

pages

Identical to IEC 61850-6:2018

**Part 80-1:2016 Guideline to exchanging information from a CDC-based data model using IEC 60870-5-101 or IEC 60870-5-14**

Not for sale

pages

Identical to IEC 61850-80-1:2016

**Part 80-3:2016: Mapping to web protocols – Requirements and technical choices**

Not for sale

pages

Identical to IEC 61850-80-3:2016

**Part 80-4:2016 Translation from the COSEM object model (IEC 62056) to the IEC 61850 data model**

Not for sale  
pages  
Identical to IEC 61850-80-4:2016

**Part 90-2:2016 Using IEC 61850 for communication between substations and control centres**

Not for sale  
pages  
Identical to IEC 61850-90-2:2016

**Part 90-3:2016 Using IEC 61850 for condition monitoring diagnosis and analysis**

Not for sale  
pages  
Identical to IEC 61850-90-3:2016

**Part 90-4:2020 Network engineering guidelines**

Not for sale  
pages  
Identical to IEC 61850-90-4:2020

**Part 90-5:2012: Use of IEC 61850 to transmit synchrophasor information according to IEEE C37.118**

Not for sale  
pages  
Identical to IEC 61850-90-5:2012

**Part 90-6:2018: Use of IEC 61850 for distribution automation system**

Not for sale  
pages  
Identical to IEC 61850-90-6:2018

**Part 90-7:2023 Object models for power converters in distributed energy resources (der) systems**

Not for sale  
pages  
Identical to IEC 61850-90-7:2023

**Part 90-8:2016: Object model for E-mobility**

Not for sale  
pages  
Identical to IEC 61850-90-8:2016

**Part 90-10:2017: Models for scheduling**

Not for sale  
pages  
Identical to IEC 61850-90-10:2017

**Part 90-11:2020: Methodologies for modelling of logics for IEC 61850 based applications**

Not for sale  
pages  
Identical to IEC 61850-90-11:2020

**Part 90-12:2020: Wide area network engineering guidelines**

Not for sale  
pages  
Identical to IEC 61850-90-12:2020

**Part 90-13:2021: Deterministic networking technologies**

Not for sale  
pages  
Identical to IEC 61850-90-13:2021

**Part 90-17:2017: Using IEC 61850 to transmit power quality data**

Not for sale  
pages

Identical to IEC 61850-90-17:2017

**ZWS IEC 61851: Part 1:2017  
Electric vehicle conductive charging system  
PART 1: General requirements**

Not for sale  
287 pages  
Identical to IEC 61851-1:2017

This part of IEC 61851 applies to EV supply equipment for charging electric road vehicles, with a rated supply voltage up to 1000 V AC or up to 1500 V DC and a rated output voltage up to 1000 V AC or up to 1500 V DC.

**ZWS IEC 61851: Part 21-1:2017  
Electric vehicle conductive charging system  
PART 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to AC/DC supply**

Not for sale  
47 pages  
Identical to IEC 61851-21-1:2017

This part of IEC 61851, together with IEC 61851-1:2010, gives requirements for conductive connection of an electric vehicle (EV) to an AC or DC supply. It applies only to on-board charging units either tested on the complete vehicle or tested on the charging system component level (ESA-electronic sub assembly)

**ZWS IEC 61851: Part 21-2:2018  
Electric vehicle conductive charging system  
Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply – EMC requirements for off-board electric vehicle charging systems**

Not for sale  
95 pages  
Identical to IEC 61851-21-2:2018

This part of IEC 61851 defines the EMC requirements for an off-board components or equipment of such systems used to supply or charge electric vehicles with electric power by conductive power transfer (CPT) with a rated input voltage, according to IEC 60038:2009, up to 1000 V AC or 1500 V DC and an output voltage up to 1000 V AC or 1500 V DC.

**ZWS IEC 61851: Part 23:2014  
Electric vehicle conductive charging system  
Part 23: DC electric vehicle charging station**

Not for sale  
159 pages  
Identical to IEC 61851-23:2014

This part of IEC 61851-24:2014, together with IEC 61851-23, applies to digital communication between a d.c. EV charging station and an electric road vehicle (EV) for control of d.c. charging, with an a.c. or d.c. input voltage up to 1 000 V a.c. and up to 1 500 V d.c. for the conductive charging procedure. The EV charging mode is mode 4, according to IEC 61851-23. Annexes A, B, and C give descriptions of digital communications for control of d.c. charging specific to d.c. EV charging systems A, B and C as defined in Part 23.

**ZWS IEC 61851: Part 24:2014  
Electric vehicle conductive charging system  
Part 24: Digital communication between a d.c EV charging station and an electric vehicle for control of d.c charging**

Not for sale  
63 pages  
Identical to IEC 61851-24:2014

This part of IEC 61851-24:2014, together with IEC 61851-23, applies to digital communication between a d.c. EV charging station and an electric road vehicle (EV) for control of d.c. charging, with an a.c. or d.c. input voltage up to 1 000 V a.c. and up to 1 500 V d.c. for the conductive charging procedure. The EV charging mode is mode 4, according to IEC 61851-23. Annexes A, B, and C give descriptions of digital communications for control of d.c. charging specific to d.c. EV charging systems A, B and C as defined in Part 23.

**ZWS IEC 61854:2014**

**Overhead lines – Requirements and test spacers**

Not for sale

81 pages

Identical to IEC 61854: 1998

Applies to spacers for conductor bundles of overhead lines. It covers rigid spacers, flexible spacers and spacer dampers.

**ZWS IEC 61936.1:2017**

**Power installations exceeding 1kV a.c.**

**Part 1: Common rules**

Not for sale

210 pages

Identical to IEC 61936.1:2010

Provides common rules for the design and the erection of electrical power installations in systems with nominal voltage above 1 kV a.c. and nominal frequency up to and including 60Hz, so as to provide safety and proper functioning for the use intended.

**ZWS IEC 61952:2014**

**Insulators for overhead lines – Composite line post insulators for A.C. systems with a nominal voltage greater than 1 000 v – Definitions, test methods and acceptance criteria**

Not for sale

27 pages

Identical to IEC 61952:2008

Applies to composite line post insulators consisting of a load-bearing cylindrical insulating solid core consisting of fibre – usually glass – in a resin based matrix, a housing (outside the insulating core) made of polymeric material and end fittings permanently attached to the insulating core.

**ZWS IEC 61980: Part 1: 2020**

**Electric vehicle wireless power transfer (WPT) systems**

**Part 1: General requirements**

Not for sale

42 pages

Identical to IEC 61980-1:2020

This part of IEC 61980 applies to the supply device for charging electric road vehicles using wireless methods at standard supply voltages per IEC 60038 up to 1 000 V AC and up to 1 500 V DC.

Electric road vehicles (EV) covers road vehicles, including plug-in hybrid road vehicles (PHEV) that derive all or part of their energy from on-board rechargeable energy storage systems (RESS). This document also applies to wireless power transfer (WPT) equipment supplied from on-site storage systems (e.g. buffer batteries).

**ZWS IEC TS 61980: Part 2: 2019**

**Electric vehicle wireless power transfer (WPT) systems**

**Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure**

Not for sale

84 pages

Identical to IEC 61980-2:2019

This Part of IEC 61980, which is a Technical Specification, applies to communication between electric road vehicle (EV) and wireless power transfer (WPT) systems when connected to the supply network, at standard supply voltages per IEC 60038 up to 1000 V AC and up to 1500 V DC. This document also applies to wireless power transfer equipment supplied from on-site storage systems (e.g. buffer batteries) at standard supply voltages per IEC 60038 up to 1000 V AC and up to 1500 V DC.

**ZWS IEC 62109-1:2016**

**Safety of power converters for use in photovoltaic power systems – General requirements**

Not for sale

150 pages

Identical to IEC 62109-1:2010

Provides general requirements applicable to all types of PV PCE. There are additional parts of this standard that provide specific requirements for the different types of power converters.

**ZWS IEC 62116:2016**

**Utility-interconnected photovoltaic inverters – Test procedures of islanding prevention measures**

Not for sale

25 pages

Identical to IEC 62116:2014

Describes a guideline for testing the performance of automatic islanding prevention measures installed in or with single or multi-phase utility interactive PV inverters connected to the utility grid.

**ZWS IEC 62124:2016**

**Photovoltaic (PV) stand-alone systems – Design verification**

Not for sale

77 pages

Identical to IEC 62124:2004

Covers systems containing one or more PV modules, a support structure, storage batteries, a charge controller and typical DC loads such as lights, radio, television and refrigerators AC loads with dedicated inverters are considered as DC loads.

**ZWS IEC 62196: Part 1:2014**

**Plugs, socket-outlets, vehicle connectors and vehicle inlets – conductive charging of electric vehicles**

**Part 1: General requirements**

Not for sale

86 pages

Identical to IEC 62196-1:2014

This part of IEC 62196 is applicable to plugs, socket-outlets, vehicle connectors, vehicle inlets, herein referred to as "accessories", and to cable assemblies for electric vehicles (EV) intended for use in conductive charging systems which incorporate control means, with a rated operating voltage not exceeding: – 690 V AC 50 Hz to 60 Hz, at a rated current not exceeding 250 A; – 1 500 V DC at a rated current not exceeding 800 A. These accessories and cable assemblies are intended to be installed by instructed persons (IEV 195-04-02) or skilled persons (IEV 195-04-01) only. These accessories and cable assemblies are intended to be used for circuits specified in IEC 61851 (all parts), which operate at different voltages and frequencies, and which can include extra-low voltage and communication signals. These accessories and cable assemblies are intended to be used at an ambient temperature between –30 °C and +40 °C.

**ZWS IEC 62196: Part 2:2016****Plugs, socket-outlets, vehicle connectors and vehicle inlets – conductive charging of electric vehicles****Part 1: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories**

Not for sale

122 pages

Identical to IEC 62196-2:2016

This part of IEC 62196 applies to plugs, socket-outlets, vehicle connectors and vehicle inlets with pins and contact-tubes of standardized configurations, herein referred to as accessories. They have a nominal rated operating voltage not exceeding 480 V a.c., 50 Hz to 60 Hz, and a rated current not exceeding 63 A three-phase or 70 A single phase, for use in conductive charging of electric vehicles. This part of IEC 62196 covers the basic interface accessories for vehicle supply as specified in IEC 62196-1, and intended for use in conductive charging systems for circuits specified in IEC 61851-1:2010.

**ZWS IEC 62257.9-5:2013****Recommendations for small renewable energy and hybrid systems for rural electrification.****Part 9-5 Integrated system – selection of stand-alone lighting kits for rural electrification**

Not for sale

27 pages

Identical to IEC 62257.9-5:2013

Applies to stand-alone rechargeable electric lighting appliances or kits that can be installed by a typical user without employing a technician.

**ZWS IEC 62257.9-8:2020****Recommendations for small renewable energy and hybrid systems for rural electrification.****Part 9-8: Integrated system – requirements for stand alone renewable energy products with power rating less than or equal to 350W**

Not for sale

71 pages

Identical to IEC 62257.9-8:2020

This part of IEC 62257 provides baseline requirements for quality, durability and truth in advertising protect consumers of off-grid renewable energy products. Evaluation of these requirements is based on tests described in IEC TS 62257-9.5. This document can be used alone or in conjunction with other international standards that address the safety and durability of components of off-grid renewable energy products.

**ZWS IEC 62430:2019****Environmentally conscious design – principles, requirements and guidance**

Not for sale

22 pages

Identical to IEC 62430:2019

This document describes principles, specifies requirements and provides guidance for organizations intending to integrate environmental aspects into the design and development in order to minimize the adverse environmental impacts of their products. This document applies to processes on how ECD (environmentally conscious design) are integrated into the design and development. This document applies to any organization, regardless of its size, type or sector.

**ZWS IEC 62504:2014****General lighting – LEDs and LED modules – terms and definitions**

Not for sale

15 pages

Identical to IEC 62504:2011

This technical specification presents terms and definitions relevant for lighting with LED light sources. It provides both descriptive terms (Such as built-in LED module) and measurable terms (such as “luminance”)

**ZWS IEC 62509:2016****Battery charge controllers for photovoltaic systems – Performance and functioning**

Not for sale

27 pages

Identical to IEC 62509:2010

Establishes minimum requirements for the functioning and performance of battery charge controllers used with lead acid batteries in terrestrial photovoltaic (PV) systems. To ensure BCC reliability and to maximize the life of battery. The standard addresses the following battery charge control features:- PV generator charging of a battery; load control; protection functions; interface functions.

**ZWS IEC 62552: Part 1:2015****Household refrigerating appliances – Characteristics and test methods:****Part 1: General requirements**

Not for sale

62 pages

Identical to IEC 62552: Part 1:2015

This part of IEC 62552 specifies the essential characteristics of household refrigerating appliances, cooled by internal natural convection or forced air circulation, and establishes test methods for checking the characteristics. For the purposes of declaration, the tests defined in this part of IEC 62552 are considered to be type tests to assess the fundamental design and operation of a refrigerating appliance. This part of IEC 62552 does not define requirements for production sampling or conformity assessment or certification.

**ZWS IEC 62552: Part 2:2015****Household refrigerating appliances – Characteristics and test methods:****Part 2: Performance requirements**

Not for sale

43 pages

Identical to IEC 62552: Part 2:2015

This part of IEC 62552 describes the methods for the determination of performance requirements. Although there is some commonality in the set-ups for different tests (and so it may be an advantage to apply them all to one sample), these are separate tests to evaluate specific characteristics of the sample being tested. This part of IEC 62552 does not specify a procedure to generalise the results from sample test results to a prediction of the characteristics of the whole population from which that sample was selected.

**ZWS IEC 62552: Part 3:2015****Household refrigerating appliances – Characteristics and test methods:****Part 3: Energy consumption and volume**

Not for sale

155 pages

Identical to IEC 62552: Part 3:2015

This part of IEC 62552 describes the methods for the determination of energy consumption characteristics and defines how these can be assembled to estimate energy consumption under different usage and climate conditions. This part of IEC 62552 also defines the determination of volume.



**ZWS IEC 62560:2014****Self-ballasted LED-Lamps for general lighting services by voltages >50 V – Safety specification**

Not for sale

24 pages

Identical to IEC 62560:2011

Specifies the safety and interchangeability requirements, together with the test methods and conditions required to show compliance of LED-lamps with intergrated means for stable operation.

**ZWS IEC 62576:2018****Electric double-layer capacitors for use in hybrid electric vehicles – test methods for electrical characteristics**

Not for sale

30 pages

Identical to IEC 62576:2018

This document describes the methods for testing electrical characteristics of electric double-layer capacitor cells (hereinafter referred to as "capacitor") used for peak power assistance in hybrid electric vehicles. All the tests in this document are type tests. This document can also be applicable to the capacitor used in idling reduction systems (start and-stop systems) for the vehicles. This document can also be applicable to the capacitor modules consisting of more than one cell.

**ZWS IEC 62612:2014****Self-ballasted LED-Lamps for general lighting services with supply voltages >50 V – Performance requirements**

Not for sale

42 pages

Identical to IEC 62612:2013

Standard specifies the performance requirements, together with the test methods and conditions, required to show compliance of LED lamps with integral means for stable operation, intended for domestic and similar general lighting purposes.

**ZWS IEC 62840: Part 1:2016****Electric vehicle battery swap system****Part 1: General and guidance**

Not for sale

27 pages

Identical to IEC 62840-1:2016

This part of IEC 62840, which is a Technical Specification, gives the general overview for battery swap systems, for the purposes of swapping batteries of electric road vehicles (EVs) when the vehicle powertrain is turned off and when the battery swap system is connected to the supply network at standard supply voltages according to IEC 60038 with a rated voltage up to 1 000 V AC and up to 1 500 V DC. This document is applicable for battery swap systems for EV equipped with one or more swappable battery system (SBS).

**ZWS IEC 62840: Part 2:2016****Electric vehicle battery swap system****Part 2: Safety requirements**

Not for sale

26 pages

Identical to IEC 62840-2:2016

This part of IEC 62840 provides the safety requirements for a battery swap system, for the purposes of swapping swappable battery system (SBS) of electric vehicles. The battery swap system is intended to be connected to the supply network. The power supply is up to 1 000 V AC or up to 1 500 V d.c, in accordance with IEC 60038. This standard also applies to battery swap systems supplied from on-site storage systems (e.g. buffer batteries).

**ZWS IEC 62840: Part 3:2021****Electric vehicle battery swap system****Part 3: Particular safety and interoperability requirements for battery swap systems operating with removable RESS/battery systems**

Not for sale

39 pages

Identical to IEC 62840-3:2021

This document applies to battery swap systems for removable RESS of electric road vehicle when connected to the supply network, with a rated supply voltage up to 480 V AC or up to 400 V DC, for battery systems with a rated voltage up to 120 V DC.

**ZWS IEC 63119: Part 1:2019****Information exchange for electric vehicle charging roaming service****Part 1: General**

Not for sale

14 pages

Identical to IEC 63119-1:2019

This part of IEC 63119 establishes a basis for the other parts of IEC 63119, specifying the terms and definitions, general description of the system model, classification, information exchange and security mechanisms for roaming between EV charge service providers (CSPs), charging station operators (CSOs) and clearing house platforms through roaming endpoints. It provides an overview and describes the general requirements of the EV roaming service system.

# ZWS ISO ADOPTIONS

## **ZWS ISO IEC Guide 21:2005**

### **Regional or national adoption of international standards and other international deliverables Part 1: adoption of international standards**

Price Code: Gr. 6

23 pages

Identical to ISO/IEC: Guide 21:1: 2005

Provides methods for determining the degree of correspondence regional or national standards and relevant international standards.

### **Part 2: Adoption of international deliverables other than international standards**

Price Code: Gr. 4

9 pages

Identical to ISO/IEC: Guide 21.2: 2005

Provides the methods for adoption of international of international standards as regional or national deliverables.

## **ZWS ISO/IEC Guide 23:2005**

### **Methods of indicating conformity with standards for third-party certification systems**

Price Code: Gr. 3

4 pages

Identical to ISO/IEC: Guide 23: 1992

Lays down methods of indicating conformity with standards and reference thereto in standards.

## **ZWS ISO/IEC Guide 27:2005**

### **Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity**

Price Code: Gr. 3

4 pages

Identical to ISO/IEC Guide 27: 2005

Identifies a series of procedures which a national certification body should consider in deciding how to respond to reported misuse of its registered mark of conformity or a situation in which a certified product is found to be hazardous.

## **ZWS ISO/IEC Guide 28:2005**

### **Conformity assessment Guidance on a third party certification systems for products**

Price Code:

Gr. 5

16 pages

Identical to ISO/IEC Guide 28 2004

Gives general guidelines for a specific product certification system.

## **ZWS ISO/IEC Guide 43:2003**

### **Proficiency testing by inter-laboratory comparisons**

#### **Part 1: Development and operation of proficiency testing Schemes**

Price Code: Gr.5

16 pages

Identical to ISO/IEC Guide 43.1

Defines principles of inter-laboratory comparisons and describes the factors which should be taken into account in the organization and conduct of proficiency testing schemes.

## **ZWS ISO/IEC Guide 53:2006**

### **Conformity assessment – Guidance on the use of an organization's quality management system in product certification**

Price Code: Gr. 6

21 pages

Identical to ISO IEC Guide 53: 2005

Outlines a general approach by which certification bodies can develop and apply product certification schemes utilizing requirements for an organization's quality management.

## **ZWS ISO/IEC Guide 60:2005**

### **Conformity assessment – Code of good practice**

Price Code: Gr. 3

5 pages

Identical to ISO/IEC Guide 65: 1996

Recommends good practices for all elements of conformity assessment, including normative documents, bodies, systems, schemes and results.

## **ZWS ISO/IEC Guide 64:2009**

### **Guide for addressing environmental issues in product standards**

Price Code: Gr. 7

36 pages

Identical to ISO/IEC Guide 64: 2008

Provides guidance on addressing environmental issues in product standards. It is primarily intended for product standards writers.

## **ZWS ISO/IEC Guide 65:2005**

### **General requirements for bodies operating product certification systems**

Price Code: Gr. 5

8 pages

Identical to ISO/IEC Guide 65: 1996

Specifies general requirements that a third party operating a product certification system shall meet if it is to be recognized as competent and reliable.

## **ZWS ISO/IEC Guide 67: 2005**

### **Conformity assessment – Fundamentals of product certification**

Price Code: Gr. 4

9 pages

Identical to ISO/IEC Guide 67: 2004

Give guidance on product certification systems by identifying their various elements based on current practices.

## **ZWS ISO/IEC Guide 68:2005**

### **Arrangements for the recognition and acceptance of conformity assessment results**

Price Code: Gr. 4

8 pages

Identical to ISO Guide 68: 2002

Provides an introduction to the development, issuance and operation of arrangements for the recognition and acceptance of results produced by bodies undertaking similar conformity assessments and related activities.

**ZWS ISO/IEC GUIDE 73:2011  
Risk Management – Vocabulary**

Price Code: Gr.6  
13 pages  
Identical to ISO/IEC Guide 73:2009

Provides the definitions of generic terms related to risk management. It aims to encourage a mutual and consistent understanding of and a coherent approach to the description of activities relating to the management of risk and the use of uniform risk management terminology in processes and frameworks dealing with the management of risk.

**ZWS ISO 91:2017  
Petroleum and related products — Temperature and pressure volume correction factors and standard reference conditions**

Price Code: Gr.6  
19 pages  
Identical to ISO 91:2017

This document refers to temperature volume correction factors, which allow users to convert volumes, measured at ambient conditions, to those at reference conditions for transactional purposes. This document also refers to compressibility factors required to correct hydrocarbon volumes measured under pressure to the corresponding volumes at the equilibrium pressure for the measured temperature.

**ZWS ISO 186:1999  
Paper and board – Sampling to determine average quality**

Price Code: Gr. 3  
5 pages  
Identical to ISO 186: 1994

Specifies a method of obtaining a representative sample from a lot of paper or board for testing to determine whether or not its average quality complies with specification including solid and corrugated fibreboard.

**ZWS ISO 188:2008  
Rubber, vulcanized or thermoplastic – accelerated ageing and heat resistance tests**

Price Code: Gr. 6  
17 pages  
Identical to ISO 188:2007

Specifies accelerated ageing or heat resistance tests on vulcanized or thermoplastic rubbers.

**ZWS ISO 361:1975  
Basic Ionizing radiation symbol**

Price Code: Gr. 2  
1 pages  
Identical to ISO 361:1975

Specifies the symbol to be used to signify the actual or potential presence of ionizing radiation and to identify objects, devices, materials or combinations of materials which emit ionizing radiation.

**ZWS ISO 488:2008  
Milk – Determination of fat content – Gebber butyrometers**

Price Code: Gr. 6  
14 pages  
Identical to ISO 488:2008

Specifies the characteristics of seven types of butyrometer for use in the determination of the fat content of whole milk partly skimmed milk and skimmed milk.

**ZWS ISO 527:1998  
Plastics – Determination of tensile properties  
Part 3: Test conditions for films and sheets**

Price Code: Gr. 3  
5 pages  
Identical to ISO 527: 1998

Specifies the conditions for determining the tensile properties of plastics films or sheets less than 1 mm thick.

**ZWS ISO 607:1980  
Surface active agents and detergents – methods of sample division**

Price Code: Gr. 5  
8 pages  
Identical to ISO 607:1980 (confirmed 2022).

This International Standard specifies methods for obtaining a reduced sample of surface active agent or detergent suitable for use with single or mixed products, in the form of powders, pastes or liquids. The sample reduction process may be required for the following reasons:

- a) the preparation of a final sample or a laboratory sample of mass greater than 250 g from a blended bulk sample of mass greater than 500 g;
- b) the preparation of several equivalent laboratory samples and/or reference samples and/or storage samples, each of mass greater than 250 g, from a final sample;
- c) the preparation of a test sample from a laboratory sample.

**ZWS ISO 629:1982  
Steel and cast iron – Determination of manganese content – Spectrophotometric method**

Price Code: Gr. 6  
7 pages  
Identical to ISO 629:1982 (confirmed 2018).

Scope and field of application 4.5 Perchloric acid, Q about 1,67 g/ml. This International Standard specifies a spectrophotometric method. NOTE - It is also possible to use perchloric acid, Q about 1,54 g/ml. The method is applicable to products having manganese contents between 0,001 and 4 % (m/m).

**ZWS ISO 697:1981  
Surface active agents — Washing powders — Determination of apparent density — Method by measuring the mass of a given volume**

Price Code: Gr. 4  
4 pages  
Identical to ISO 697: 1981

This International Standard specifies a method for the determination of the apparent density of washing powders by measuring the mass of a given volume.

**ZWS ISO 707:2008  
Milk and milk products – Guidance on sampling**

Price Code: Gr. 5  
36 pages

Gives guidance on methods of sampling milk and milk products.

**ZWS ISO 712:1996**  
**Cereals and cereal products – Determination of moisture content (Routine reference method)**

Price Code: Gr. 4  
8 pages  
Identical to ISO 712: 1995

Specifies a routine reference method for the determination of moisture content of cereals and cereal products.

**ZWS ISO 750:1998**  
**Fruit and vegetable products – Determination of titratable acidity**

Price Code: Gr. 3  
4 pages  
Identical to ISO 750:1998

Specifies two methods for the determination of the titratable acidity of fruit and vegetable products, a potentiometric reference method, a routine method using a coloured indicator. By convention the latter method does not apply to wines.

**ZWS ISO 751:1998**  
**Fruit and vegetable products – Determination of water insoluble solids**

Price Code: Gr. 3  
4 pages  
Identical to ISO 751:1998

Specifies a method for the determination of the content of water-insoluble solids in the edible parts of fruit and vegetable products.

**ZWS ISO 762:2003**  
**Fruit and vegetable products – Determination of mineral impurities content**

Price Code: Gr. 3  
5 pages  
Identical to 762:2003

Specifies a method for the determination of the mineral impurities content (impurities generally originating from the soil) of fruit and vegetable products.

**ZWS ISO 763:1982**  
**Fruit and vegetable products – Determination of ash insoluble in hydrochloric acid**

Price Code: Gr. 2  
4 pages  
Identical to ISO 763:2003

Specifies a method for the determination of the hydrochloric acid in soluble ash yielded by fruit and vegetable products.

**ZWS ISO 780:2015**  
**Packaging – Distribution packaging – Graphical symbols for handling and storage of packages**

Price Code: Gr. 6  
12 pages  
Identical to ISO 780:2015

This International Standard specifies a set of graphical symbols conventionally used for marking of distribution packages in their physical distribution chain to convey handling instructions. The graphical symbols should be used only when necessary. This International Standard is applicable to packages containing any kind of goods, but does not include instructions specific to handling of dangerous goods.

**ZWS ISO 789:1999**  
**Agricultural tractors – Test procedures**  
**Part 4: Measurement of exhaust smoke**

Price Code: Gr. 4

7 pages  
Identical to ISO 789:Part 4 1986

Specifies a method for measuring the smoke emitted by the engines of agricultural tractors operating as steady speed.

**ZWS ISO 862:1984**  
**Surface active agents – vocabulary**

price Code: Gr. 7  
35 pages  
Identical to ISO 862:1984

This International Standard defines terms frequently used in the field of surface active agents.

**ZWS ISO 1026:1982**  
**Fruit and vegetable products – Determination of dry matter content by drying under reduced pressure and of water content by Azeotropic distillation**

Price Code: Gr. 2  
4 pages  
Identical to ISO 1026:1982

Specifies a method for the determination of the dry matter content of fruit and vegetable products by drying under reduced pressure and a method for the determination of water content by azeotropic distillation.

**ZWS ISO 1042:1998**  
**Laboratory glassware – one-mark volumetric flasks**

Price Code: Gr. 5  
8 pages  
Identical to ISO 1042:1998 (confirmed in 2019).

This International Standard specifies requirements for an internationally acceptable series of one-mark volumetric flasks, suitable for general laboratory purposes.

**ZWS ISO 1133:2000**  
**Plastics – Determination of the mass-flow rate (MFR) and the melt-volume flow rate (MVR) of thermoplastics**

Price Code: Gr. 4  
1 pages  
Identical to ISO 1133: 1997

Specifies a method for the determination of the melt mass flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastic materials under specifies conditions of temperature and load.

**ZWS ISO 1167: Part 1:2006**  
**Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure**  
**Part 1: General method**

Price Code: Gr. 5  
8 pages  
Identical to ISO 1167: Part 1:2006

This part of ISO 1167 specifies a general test method for determining the resistance to internal hydrostatic pressure at a given temperature of thermoplastics pipes, fittings and piping systems for the transport of fluids. The method accommodates water in water, water in air and water in liquid tests.

**ZWS ISO 1167: Part 2:2006****Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure Part 2: Preparation of pipe test pieces**

Price Code: Gr. 5  
 4 pages  
 Identical to ISO 1167: Part 2:2006

This part of ISO 1167 specifies the dimensions and method for preparation of extruded, or injection-moulded tubular, test pieces used to determine the resistance of thermoplastics pipes to internal hydrostatic pressure according to ISO 1167-1.

**ZWS ISO 1167: Part 3:2007****Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure Part 3: Preparation of components**

Price Code: Gr. 5  
 9 pages  
 Identical to ISO 1167: Part 3:2007

This part of ISO 1167 specifies the procedure for the preparation of components, i.e. fittings and valve bodies, for the determination of their resistance to internal hydrostatic pressure according to ISO 1167-1.

**ZWS ISO 1167: Part 4:2007****Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure Part 4: Preparation of assemblies**

Price Code: Gr. 5  
 6 pages  
 Identical to ISO 1167: Part 4:2007

This part of ISO 1167 specifies the procedure for the preparation of both end load bearing and non end load bearing assemblies, for the determination of their resistance to internal hydrostatic pressure according to ISO 1167-1.

**ZWS ISO 1211:2002****Milk – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr. 5  
 14 pages  
 Identical to ISO 1211: 1999

Specifies the reference method for the determination of the fat content of milk.

**ZWS ISO 1442:1998****Meat and meat products – Determination of moisture content**

Price Code: Gr. 2  
 4 pages  
 Identical to ISO 1442: 1992

Specifies a reference method for the determination of the total moisture content of meat and meat products

**ZWS ISO 1443:1998****Meat and meat products – Determination of total fat content**

Price Code: Gr. 1  
 2 pages

Specifies a reference method for the determination of the total fat content of meat and meat products.

**ZWS ISO 1461:2001****Hot-dip galvanized coating on iron and steel articles**

Price Code: Gr. 6  
 18 pages  
 Technically identical to ISO 1461: 1999  
 Replaces ZWS 648: 1998

Specifies the general properties and methods of test for coatings applied by hot dipping in zinc (containing not more than 2 % of other metals) on fabricated iron and steel articles.

**ZWS ISO 1516:2002****Determination of flash/no flash – Closed cup equilibrium method**

Price Code: Gr. 5  
 9 pages  
 Identical to ISO 1516:2002

Specifies a method to determine if paints, varnishes, paint binders, solvents, petroleum or related products when maintained at a selected equilibrium temperature and under the conditions of the test give off sufficient flammable vapour to cause ignition on application of an external source of flame applied in a standard manner

**ZWS ISO/IEC 1523:2002****Determination of flash point – Closed cup equilibrium method**

Price Code: Gr. 5  
 11 pages  
 Identical to ISO/IEC 1523

Specifies a method to determine the flash point of paints, varnishes, paint binders, solvents, petroleum or related products.

**ZWS ISO 1572:2003****Tea-preparation of ground sample of known dry matter content**

Price Code: Gr. 2  
 2 pages  
 Identical to ISO 1572: 1980

Specifies a method of preparing ground sample of tea and of determining its dry content for use in analytical determinations which require the results to be expressed on the dry basis.

**ZWS ISO 1573:2003****Tea-Determination of loss in mass 103°C**

Price Code: Gr. 2  
 2 pages  
 Identical to ISO 1573: 1980

Specifies a method for the determination of the loss in mass when tea is heated in air at 103°C.

**ZWS ISO 1575: 2003****Tea – Determination of total ash**

Price Code: Gr. 2  
 2 pages  
 Identical to ISO 1575 1987

Specifies a method for the determination of total ash from tea

**ZWS ISO 1576:2003****Tea – Determination of water – soluble ash and water in soluble ash**

Price Code: Gr. 2  
 2 pages  
 Identical to ISO 1576: 1988

Specifies a method for the determination of water soluble ash and water soluble ash tea.

**ZWS ISO 1577:2003****Tea – Determination of acid insoluble ash**

Price Code: Gr. 2

2 pages

Identical to ISO 1577 1987

Specifies a method for the determination of the acid – in soluble ash from tea.

**ZWS ISO 1578:2003****Tea – Determination of alkalinity of water-soluble ash**

Price Code: Gr. 2

2 pages

Specifies the reference method for the determination of the fat content of all types of cheese and processed cheese products.

**ZWS ISO 1736:2009****Dried milk and dried milk products – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr. 4

14 pages

Identical to ISO 1736:2000

Specifies the reference method for the determination of the fat content of dried milk products.

**ZWS ISO 1737:2002****Evaporated milk and sweetened condensed milk – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr. 7

14 pages

Identical to ISO 1737: 1999

Specifies the reference method for the determination of the fat content of all types of evaporated milk and sweetened condensed milk.

**ZWS ISO 1738:2001****Butter – Determination of salt content**

Price Code: Gr. 2

5 pages

Identical to ISO 1738: 1997

Specifies a method for the determination of the salt content of butter. Method is applicable to all types of butter containing more than 0.1 % (m/m) of salt.

**ZWS ISO 1739:2006****Butter – Determination of refractive index of the fat (Reference method)**

Price Code: Gr. 4

4 pages

Identical to ISO 1738: 1997

Specifies a reference method for the determination of the refractive index of the fat obtained by melting butter

**ZWS ISO 1740:2005****Milk fat products and butter – Determination of fat acidity (Reference method)**

Price Code: Gr. 4

7 pages

Identical to ISO 1740: 2004

Specifies a method for the determination of acidity of the fat contained in milk fat products and in butter.

**ZWS ISO 1839:2003****Tea – Sampling**

Price Code: Gr. 3

3 pages

Identical to ISO 1839: 1980

Specifies the method for sampling tea. Applies to sampling from containers of all sizes.

**ZWS ISO 1841:1998****Meat and meat products – Determination of chloride content Part 2: Potentiometric method**

Price Code: Gr. 2

3 pages

Identical to ISO 1841: Part 2: 1996

Specifies a method for the determination of the chloride content of meat and meat products.

**ZWS ISO 1842:1991****Fruit and vegetable products – Determination of pH**

Price Code: Gr. 2

2 pages

Identical to ISO 1842:1991

Specifies a potentiometric method of measuring the pH of fruit and vegetable products.

**ZWS ISO 1854:2009****Whey cheese – Determination of fat content – Gravimetric method**

Price Code: Gr.5

Identical to ISO 1854:2008

14 pages

Specifies the reference method for the determination of fat content of whey cheese. It is not applicable to products which do not dissolve completely in ammonia solution or which contain free fatty acids in significant quantities.

**ZWS ISO 1924:1999****Paper and Board – Determination of tensile properties Part 1: Constant rate of loading method**

Price Code: Gr. 4

5 pages

Identical to ISO 1924: part 1: 1992

Specifies a method of measuring the tensile strength, of paper and board using an instrument operating at a constant rate of application of tensile force.

**Part 2: Constant rate of elongation method**

Price Code: Gr. 4

8 pages

Identical to ISO 1924: Part 2: 1994

Specifies a method of measuring the tensile strength, stretch at break and tensile energy absorption of paper and board using a test instrument operating at a constant rate of elongation.

**ZWS ISO 1955:1982****Citrus fruits and derived products – Determination of essential oil content (Reference Method)**

Price Code: Gr. 2

3 pages

Identical to ISO 1955:1982

Specifies the reference method for the determination of the total essential oils content of citrus fruits and their derived products

(whole fruits, fruits cut into small pieces, skins, juices, concentrates, beverage bases, sweetened products etc.

**ZWS ISO 2170:1998**  
**Cereals and pulses – Sampling of milled products**

Price Code: Gr. 4  
8 pages  
Identical to ISO 2170: 1980

Specifies general conditions retaining to the sampling for assessment of quality and condition of milled products from cereals and pulses, intended for human or animal consumption in power, particulate or agglomerated form.

**ZWS ISO 2171:2002**  
**Cereals and milled cereals products – Determination of total ash**

Price Code: Gr. 3  
5 pages  
Identical to ISO 5171: 1993

Specifies a method for the determination of ash yielded by cereals and milled cereals products.

**ZWS ISO 2172:1983**  
**Fruit juice – Determination of soluble solids content – Pyknometric method**

Price Code; Gr. 2  
3 pages  
Identical to ISO 2172:1983

Applicable to fruit juice containing no suspended matter and to clear concentrated juice. It is not applicable to other fruit and vegetable products, for which the method specified in ISO 2173 should be used.

**ZWS ISO 2173:2003**  
**Fruit and vegetable products – Determination of soluble solids – Refractometric method**

Price Code: Gr. 3  
8 pages  
Identical to ISO 2173:2003

Specifies a refractometric method for the determination of the soluble solids in fruit and vegetable products.

**ZWS ISO 2294:1998**  
**Meat and Meat products – Determination of total phosphorous content (reference method)**

Price Code: Gr. 2  
3 pages  
Identical to ISO 2294: 1974

Specifies a reference method for the determination of the total phosphorus content of meat and meat products.

**ZWS ISO 2307:2000**  
**Ropes – Determination of certain physical and mechanical properties**

Price Code: Gr. 4  
9 pages  
Identical to ISO 2307: 2000

Specifies, for ropes of different kinds, a method of determination of certain physical and mechanical properties.

**ZWS ISO 2446:2008**  
**Milk – Determination of fat content**

Price Code: Gr. 5  
12 pages  
Specifies the Gerber method for the determination of fat content of milk and includes guidance on the determination of the appropriate capacity of the milk pipette.

**ZWS ISO 2450:2011**  
**Cream – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr 5  
14 pages  
Identical to ISO: 2450: 2008  
Replaces ZWS ISO 2450:2001

Specifies the reference method for the determination of fat content of raw, processed and sour cream in which no appreciable separation or breakdown of fat, due to lipolysis, has occurred.

**ZWS ISO 2469:2009**  
**Paper, Board and pulp – Measurement of diffuse reflectance factor**

Price Code: Gr. 4  
7 pages  
Identical to ISO 2469: 1994

Specifies the equipment for measuring the diffuse reflectance factor of pulp, paper and board the procedures for calibrating that equipment.

**ZWS ISO 2505:2005**  
**Thermoplastics pipes — Longitudinal reversion — Test method and parameters**

Price Code: Gr. 4  
5 pages  
Identical to ISO 2505:2005

This International Standard specifies a method for determining the longitudinal reversion of thermoplastics pipes, to be carried out in either a liquid or in air. In case of dispute, heated liquid is used as the reference. This International Standard is applicable to all thermoplastics pipes with smooth internal and external walls of constant cross section. It is not applicable to non smooth structured wall thermoplastics pipes. The parameters appropriate to the pipe material and recommendations for the maximum levels of reversion as a function of the pipe material are given in Annex A.

**ZWS ISO 2859:2003**  
**Sampling procedures for inspection by attributes**  
**Part 0: Introduction to ZWS ISO 2859 attribute sampling system**

Price Code: Gr. 8  
56 Pages  
Identical to ISO 2859: 1995

Explains the terms used in acceptance sampling, describes the various schemes and plans, gives practical advice on sampling inspection and discusses some of the theoretical aspects.

**Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot by lot inspection**

Price Code: Gr. 8  
87 pages  
Identical to ISO 2859-1: 1999

Specifies an acceptance sampling system for inspection by attributes. Indexed in terms of the acceptance quality limit.

**Part 2: Sampling plans indexed by limiting quality (LQ) for isolate lot inspection**

Price Code: Gr. 6

21 pages

Identical to ISO 2859-2: 1985

Establishes LQ sampling plans and procedures for inspection by attributes compatible with ISO 2859-1 that can be used when switching rules given in ISO 2859-1 are not applied.

**Part 3: Skip lot sampling procedures**

Price Code: Gr. 5

16 pages

Identical to ISO 2859-2: 1993

Specifies generic attributes skip-lot sampling procedures for reducing the inspection effort on products submitted by those suppliers who have demonstrated their ability to enroll, in an effective manner, all facets of quality and who consistently produce lot which meet requirements.

**Part 4: Procedures for assessment of declared quality levels**

Price Code: Gr. 5

12 pages

Identical to ISO 2859-4: 2002

Establishes sampling plans and procedures that can be used to assess whether the quality level of an entity (lot, process etc) conforms to a declared value.

**ZWS ISO 2911:2005**

**Sweetened condensed – milk-determination of sucrose content – polarimetric method**

Price Code: Gr. 5

7 pages

Identical to ISO 2911: 2004

Specifies a method for the determination of sucrose in sweetened condensed milk. This method is applicable to sweetened condensed milk of normal composition from whole partially skimmed or skimmed milk and sucrose only and containing no altered sucrose.

**ZWS ISO 3057:1998**

**Non-Destructive testing –Metallographic replica techniques of surface examination**

Price Code: Gr. 2

2 pages

Identical to ISO 3057:1998

Specifies techniques of surface examination in which transparent nitrocellulose varnish, or plastic material, with or without supports, is used to record inhomogeneities, both mechanical and metalurgical, in the condition of a metal surface.

**ZWS ISO 3058:1998**

**Non-Destructive testing –Aids to visual inspection – Selection of low-power magnifiers**

Price Code: Gr. 5

6 pages

Identical to ISO 3058:1998

Specifies the characteristics of the (single element magnifier, multi-element magnifier and twin system magnifiers) of low-power magnifiers and gives recommendations for their selection for the inspection of surfaces.

**ZWS ISO 3059:2012**

**Non-Destructive testing –Penetrant testing and magnetic particle testing –Viewing conditions**

Price Code: Gr. 4

5 pages

Identical to ISO 3059: 2012

Specifies the control of the viewing conditions for magnetic particle and penetrant testing. It includes minimum requirements for the illuminance and UV-A irradiance and their measurement.

**ZWS ISO 3093:1996**

**Cereals – Determination of falling number**

Price Code: Gr. 5

13 pages

Identical to ISO 3093: 1982

Specifies a method for the determination of the falling number of cereals, as a measure of alpha-amylase activity.

**ZWS ISO 3103:2003**

**Tea – Preparation of liquor for use in sensory tests**

Price Code: Gr. 3

4 pages

Identical to ISO 3103: 1980

Specifies a method for the preparation of a liquor of tea for use in sensory tests, by means of infusing the leaf.

**ZWS ISO 3104:1994**

**Petroleum products – Transparent and opaque liquids – Determination of kinematic viscosity and calculation of dynamic viscosity**

Price Code: Gr. 5

13 pages

Identical to ISO 3104:1994

Specifies a procedure for the determination of the kinematic viscosity,  $\nu$  of liquid petroleum products both transparent and opaque by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer.

**ZWS ISO 3127:1994**

**Thermoplastics pipes – Determination of resistance to external blows – Round-the-clock method**

Price Code: Gr. 6

11 pages

Identical to ISO 3127:1994

This International Standard specifies a method for the determination of the resistance to external blows of thermoplastics pipes of circular cross-section; it is called the round-the-clock method. This method is applicable to isolated batches of pipe tested at 0 °C (information is also given for sampling from the continuous production of pipe).

**ZWS ISO 3173:1999**

**Road vehicles – Apparatus for measurement of opacity of exhaust gas from diesel engines operating under steady state conditions**

Price Code: Gr. 7

28 pages

Identical to ISO 3173: 1974

Specifies the general requirement and the installations of instruments for measuring the light obscuration of exhaust gas from diesel engines for driving road vehicles, operating under steady state conditions.



**ZWS ISO 3219:1993****Plastics – Polymers/resins in the liquid state or as emulsions or dispersions – Determination of viscosity using a rotational viscometer with defined shear rate**

Price Code: Gr. 4  
11 pages  
Identical to ISO 3219:1993

Specifies the general principles of a method for determining the viscosity of polymers and resins in the liquid, emulsified or dispersed state, including polymer dispersions at a defined shear rate by means of rotational viscometers with standard geometry.

**ZWS ISO 3356:2001****Milk and dried milk, buttermilk and buttermilk powder, whey and whey powder – Determination of phosphates activity (Reference method)**

Price Code: Gr. 2  
2 pages

Specifies a reference method for the determination of the phosphates activity in milk and dried milk, buttermilk and buttermilk powder, whey and whey powder.

**ZWS ISO 3394:2012****Packaging – Complete, filled transport packages and unit loads – Dimensions of rigid rectangular packages**

Price Code: Gr. 5  
9 pages  
Identical to ISO 3394:2012

This International Standard sets forth a series of dimensions for rigid rectangular transport packages, based on the standard plan dimension (module) of 600 mm × 400 mm, 600 mm × 500 mm and 550 mm × 366 mm, as outlined in ISO 3676, which defines the plan dimensions of four series (1 219 mm × 1 016 mm, 1 200 mm × 1 000 mm, 1 200 mm × 800 mm, 1 100 mm × 1 100 mm).

**ZWS ISO 3432:2008****Cheese – Determination of fat content butyrometer for van gulik method**

Price Code: Gr 5  
7 pages  
Identical to ISO 3432:2008

Specifies the characteristics of a butyrometer for the determination of the fat content, in the range 0% mass fraction to 40% mass fraction, of cheese by the van gulik method and illustrates suitable devices for weighing and introducing the cheese test portion.

**ZWS ISO 3433:2008****Cheese – Determination of fat content - Van Gulik method**

Price Code: Gr 5  
7 pages  
Identical to ISO 3433:2008

Specifies the Van Gulik method for the determination of the fat content, as a mass fraction, of cheese.

**ZWS ISO 3452:2012****Non-Destructive testing – Penetrant testing**

**Part 1: General Principles**  
Price Code: Gr. 6  
22 pages  
Identical to ISO 3059.1: 2012

Specifies the method of penetrant testing used to detect discontinuities eg cracks, laps, folds, porosity and lack of fusion, which are open to

the surface of the material to be tested mainly applied to metallic material but can also be performed on other materials provided that they are inert to the test media and not excessively porous.

**Part 2:2013 Testing of penetrant materials**

Price Code: Gr. 5  
25 pages  
Identical to ISO 3059.2: 2013

Specifies the technical requirements and test procedures for penetrant materials for their type testing and batch testing covers the temperature range 10°C to 50°C.

**Part 3: Reference test blocks**

Price Code: Gr. 4  
6 pages  
Identical to ISO 3059.3: 2013

Specifies the two types of reference blocks, type 1 blocks used to determine the sensitivity levels of both fluorescent and colour contrast penetrant product family and type 2 blocks used for routine assessment of the performance of both fluorescent and colour contrast penetrant testing.

**Part 4:1998 Equipment**

Price Code 5  
5 pages

Specifies the characteristics of equipment used in penetrant testing depending on the number of tests to be made and on the size of the components to be tested.

**Part 5:2008 Testing of penetrant materials**

Price Code: Gr. 5  
7 pages  
Identical to ISO 3059.5: 2008

Specifies the testing requirements particular to applications at higher temperatures over 50 °C and also the method for qualification of suitable testing products. It applies only to material qualified for the relevant temperature range used in accordance with the manufacturer's instruction.

**Part 6:2008 Penetrant testing at temperatures lower than 10°C**

Price Code: Gr. 5  
5 pages  
Identical to ISO 3059.6: 2008

Specifies the testing requirements particular to applications at low temperatures lower than 10 °C as well as the method for qualification of suitable testing products. It applies only to material qualified for the relevant temperature range used in accordance with the manufacturer's instruction.

**ZWS ISO 3679:2004****Determination of flash point rapid equilibrium closed cup method**

Price Code:Gr. 4  
18 pages  
Identical to ISO 3679:2004

Specifies a method for the determination of the closed cup flash point of paints (including water-borne paints), varnishes, paint binders, adhesives, solvents, petroleum and related products having closed cup flash points within the range of -30°C to 300°C. When used in conjunction with the flash detector (A.1.6), it is also suitable for the determination of the flash point of fatty acid methyl esters (FAME).

**ZWS ISO 3680:2004****Determination of flash/no flash – Rapid equilibrium closed cup method**

Price Code: Gr. 6

19 pages

Identical to ISO 3680:2004

Specifies a method for the determination of the ability of paints (including waterborne paints), varnishes, paint binders, adhesives, solvents and petroleum and related products, when maintained at a selected test temperature within the range of -30°C to 300°C and under the conditions of test to yield sufficient flammable vapour at this temperature to cause ignition on the application of a test flame in a standard manner.

**ZWS ISO 3720:2003****Black Tea – Definition and basic requirements**

Price Code: Gr. 2

2 pages

Identical to ISO 3720

Specifies the parts of a named plant that are suitable for making black tea for consumption as a beverage and the chemical requirements for tea that are used to indicate that tea from that source has been produced in accordance with good production practice, also specifies the packing and marking requirements for black tea in containers

**ZWS ISO 3727:2005****Butter – Determination of moisture, non-fat solids and fat contents****Part 1: Determination of moisture content (Reference method)**

Price Code: Gr. 3

6 pages

Identical to ISO 3727-1: 2005

Specifies a method for the determination of the moisture content of butter.

**Part 2: Determination of non-fat solids content (Reference method)**

Price Code: Gr. 4

6 pages

Identical to ISO 3727-2: 2001

Specifies a method for the determination of the moisture content of butter.

**ZWS ISO 3728:2001****Ice-cream and milk ice – Determination of total solids content (Reference method)**

Price Code: Gr. 2

3 pages

Identical to ISO 3728: 1977

Specifies a reference method for the determination of the total solids content of ice-cream, milk ices and similar products.

**ZWS ISO 3740:2000****Acoustic – Determination of sound power levels of noise sources - guidelines for the use of basic standards**

Price Code: Gr. 7

25 pages

Identical to ISO 3747:2010

Standard gives guidance for the use of a series of nine international standards describing various methods for determining the sound power levels from all types of machinery and equipment. It applies only to airborne sound

**ZWS ISO 3747:2010****Acoustic – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering/survey methods for use in situ in a reverberant environment**

Price Code: Gr. 7

43 pages

Identical to ISO 3747:2010

Specifies a method for determining the sound power level or sound energy level of a noise source by comparing measured sound pressure levels emitted by a noise source (machinery or equipment) mounted in situ in a reverberant environment, with those from a calibrated reference sound source. The sound power level (or in the case of noise bursts or transient noise emission, the sound energy) produced by the noise, in frequency bands of width one octave, is calculated using those measurements.

**ZWS ISO 3758:2000****Textiles – Care labeling code using symbols**

Price Code: Gr. 3

6 pages

Identical to ISO 3758: 1991

Establishes a system of graphic symbols, intended for use in permanent marking of textiles articles, providing information essential for their proper care, and specifies the use of these symbols in care labeling.

**ZWS ISO 3779:1998****Road vehicles-Vehicles identification number (VIN) Content and structure**

Price Code: Gr. 2

3 pages

Identical to ISO 3779: 1983

Specifies the content and structure of a vehicle identification number (VIN) in order to establish, on a world-wide basis, a uniform identification numbering system for road vehicles

**ZWS ISO 3780:1998****Road vehicles – World manufacturer identifier (WMI) code**

Price Code: Gr. 1

2 pages

Identical to ISO3780: 1983

**ZWS ISO 3781:1998****Paper and board – Determination of tensile strength after immersion in water**

Price Code: Gr. 2

4 pages

Identical to ISO3781: 1983

Specifies methods for the determination of tensile strength after it has immersed in water for a specified method.

**ZWS ISO 3801:1998****Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area**

Price Code: Gr. 2

4 pages

Identical to ISO 3801: 1977

Specifies methods for determination of mass per unit length and the mass per unit area of woven fabrics.

### **ZWS ISO 3833:1998**

#### **Road vehicles – Types – Terms and definitions**

Price Code: Gr. 5

11 pages

Identical to ISO3833: 1978

Defines terms relating to some types of road vehicles designated according to certain design and technical characteristics.

### **ZWS ISO 3837:1993**

#### **Liquid petroleum products – Determination of hydrocarbon types – Fluorescent indicator absorption method**

Price Code: Gr. 5

8 pages

Identical to ISO 3837:1993

Specifies a fluorescent indicator absorption method for the determination of hydrocarbon types over the concentration ranges from 5% (V/V) to 99% (V/V) aromatic hydrocarbons, 0,3% (V/V) to 55% (V/V) olefins and 1% (V/V) to 95% (V/V) saturated hydrocarbons in petroleum fractions that distill below 315°C.

### **ZWS ISO 3864: Part 2:2016**

#### **Graphical symbols – Safety colours and safety signs: Part 2:2016: Design principles for product safety labels**

Price Code: Gr. 6

19 pages

Identical to ISO 3864: Part 2:2016

This document establishes additional principles to ISO 3864 1 for the design of safety labels for products, i.e. any items manufactured and offered for sale in the normal course of commerce, including but not limited to consumer products and industrial equipment. The purpose of a product safety label is to alert persons to a specific hazard and to identify how the hazard can be avoided. This document is applicable to all products in all industries where safety-related questions can be posed. However, it is not applicable to safety labels used for chemicals, for the transport of dangerous substances and preparations and in those sectors subject to legal regulations which differ from certain provisions of this document. The design principles incorporated in this document are intended to be used by all ISO Technical Committees and anyone designing product safety labels in the development of product safety label standards for their industries or services.

### **ZWS ISO 3864: Part 3:2024**

#### **Graphical Symbols – Safety Colors and Safety Signs Part 3:2024: Design principles for graphical symbols for use in safety signs**

Price Code: Gr. 8

25 pages

Identical to ISO 3864: Part 3:2024

This part of ISO 3864 gives principles, criteria and guidance for the design of graphical symbols for use in safety signs as defined in ISO 3864 1, and for the safety sign element of product safety labels as defined in ISO 3864 2.

### **ZWS ISO 3864: Part 4: 2011**

#### **Graphical symbols – Safety colours and safety signs: Part 4: 2011: Colorimetric and photometric properties of safety sign materials**

Price Code: Gr. 8

24 pages

Identical to ISO 3864: Part 4: 2011

This part of ISO 3864 establishes the colorimetric and photometric requirements and test methods for the colours of safety signs to be used in workplaces and public areas. It provides the colorimetric and photometric specifications for the named safety and contrast colours prescribed in ISO 3864-1. The physical requirements that safety signs have to meet are primarily related to daytime colour and normally lit environments. This part of ISO 3864 also includes the colorimetric

requirements and test methods for safety signs and phosphorescent material which also operate in unlit environments. This part of ISO 3864 is applicable to all locations where safety issues related to people need to be addressed. However, it is not applicable to signalling used for guiding rail, road, river, maritime and air traffic and, generally speaking, to those sectors subject to a regulation that may differ. The colorimetric and photometric properties of retro-reflective safety signs, retroreflective materials combined with fluorescent or phosphorescent materials, or luminous safety signs activated by a radioactive source are not specified in this part of ISO 3864.

### **ZWS ISO 3890:2009**

#### **Milk and milk products – Determination of residues of organochlorine compounds (pesticides)**

##### **Part 1: General considerations and extraction methods**

Price Code: Gr. 6

17 pages

Identical to ISO 3890.1:2009

Describes general considerations and specifies extraction methods for the determination of residues of organochlorine pesticides in milk and milk products.

##### **Part 2: Test methods for crude extract purification and confirmation**

Price Code: Gr. 7

31 pages

Identical to ISO 3890.2:2009

Specifies test methods for the purification of the crude extracts obtained by the general methods given in ISO 3890.1| DF 75-1. It also gives recommended methods for the determination of the residues of organochlorine compounds in milk and milk products, together with confirmatory tests and clean up procedures.

### **ZWS ISO 3894:2010**

#### **Road Vehicles – Wheels / Rims for commercial vehicles – Test methods**

Price Code: Gr. 5

10 pages

Identical to ISO 3894:2005

Specifies three laboratory methods for testing certain essential strength characteristics of disc wheels and demountable rims intended for road use on commercial vehicles, buses, trailers and multipurpose passenger vehicles, as defined in ISO 3833.

### **ZWS ISO 3929:1999**

#### **Road vehicles – Measurement methods for exhaust gas emissions during inspection or maintenance**

Price Code: Gr. 3

6 pages

Identical to ISO 3929:1995

Establishes the test procedures for direct measurement of the concentration of exhaust gas emissions from road vehicles.

### **ZWS ISO 3930:2001**

#### **Instruments for measuring vehicle exhaust emissions**

Price Code: Gr. 7

27 pages

Identical to ISO 3930:2000

Specifies the metrological and technical requirements and tests for measuring instruments that serve to determine the volume fraction of certain components of the exhaust gases emanating from motor vehicles.

**ZWS ISO 3932:1998****Textiles – Woven fabrics – Measurement of width of pieces**

Price Code: Gr. 2

4 pages

Identical to ISO 3932:1976

Specifies two methods for the determination of the width of pieces of woven fabrics that are in the state of relaxation obtained by exposure (free from applied tension) to the standard atmosphere for testing.

**ZWS ISO 3933:1998****Textiles – Woven fabrics – Measurement of length of pieces**

Price Code: Gr. 2

3 pages

Identical to ISO 3933:1976

Specifies two methods for the determination of the length of pieces (of any length) of woven fabrics that are in the state of relaxation obtained by exposure (free from applied tension) to the standard atmosphere for testing.

**ZWS ISO/TR 4011:1999****Road vehicles – Apparatus for measurement of opacity of exhaust gas from diesel engines**

Price Code: Gr. 6

17 pages

Identical to ISO /TR 4011:1976

Establishes the specifications for devices for measuring the opacity of exhaust gas from diesel engines for road vehicles, and for their installations.

**ZWS ISO 4074:2003****Natural latex rubber condoms – Requirements and test methods**

Price Code: Gr. 7

46 pages

Identical to ISO 4074: Part 1:1976

Replaces ZWS ISO 4074: Part 1 – 10:1999

Amended by COR 1:2004

Specifies the minimum requirements and the test methods to be used for condoms made from natural rubber latex which applied to consumers for contraceptive purposes and to assist in the prevention of sexually transmitted infections.

**ZWS ISO 4100:1998****Road vehicles – World parts manufacturer identifier (WPMI) code**

Price Code: Gr. 2

3 pages

Identical to ISO 4100:1980

Specifies the content and structure of an identifier in order to establish, on a world-wide basis, the identification of the manufacturer of parts for road vehicles.

**ZWS ISO 4198:1984****Surface active agents – Detergents for washing fabrics – guide for comparative testing of performance**

Price Code: Gr. 5

10 pages

Identical to ISO 4198:1984

This International Standard establishes guidelines for carrying out comparative tests for determining the principal performance characteristics of detergents, solid or liquid, for domestic hand dishwashing which are of interest to the consumer. It lists and defines the performance characteristics considered; it gives details of the variables to be considered, indicates their significance and provides a basis for designing adequate comparative test methods.

**ZWS ISO 4217:2015****Codes for the representation of currencies and funds**

Price Code: Gr. 4

5 pages

Identical to ISO 4217:2015

This International Standard specifies the structure for a three-letter alphabetic code and an equivalent three-digit numeric code for the representation of currencies. For those currencies having minor units, it also shows the decimal relationship between such units and the currency itself. The scope of this International Standard also includes funds and precious metals. This International Standard also includes basic guidelines for its maintenance. This International Standard is intended for use in any application of trade, commerce and banking, where currencies and, where appropriate, funds are required to be described. It is designed to be equally suitable for manual users and for those employing automated systems.

**ZWS ISO 4219:1999****Air quality – Determination of gaseous sulfur compounds in ambient air sampling equipment**

Price Code: Gr. 2

4 pages

Identical to ISO 4219

Specifies general requirements for the equipment for the sampling of ambient air in order to determine gaseous sulphur compounds, particularly sulphur dioxide.

**ZWS ISO 4220:1999****Ambient air – Determination of gaseous acid pollution index – Tritrimetric method with indicator or potentiometric end point detection**

Price Code: Gr. 3

5 pages

Identical to ISO 4220:1983

Specifies a Thorn spectrometric method for the determination of sulphur dioxide in ambient air.

**ZWS ISO 4221:1999****Air quality – Determination of mass concentration of sulfur dioxide in ambient air -**

Price Code: Gr. 4

7 pages

Identical to ISO 4221:1980

Specifies a thorn spectrophotometric methods for the determination of the mass concentration of sulfur dioxide in ambient air.

**ZWS ISO 4225:2000****Air quality – General aspects - Vocabulary**

Price Code: Gr. 4

11 pages

Identical to ISO 4225:1994

Explains the meanings of a selection of terms commonly used in connection with the sampling and measurement of gases, vapours and particles for the determination of air quality.

**ZWS ISO 4226:1999****Air quality – General aspects – Units of measurement**

Price Code: Gr. 1

2 pages

Identical to ISO 4226:1993

Lays down the units and symbols to be used when reporting results of air quality measurements.

**ZWS ISO/TR 4227:1999**  
**Planning of ambient air quality monitoring**  
Price Code: Gr. 5  
15 pages  
Identical to ISO 4227: 1998

Establishes a classification scheme which should form a general basis for international standardization of ambient air quality monitoring and permits comparison between existing and planned ambient air quality monitoring systems.

**ZWS ISO 4312:1989**  
**Surface active agents - Evaluation of certain effects of laundering - Methods of analysis and test for unsoiled cotton control cloth**  
Price Code: Gr. 7  
50 pages  
Identical to ISO 4312: 1989

Specifies the methods to be used to determine, under strictly controlled conditions, certain characteristics of unsoiled cotton control cloth, namely intrinsic greying and yellowing, increase in organic deposit content and incineration residue, the Overall decrease in breaking strength, the decrease in breaking strength resulting from Chemical degradation of the cellulose and the decrease in breaking strength resulting from mechanical factors in laundering both before and after processing, so that certain effects of laundering can be evaluated.

**ZWS ISO 4317:2009**  
**Surface active agents and detergents – determination of water content – Karl Fischer methods**  
Price Code: Gr 5  
14 pages  
Identical to ISO 4317:2011  
Superceeds COMESA ZWS HS ISO 4317:2007

ISO 4317:2011 specifies two titration methods (volumetric and coulometric) using Karl Fischer reagent for the determination of the water content of surface active agents and detergents. These methods are applicable to products in the form of powders, pastes and solutions. They are applicable only if so indicated in the specific standard for each product. As alkaline compounds react with Karl Fischer reagent, the methods give values which are too high in the case of samples containing alkali metal silicates, carbonates, hydroxides or borates. Therefore, samples need to be analysed for the presence of such alkali metal salts prior to the determination of the water content.

**ZWS ISO 4319:1977**  
**Surface active agents - Detergents for washing fabrics - Guide for comparative testing of performance**  
Price Code: Gr. 7  
50 pages  
Identical to ISO 4319: 1977

This International Standard constitutes a guide for carrying out comparative tests of fabric washing products in such a way as to realistically reflect the performance of the products likely to be used by consumers. It gives details of the variables to be considered, indicating the significance and importance of each of these variables, and provides a basis for the drawing up of adequate comparative test methods which will give a valid estimation of the performance of a fabric washing product when two or more products are compared during the same series of tests.

**ZWS ISO 4427:2007**  
**Plastics piping systems - Polyethylene (PE) pipes and fittings**  
**Part 1: General**  
Price Code: Gr. 6  
14 pages  
Identical to ISO 4427.1: 2007  
Amended by MD684

Specifies the general aspects of polyethylene (PE) piping systems (mains and service pipes) intended for the conveyance of water for human consumption, including raw water prior to treatment and water for general purpose.

**Part 2: Pipes**  
Price Code: Gr. 6  
18 pages  
Identical to ISO 4427.2: 2007

Specifies the pipes made from polyethylene (PE) intended for the conveyance of water for human consumption, including raw water prior to treatment and water for general purposes.

**Part 3: Fittings**  
Price Code: Gr. 7  
31 pages  
Identical to ISO 4427.3: 2007

Specifies the general aspects of fittings made from polyethylene (PE) for piping systems intended for the conveyance of water for human consumption, including raw water prior to treatment and water for general purposes.

**Part 5: Fitness for purpose**  
Price Code: Gr. 5  
7 pages  
Identical to ISO 4427.5: 2007

Specifies the characteristics of the fitness for purpose of assembling piping systems made from polyethylene (PE) intended for the conveyance of water for human consumption, including raw water prior to treatment and water for general purpose.

**ZWS ISO 4593:2000**  
**Plastics – Film sheeting – Determination of thickness by mechanical scanning**  
Price Code: Gr. 1  
2 pages  
Identical to ISO 4593: 1993

Specifies a method for the determination of thickness of a sample of plastics film or sheeting by mechanical scanning.

**ZWS ISO 4831:2007**  
**Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration coliforms- most probable number technique**  
Price Code: Gr 4  
11 pages  
Identical to ISO 4831 : 2006  
Replaces ZWS ISO 5541:2005

Gives general guidelines for the detection and enumeration of coliforms. It is applicable to products intended for human consumption and for the feeding of animals and environmental samples in the are of food production and food handling.

**ZWS ISO 4832:2007****Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coliforms – Colony count technique.**

Price Code Gr 3

6 pages

Identical to ISO 4832:2006

Gives general guidelines for the enumeration of coliforms. It is applicable to products intended for human consumption and for the feeding of animals and environmental samples, in the area of food production and food production and food handling.

**ZWS ISO 4833:2005****Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30°C.**

Price Code Gr 4

9 pages

Identical to ISO 4833:2003

Specifies a horizontal method for the enumeration of micro-organisms, by counting the colonies growing in a solid medium after aerobic incubation at 30°C. Subject to the limitations discussed, this standard is applicable consumption or the feeding of animals.

**ZWS ISO 4880:2011****Burning behavior of textiles and textile products - Vocabulary**

Price Code: Gr. 5

14 pages

Identical to ISO 4880:1997

Defines terms used in testing the burning behavior of textiles and textile products.

**ZWS ISO 4925:2020****Road vehicles – Specification of non-petroleum-based brake fluids for hydraulic system**

Price Code: Gr. 7

24 pages

Identical to ISO 4925:2020

This document provides the specifications, requirements and test methods, for non-petroleum-based fluids used in road-vehicle hydraulic brake and clutch systems that are designed for use with such fluids and equipped with seals, cups or double-lipped type gland seals made of styrene-butadiene rubber (SBR) and ethylene-propylene elastomer (EPDM).

**ZWS ISO 4926:2020****Road vehicles – Hydraulic braking systems – Non-petroleum-based reference fluid**

Price Code: Gr. 2

2 pages

Identical to ISO 4926:2020

This document specifies the composition and characteristics of a reference fluid used for the compatibility testing of hydraulic braking systems and components mounted on road vehicles.

**ZWS ISO 5077:1998****Textiles – Determination of dimensional change in washing and drying**

Price Code Gr 2

3 pages

Identical to ISO 5077 Part 2 1984

Specifies a method for determination of the dimensional change of fabrics, garments or other textile articles when subjected to an appropriate combination of specified washing and drying procedures.

**ZWS ISO 5081:1998****Textiles – Woven fabrics – Determination of breaking strength and elongation (strip method)**

Price Code: Gr. 4

8 pages

Identical to ISO 5081:1977

Specifies a method known as the “strip” method, for the determination of the breaking strength and elongation at break of woven textile fabrics, (except woven elastic fabrics).

**ZWS ISO 5082:1998****Textiles – Woven fabrics – Determination of breaking strength – Grab method.**

Price Code: Gr. 4

7 pages

Identical to ISO 5082:1982

Specifies a method, known as the “grab” method, for the determination of the breaking strength of woven textile fabrics.

**ZWS ISO/IEC 5140:2024****Information Technology — Cloud computing — Concepts for multi-cloud and the use of multiple cloud services**

Price Code: Gr. 7

29 pages

Identical to ISO/IEC 5140:2024

This document specifies foundational concepts for multiple cloud services including multi-cloud, hybrid cloud, inter-cloud and federated cloud.

**ZWS ISO 5151/Amd 1:2020****Non-ducted air conditioners and heat pumps — Testing and rating for performance**

Price Code: Gr. 7

68 pages

Identical to ISO 5151/Amd 1:2020

This document specifies performance testing, the standard conditions and the test methods for determining the capacity and efficiency ratings of air-cooled air conditioners and air-to-air heat pumps.

This document is applicable to the following equipment:

- non-ducted air-cooled air conditioners and non-ducted air-to-air heat pumps; or
- ducted air conditioners and/or ducted heat pumps rated at less than 8 kW and intended to operate at an external static pressure of less than 25 Pa.

**ZWS ISO 5263:2001****Pulps – Laboratory wet disintegration**

Price Code: Gr 3

5 pages

Identical to ISO 5263:1997

Specifies apparatus and a method for the laboratory wet disintegration of pulp.

**ZWS ISO 5349.1:2001****Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration****Part:1 General Requirements**

Price code: Gr 7

25 pages

Identical to ISO 5349.1:2001

Specifies general requirements for measuring and reporting hand transmitted vibration exposure in three orthogonal axes. It defines

a frequency weighting and band-limiting filters to allow uniform comparison of measurements.

**Part 2: Practical guidance for measurement at the workplace**

Price code: Gr 7

37 pages

Identical to ISO 5349.2:2001

Describes the precautions to be taken to make representative vibration measurements and to determine the daily exposure time for each operation in order to calculate the 8-h energy equivalent vibration total value (daily value exposure).

**ZWS ISO 5517:1978**

**Fruits, vegetables and derived products – Determination of iron content – 1,10 – Phenanthroline photometric method**

Price Code: Gr. 3

3 pages

Identical to ISO 5517:1978

Specifies a 1,10 phenanthroline photometric method for the determination of the iron content of fruits, vegetables and derived products.

**ZWS ISO 5518:2007**

**Fruits, vegetables and derived products – Determination of benzoic acid content – Spectrometric Method**

Price Code: Gr. 3

5 pages

Identical to ISO 5518:2007

Specifies a method for determining the benzoic acid content of fruits, vegetables and derived products.

**ZWS ISO 5519:2008**

**Fruits,vegetables and derived products – Determination of sorbic acid content**

Price Code: Gr. 5

9 pages

Identical to ISO 5519:2008

Specifies a method for extracting the sorbic acid present in fruits, vegetables and derived products and two techniques for determining the sorbic acid extracted.

**ZWS ISO 5520:1981**

**Fruits, vegetables and derived products – Determination of alkalinity of total ash and of water-soluble ash**

Price Code: Gr. 2

3 pages

Identical to ISO 5520:1981

Specifies a method for the determination of the alkalinity of the total ash and a method for the determination of the alkalinity of the water-soluble ash from fruits, vegetables and derived products.

**ZWS ISO 5522:1981**

**Fruits,vegetables and derived products – Determination of total sulphur dioxide content**

Price Code: Gr.2

7 pages

Identical to ISO 5522:1981

Specifies a method for the determination of the total sulphur dioxide content of fruits, vegetables and derived products, whatever the sulphur dioxide content.

**ZWS ISO 5531:1998**

**Wheat flour – Determination of wet gluten .**

Price Code: Gr 2

3 pages

Identical to ISO 5531:1978

Specifies a method for the determination of wet gluten in wheat flour.

**ZWS ISO 5534:2002**

**Cheese and processed cheese – Determination of total solids content (Reference method)**

Price Code: Gr 2

2 pages

Identical to ISO 5534:1985

Specifies a method for the determination of the total solids content of cheese and processed cheese.

**ZWS ISO 5536:2009**

**Milk fat products – Determination of water content – Karl Fischer method**

Price

Code:

Gr.3

8 pages

Identical to ISO 5536:2009

Specifies a method for the determination of the water content of milk fat products by the Karl Fischer (KF) method. The method is applicable to butteroil (anhydrous butteroil, anhydrous butterfat, anhydrous milk fat) with a water content not exceeding 1,0% mass fraction.

**ZWS ISO 5542:2002**

**Milk – Determination of protein content – Amido black dye binding method (Routine method)**

Price Code: Gr 3

5 pages

Identical to ISO 5542:1984

Describes the amido black dye-binding method used as routine method for the determination of the protein content of milk.

**ZWS ISO 5544:2008**

**Caseins – Determination of fixed ash (Reference method)**

Price Code: Gr. 4

5 pages

Identical to ISO 5544:2008

Specifies a reference method for the determination of the fixed ash of caseins, as a percentage by mass, obtained by acid precipitation or lactic fermentation, of ammonium caseinates, of their mixtures with rennet casein and with caseinates, and of caseins of unknown type.

**ZWS ISO 5545:2008**

**Rennet caseins and caseinates – Determination of ash (Reference method)**

Price Code: Gr 3

5 pages

Identical to ISO 5545:2008

Specifies a reference method for the determination of the ash of caseins obtained by rennet precipitation and of caseinates, with the exception of ammonium caseinate.

**ZWS ISO 5547:2009**

**Caseins – Determination of free acidity (Reference Method)**

Price Code: Gr 3

4 pages

Identical to ISO 5547:2008

Specifies a reference method for the determination of the free acidity of caseins obtained by acid precipitation or lactic fermentation and of rennet caseins

**ZWS ISO 5550:2006**

**Cheese – Determination of fat content butyrometer for van gulik method**

Price Code: Gr 5

8 pages

Identical to ISO 5550:2006

Specifies the reference method for the determination of the moisture content of all types of caseins and casinates

**ZWS ISO 5554:1998**

**Meat and meat products – Determination of starch content (reference method)**

Price Code: Gr 3

5 pages

Identical to ISO 5554:1978

Specifies a reference method for the determination of the starch content of meat products.

**ZWS ISO 5576:1997**

**Non-destructive testing – Industrial radiographic illuminators – Minimum requirements**

Price Code: Gr 5

7 pages

Identical to ISO 5576:1997

The standard defines terms used in industrial radiographic testing

**ZWS ISO 5579:2013**

**Non-Destructive testing – radiographic testing of metallic materials using film and X – or gamma rays – Basic Rules**

Price code: Gr 5

11 pages

Identical to ISO 5579:2013

Outlines the general rules for industrial X – and gamma-radiology for flaw-detection purposes, using film techniques, applicable to the inspection of metallic products and materials

**ZWS ISO 5580:1985**

**Non-Destructive testing – Industrial radiographic illuminators – minimum requirements**

Price code: Gr 4

4 pages

Identical to ISO 5580:1985

Specifies the minimum requirements for industrial illuminators used for viewing radiographs

**ZWS ISO 5725:2003**

**Accuracy (trueness and precision) of measurement methods and results**

**Part 1: General principles and definitions**

Price Code: Gr 5

17 pages

Identical to ISO 5725-1:1994

Defines values which describe in quantitative terms, the ability of a measurement method to give a correct result (trueness) or to replicate a given result (precision).

**Part 2: Basic method for the determination of repeatability and reproducibility of standard measurement method.**

Price Code: Gr 7

42 pages

Identical to ISO 5725-2:1994

Amplifies general principles to be observed in designing experiments for the numerical estimation of the precision of measurement methods by means of a collaborative interlaboratory experiment.

**Part 3: Intermediate measures of the precision of a standard measurement method**

Price Code: Gr 6

25 pages

Identical to ISO 5725-3:1994

Specifies four intermediate precision measures due to changes in observation conditions (time, calibration, operator and equipment) within a laboratory.

**Part 4: Basic methods for the determination of the trueness of a standard measurement method**

Price Code: Gr 6

23 pages

Identical to ISO 5725-4:1994

Provides basic methods for estimating the bias of a measurement method and the laboratory bias when a measurement method is applied.

**Part 5: Alternative methods for the determination of the precision of a standard measurement method.**

Price Code: Gr 7

56 pages

Identical to ISO 5725-5:1998

Provides detailed description of alternatives to the basic method of determining the repeatability and reproducibility standard deviations of a standard measurement method, namely the split-level design and a design for heterogeneous materials.

**Part 6: Use in practice of accuracy values**

Price Code: Gr 7

41 pages

Identical to ISO 5725-6 1994

Gives some indications of the way in which accuracy data can be used in practical situations.

**ZWS ISO 5739:2005**

**Caseins and Caseinates – Determination of contents of scorched particles and of extraneous matter.**

Price Code: Gr 5

12 pages

Identical to ISO 5739:2003

Specifies a method for the determination of the contents of scorched particles and of extraneous matter in caseins and caseinates.



**ZWS ISO 5815.2:2003****Water quality – Determination of biochemical oxygen demand after n days (BOD<sub>n</sub>)****Part 2: Method for undiluted samples**

Price Code: Gr 5

13 pages

Identical to ISO 5815-2:2003

Specifies determination of the biological oxygen demand (BOD) of waters of undiluted samples. Applicable to all waters having biochemical oxygen demand greater than or equal to 0,5 mg/l of oxygen (the limit of determination) not exceeding 6 mg/l of oxygen.

**ZWS ISO 6009:2016****Hypodermic needles for single use – Colour coding for identification**

Price Code: Gr 4

6 pages

Identical to ISO 6009: 2016

Establishes a colour code for the identification of single-use hypodermic needles of designated metric size in the range 0,18mm (34 gauge) to 3,4mm (10 gauge). It applies to regular-walled, thin walled and extra-thin-walled and ultra-thin needles and to opaque and translucent colours

**ZWS ISO 6078:2003****Black tea – vocabulary**

Price Code: Gr 6

22 pages

Identical to ISO 6078:1982

Provides a list of terms and definitions, applicable to the techniques of processing and assessing black tea for commerce.

**ZWS ISO 6079:2003****Instant tea in solid form**

Price Code: Gr 2

2 pages

Identical to ISO6079:1990

Specifies requirements for instant tea in solid form.

**ZWS ISO 6092:1980****Dried milk – Determination of titratable acidity (Routine method)**

Price Code: Gr

3 pages

Identical to ISO6092:1980

Specifies a routine method for the determination of the titratable acidity of all types of dried milk.

**ZWS ISO 6091:2001****Dried milk – Determination of tritratable acidity (Reference method)**

Price Code: Gr 1

2 pages

Identical to ISI 6091:1980

Specifies a reference method for the determination of the tritratable acidity of all types of dried milk.

**ZWS ISO 6166:2013****Securities and related financial instruments — International securities identification numbering system (ISIN)**

Price Code: Gr 4

11 pages

Identical to ISO 6166:2013

This International Standard provides a uniform structure for the identification of fungible and non-fungible securities and financial instruments (see Annex A) using a unique identification number and associated minimum descriptive data (see Annex B).

**ZWS ISO 6252:2000****Plastics – Determination of environmental stress cracking (ESC)- Constant-tensile-stress-method.**

Price Code: Gr 4

8 pages

Identical to ISO 6252:1992

Specifies methods for the determination of environmental stress cracking (ESC) of plastics when they are subjected to a constant tensile force in the presence of chemical agents.

**ZWS ISO 6460:1999****Road vehicles – Measurement method of gaseous pollutants emitted by motorcycles equipped with a controlled ignition engine.**

Price Code: Gr 5

14 pages

Identical to ISO 6460:1981

Specifies methods of measurement of gaseous pollutants emitted by motorcycles.

**ZWS ISO 6506:1995****Metallic materials – Hardness test Brinell test**

Price Code: Gr 4

10 pages

Identical to ISO 6506:1981

Specifies the method for the Brinell hardness test for metallic materials.

**ZWS ISO 6507:1996****Metallic materials – Hardness test – Vickers test****Part 1: HV 5 to HV 100**

Price Code: Gr 6

19 pages

Identical to ISO 6507 Part 1982

Specifies the method of Vickers hardness test HV 5 to HV 100 (test forces from 49.03 to 980.7N) for metallic materials.

**Part 2: HV 0,2 to less than HV 5**

Price Code: Gr 6

19 pages

Identical to ISO 6507: Part 2: 1983

Specifies the method of Vickers hardness test HV 5 (test forces from 1.961 to less than 49.03 N) for metallic materials.

**Part 3: Less than HV 0,2**

Price Code: Gr 4

10 pages

Identical to ISO 6507:Part 3:1989

Specifies a method of determining a Vickers hardness of less than HV 0,2 (test force less than 1,961N) for metallic materials.

**ZWS ISO 6508:2001****Metallic materials – Rockwell hardness test****Part 1: Test method (Scales A, B, C, D, E, F, G, H, K, N, T)**

Price Code: Gr 5

15 pages

Replaces SZS ISO 6508:1996

Identical to ISO 6508-1:1999

Specifies the method for Rockwell and Rockwell superficial hardness tests for metallic material.

**Part 2: Verification and calibration of testing machines (Scale A, B, C, D, E, F, G, H, K, N, T)**

Price Code: Gr 4

10 pages

Identical to ISO6508-2 1999

Specifies a method of verification of testing machines for determining Rockwell hardness.

**Part 3: Calibration of reference blocks (Scales A, B, C, D, E, F, G, H, K, N, T)**

Price Code: Gr4

7 pages

Identical to ISO 6508-3 1999

Specifies a method for the calibration of reference blocks to be used for the indirect verification of Rockwell hardness testing machines as specified in ZWS ISO 6508 Part 2.

**ZWS ISO 6540:2021**

**Maize- Determination of moisture content (on milled grains and on whole grains)**

Price Code: Gr 7

25 pages

Identical to ISO 6540:2021

This document specifies two methods:

a reference method for the determination of the moisture content of maize grains and ground whole maize, groats, grits and maize flour, see Clause 4; a routine method for the evaluation of the moisture content of maize in whole grains, see Clause 5. The latter is not suitable for use for experts' reports, or for calibration or checking of humidity meters, because of its significant bias to the reference method (see Table B.3).

**ZWS ISO 6579: Part 1:2017/Amd.1:2020**

**Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella**

**Part 1: Detection of Salmonella spp.**

Price Code: Gr. 8

46 pages

Identical to ISO 6579-1:2017

This document specifies a horizontal method for the detection of Salmonella. It is applicable to the following:

—products intended for human consumption and the feeding of animals;

—environmental samples in the area of food production and food handling;

—samples from the primary production stage such as animal faeces, dust, and swabs.

With this horizontal method, most of the Salmonella serovars are intended to be detected. For the detection of some specific serovars, additional culture steps may be needed. For Salmonella Typhi and Salmonella Paratyphi, the procedure is described in Annex D. The selective enrichment medium modified semi-solid Rappaport-Vassiliadis (MSRV) agar is intended for the detection of motile Salmonella and is not appropriate for the detection of non-motile Salmonella strains.

**ZWS ISO 6591:1996**

**Packaging –Sacks- Description and method of measurement**

**Part 2: Empty sacks made from thermoplastic flexible film.**

Price Code: Gr 4

11 pages

Identical to ISO 6591 Part 2 1985

Specifies a method for measuring and expressing the dimensions of empty sacks of thermoplastic flexible film. It is primarily intended for application to plastic sacks as specified in ISO 6590: Part 2.

**ZWS ISO 6610:2001**

**Milk and milk products – Enumeration of colony- forming units of micro-organisms-Colony count technique at 30°C**

Price Code: Gr 2

5 pages

Specifies a method for the enumeration of colony forming units (CFU)of micro-organisms in milk and milk products by means of a colony-count technique at 30°.

**ZWS ISO 6509 Part 1:2014**

**Test Methods**

**Corrosion Of Metals and alloys- determination of Dezincification resistance Of copper alloys with Zinc**

Price Code: Gr 4

7 pages

This part of ISO 6509 specifies a method for the determination of dezincification depth of copper alloys with a mass fraction of zinc more than 15%.

**ZWS ISO 6611:2005**

**Milk and milk products – Enumeration of colony- forming units of yeasts and/ or moulds – Colony-count technique at 25°C.**

Price Code : Gr 3

6 pages

Identical to ISO 6611 1992

Specifies a method for the detection and enumeration of colony-forming units (CFU) of viable yeasts and or moulds in milk and milk products by means of the colony-count technique at 25°C.

**ZWS ISO 6730:2006**

**Milk – Enumeration of colony – forming units of psychrotrophic micro-organisms – Colony- count technique 6.5°C**

Price Code: Gr 4

8 pages

Identical to ISO 6730:2005

Specifies a method for the enumeration of colony forming units (CFU) of psychrotrophic microorganisms in raw and heat – treated milk by means of the colony-count technique at 6.5°C.

**ZWS ISO 6731:2002**

**Milk, cream and evaporated milk – Determination of total solids content (Routine method)**

Price Code : Gr 2

3 pages

Identical to ISO 6731:1989

Specifies the reference method for the determination of the total solids content of milk, cream and evaporated milk.

**ZWS ISO 6734:2005**

**Sweetened condensed milk – Determination of total solids content (Reference method).**

Price Code: Gr 3

3 pages

Specifies the reference method for the determination of the total solids content of solids content of sweetened condensed milk.

**ZWS ISO 6767:2000****Ambient air – Determination of the mass concentration of sulphur dioxide – Tetrachloromercurate (TCM) pararosaniline method.**Price Code: Gr 4  
10 pages  
Identical to ISO 6767:1990

Specifies a spectrophotometric method, known as the tetrachloromercurate method.

**ZWS ISO 6768:2000****Ambient air – Determination of mass concentration of nitrogen dioxide – modified griess-saltzman method.**Price Code: Gr 4  
10 pages  
Identical to ISO 6768:1998

Specifies a modified Griess-Saitzman method for the determination of the mass concentration of nitrogen dioxide present in ambient air.

**ZWS ISO 6770:2003****Instant tea – Determination of free-flow and compacted bulk densities**Price code: Gr 4  
6 pages  
Identical to ISO 6770:1982

Specifies two methods for the determination of the bulk density of instant tea.

**ZWS ISO 6780:2000****General – purpose flat pallets for through transit of goods principal dimension and tolerances.**Price Code: Gr 4  
7 pages  
Identical to ISO 6780:1994

Specifies overall dimensions for single-deck and double –deck non-reversible pallets for through transit of goods, and dimensions related of their handling by pallet trucks, fork lift trucks and other appropriate handling equipment.

**ZWS ISO 6785:2005****Milk and milk products – Detection of Salmonella ssp**Price Code:Gr 6  
23 pages  
Identical to ISO 6785:2005

Specifies a method for the detection of Salmonella ssp in milk and milk products.

**ZWS ISO 6835:1981****Surface active agents – Washing Powders – Determination of total boron content – Titrimetric Method**Price Code: Gr 4  
5 pages  
Identical to ISO 6835:1981

Specifies a titrimetric method for the rapid determination of the total boron content of commercial washing powders, without interference from other compounds usually present. The method may be used in the presence of sequestering agents..

**ZWS ISO 6855:1999****Road vehicles – Measurement methods for gaseous pollutants emitted by mopeds equipped with a controlled ignition engine.**Price Code: Gr 5  
13 pages  
Identical to ISO 6855:1983

Specifies the measurement methods for gaseous pollutants emitted by mopeds.

**ZWS ISO 6879:2000****Air quality – Performance characteristics and related concepts for air quality measuring methods.**Price Code: Gr 3  
6 pages  
Identical to ISO 6879:1995

Defines terms and performance characteristics related to air quality measuring method.

**ZWS ISO 6892:1996****Metallic materials – Tensile testing**Price Code: Gr. 7  
37 pages  
Identical to ISO 6892:1984

Specifies the method of tensile testing of metallic materials and defines the mechanical properties which can be determined thereby.

**ZWS ISO 6940:2011****Textile fabrics – Burning behavior – Determination of ease of ignition of vertically oriented specimens**Price Code: Gr. 5  
14 pages  
Identical to ISO 6940:2004

Specifies a method for the measurement of ease of ignition of vertically oriented textile fabrics and industrial products in the form of single or multi-component fabrics when subjected to a small defined flame.

**ZWS 6941:2011****Textile fabrics – Burning behavior – Measurement of flame spread properties of vertically oriented specimens**Price Code: Gr. 5  
13 pages  
Identical to ISO 6941:2003

Specifies a method for the measurement of flame spread times of vertically oriented textile fabrics and industrial products in the form of single or multi-component fabrics when subjected to a small defined flame.

**ZWS ISO 6970:1999****Motorcycle and mopeds – Pollution tests – Chassis dynamometer bench.**Price Code: Gr 4  
9 pages  
Identical to ISO 6970:1994

Specifies the performance of a universal chassis dynamometer bench and a simplified bench, with a single roller, for laboratory tests of mopeds and motorcycles.

**ZWS ISO 7010:2011****Graphical symbols – Safety colors and safety signs - registered safety signs**Price Code: Gr.12  
301 pages  
Identical to ISO 7010:2011

This document prescribes safety signs for the purposes of accident prevention, fire protection, health hazard information and emergency evacuation. The shape and colour of each safety sign are according to ISO 3864 1 and the design of the graphical symbols

is according to ISO 3864 3. This document is applicable to all locations where safety issues related to people need to be addressed. However, it is not applicable to the signalling used for guiding rail, road, river, maritime and air traffic and, in general, to those sectors subject to a regulation which may differ with regard to certain points of this document and of the ISO 3864 series. This document specifies the safety sign originals that can be scaled for reproduction and application purposes.

**ZWS ISO 7023:1996**

**Packaging – Sacks – Method of sampling empty sacks for testing**

Price Code: Gr 4

8 pages

Identical to ISO 7023:1983

Specifies a method of obtaining a representative sample of empty sacks for testing.

**ZWS ISO 7101:2023**

**Healthcare organization management — Management systems for quality in healthcare organizations — Requirements**

Price Code:

Gr. 7

38 pages

Identical to ISO 7101:2023

The purpose of this document is to provide organizations with requirements to deliver high-quality healthcare and specifies requirements for management systems for quality in healthcare organizations when an organization desires to:

- a) demonstrate its ability to consistently meet service user, stakeholder, and applicable statutory and regulatory requirements;
- b) enhance service user experience during the continuum of care and continually improve healthcare quality; and
- c) create and maintain processes that ensure timely, safe, effective, efficient, equitable, and people-centred care. The requirements of this document are based on recognized best practices and are intended to be applicable to any organization providing healthcare services, regardless of its type, size, or the services it provides.

**ZWS ISO 7168:1999**

**Air quality – Exchange of data**

**Part 1: General data format**

Price Code: Gr 8

49 pages

Identical to ISO 7168 part 1 1999

Specifies a general format for the exchange of air quality data and related information.

**Part 2: Condensed data format**

Price Code: Gr 6

23 pages

Identical to ISO 7168 Part 2 1999

Specifies a condensed data format for presentation of air quality data.

**ZWS ISO 7176: Part 1:2014**

**Wheelchairs**

**Part 1:2014: Determination of static stability**

Price Code: Gr 6

27 pages

Identical to ISO 7176-1:2014

This part of ISO 7176 specifies test methods for determining the static stability of wheelchairs. It is applicable to manual and electrically powered wheelchairs, including scooters, with a maximum speed not greater than 15 km/h, intended to provide indoor and/or outdoor mobility for one disabled person whose mass is within the range represented by ISO 7176 11. For active stability-controlled wheelchairs, this part of ISO 7176 applies to the device in a stable, parked state.

This part of ISO 7176 provides a method for the measurement of the tipping angles (either wheelchair tipping angle or anti-tip device tipping angle), but this method is not applicable to wheelchairs with lateral anti-tip devices and does not consider sliding on the ground.

This part of ISO 7176 also includes requirements for test reports and information disclosure.

**ZWS ISO 7176: Part 2:2017**

**Wheelchairs**

**Part 2:2017: Determination of dynamic stability of electrically powered wheelchairs**

Price Code: Gr 6

25 pages

Identical to ISO 7176-2:2017

This document specifies test methods for determining the dynamic stability of electrically powered wheelchairs. This document is applicable to electrically powered wheelchairs, including scooters, with a maximum nominal speed not exceeding 15 km/h, intended to carry one person. This document is not applicable to manual wheelchairs with add-on power kits used for, or to assist, propulsion.

**ZWS ISO 7176: Part 3:2012**

**Wheelchairs**

**Part 3:2012: Determination of effectiveness of brakes**

Price Code: Gr 5

15 pages

Identical to ISO 7176-3:2012

This part of ISO 7176 specifies test methods for the measurement of the effectiveness of brakes of manual wheelchairs and electrically powered wheelchairs, including scooters, intended to carry one person, with a maximum speed not exceeding 15 km/h. It also specifies disclosure requirements for the manufacturer.

**ZWS ISO 7176: Part 4:2008**

**Wheelchairs**

**Part 4:2008: Energy consumption of electric wheelchairs and scooters for determination of theoretical distance range**

Price Code: Gr 3

8 pages

Identical to ISO 7176-4:2008

This part of ISO 7176 specifies methods for determining the theoretical distance range of electrically powered wheelchairs, including scooters, using measurements of energy consumed while driving and the nominal energy capacity of the wheelchair's battery set. It is applicable to electrically powered wheelchairs with a maximum nominal speed no greater than 15 km/h, intended to provide indoor and/or outdoor mobility for one disabled person whose mass is within the range represented by ISO 7176-11. This part of ISO 7176 also includes requirements for test reports and information disclosure.

**ZWS ISO 7176: Part 5:2008**

**Wheelchairs**

**Part 5:2008: Determination of dimensions, mass and manoeuvring space**

Price Code: Gr 7

78 pages

Identical to ISO 7176-5:2008

This part of ISO 7176 specifies methods for the determination of wheelchair dimensions and mass. This includes specific methods for the determination of outside dimensions when the wheelchair is occupied by a reference occupant and the required manoeuvring space needed for wheelchair manoeuvres commonly carried out in

daily life. This part of ISO 7176 specifies requirements for the disclosure of the dimensions and masses and contains five informative annexes.

**Annex A** specifies methods for the determination of technical dimensions that can be important to the performance of the wheelchair.

**Annex B** provides detailed information about pivot width and reversing width.

**Annex C** provides detailed information about the turning diameter.

**Annex D** provides details on determining the wheelchair longitudinal axis and wheelchair centre-point.

**Annex E** provides technical guidelines and recommendations for many of the measurements specified to facilitate improved understanding, design and construction of wheelchairs.

**This part of ISO 7176 is applicable to manual wheelchairs and electrically powered wheelchairs (including scooters).**

**ZWS ISO 7176: Part 6:2018**

#### **Wheelchairs**

**Part 6:2018: Determination of maximum speed of electrically powered wheelchairs**

Price Code: Gr 2

4 pages

Identical to ISO 7176-6:2018

This part of ISO 7176 specifies methods for the determination of wheelchair dimensions and mass. This includes specific methods for the determination of outside dimensions when the wheelchair is occupied by a reference occupant and the required manoeuvring space needed for wheelchair manoeuvres commonly carried out in daily life. This part of ISO 7176 specifies requirements for the disclosure of the dimensions and masses and contains five informative annexes.

**ZWS ISO 7176: Part 7:1998**

#### **Wheelchairs**

**Part 7:1998: Measurement of seating and wheel dimensions**

Price Code: Gr 7

48 pages

Identical to ISO 7176-7:1998

This part of ISO 7176 specifies a method for measuring the seating and wheel dimensions of wheelchairs. It is applicable to wheelchairs and vehicles intended to provide indoor and outdoor mobility at speed up to 15 km/h for people with disabilities whose mass does not exceed 120 kg, including the following classifications from ISO 9999:1992:

Electric motor-driven wheelchairs with manual steering	12 21 24
Electric motor-driven wheelchairs with power steering	12 21 27
Powered attendant-controlled wheelchairs	12 21 21
Manual attendant-controlled wheelchairs	12 21 03
Bimanual rear-wheel-driven wheelchairs	12 21 06
Bimanual front-wheel-driven wheelchairs	12 21 09
Bimanual lever-driven wheelchairs	12 21 12
Single-side-driven nonpowered wheelchairs driven by one arm or one leg	12 21 15
Foot-propelled wheelchairs	12 21 18

It does not apply to wheelchairs with a seat width of less than 212 mm. This part of ISO 7176 does not specify nominal seating and wheel dimensions for wheelchairs.

**NOTE:** For wheelchairs not covered by the scope, this part of ISO 7176 may still give an indication of where measurements should be made. Observe that for wheelchairs designed for users whose mass is significantly greater than the reference loader gauge (see Annex A) and which have compressible parts such as sprung wheels and/or seats, this measurement procedure may not give the correct seat measurements, as the compressible parts will not be fully compressed.

**ZWS ISO 7176: Part 8:2015**

#### **Wheelchairs**

**Part 8:2015: Requirements and test methods for static, impact and fatigue strengths**

Price Code: Gr 8

66 pages

Identical to ISO 7176-8:2015

This part of ISO 7176 specifies requirements for static, impact, and fatigue strength of wheelchairs including scooters. It specifies the test methods for determining whether the requirements have been met. It also specifies requirements for disclosure of the test results. The test methods can also be used to verify the manufacturers' claims that a product exceeds the minimum requirements of this part of ISO 7176. This International Standard applies to occupant- and attendant-propelled manual wheelchairs and electrically powered wheelchairs intended to provide indoor and outdoor mobility for people with disabilities.

**NOTE 1:** For the purposes of this part of ISO 7176, "wheelchair(s)" is used as an abbreviation for manual wheelchair(s) or electrically powered wheelchair(s), including scooter(s), to which the requirements and test methods are applied.

**NOTE 2:** Clauses of this part of ISO 7176 will be used as a basis for developing requirements and test methods for wheelchairs not covered by this part of ISO 7176.

**ZWS ISO 7176: Part 26:2007**

#### **Wheelchairs**

**Part 26:2007: Vocabulary**

Price Code: Gr 8

41 pages

Identical to ISO 7176-26:2007

This part of ISO 7176 specifies a vocabulary consisting of terms and definitions used in the field of manual and electrically powered wheelchairs (including scooters) and associated seating systems. This part of ISO 7176 includes, but is not limited to, the preferred terms used in two or more ISO standards of the ISO 7176, ISO 10542, and ISO 16840 series, but does not include terms considered to be adequately defined in everyday English.

**NOTE 1:** In addition to terms used in the three official ISO languages (English, French and Russian), this International Standard gives the equivalent terms in United States English; these are published under the responsibility of the member body/National Committee for the United States. However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

**NOTE 2:** Annex A provides a standard set of descriptors for characterizing wheelchairs.

**ZWS ISO 7176: Part 30:2018**

#### **Wheelchairs**

**Part 30:2018: Wheelchairs for changing occupant posture – test methods and requirements**

Price Code: Gr 6

26 pages

Identical to ISO 7176-30:2018

This document specifies the test methods and requirements for determining the safety and performance of a manual and/or power wheelchair that incorporates technology to alter the posture of the wheelchair occupant, which are either electrically or manually operated by the occupant or assistant during normal wheelchair use. This can include recline, tilt, elevate and stand-up mechanisms or a combination of these. In order for a wheelchair to be able to recline, tilt, elevate and/or stand-up, the wheelchair requires additional mechanisms and mechanical structures to allow these features to operate. This document specifies the different functional and strength tests required to test these wheelchairs in critical configurations of their adjustable range. This document does not cover wheelchairs where the only operator adjustable body support system (OABSS) is adjustable limb or head postural support device alone (e.g. elevating leg supports). This document does not include wheelchair and postural support device customization during initial or subsequent setup of a wheelchair for an individual occupant.

It also does not reflect other factors that can influence wheelchair stability such as occupant movement, cushion thickness, and the addition of ancillary equipment (e.g. respiratory support items).

**ZWS ISO 7211:1998**

**Textiles – Woven fabrics – Construction – Methods of analysis.**

**Part 2: Determination of number of threads per unit length.**

Price Code: Gr 3

6 pages

Identical to ISO 7211:1984

Specifies three methods of the determination of the number of thread per centimetre in woven fabrics.

**ZWS ISO 7212:1986**

**Enclosure For Protective Against Ionizing Radiation Lead Shielding Units for 50mm And 100mm Thick walls Guidelines**

Price Code: Gr. 7

54 pages

Identical to ISO 7212:1986

This document provides guidelines on managing risk faced by organisations. The application of these guidelines can be customized to any organization and its context. It provides a common approach to managing any type risk of risk and is not industry or sector specific

**ZWS ISO 7218:2007/Amd: 2013**

**Microbiology of the food chain - General requirements and guidance for microbiological examinations**

Price Code: Gr 8

81 pages

Identical to ISO 7218:2013

This document specifies general requirements and gives guidance on microbiological examinations. It is applicable to:

— the implementation of specific horizontal or vertical International Standards developed by ISO/TC 34/SC 9 or ISO/TC 34/SC 5 for detection or enumeration of microorganisms, named hereafter “specific standards”;

— good laboratory practices for microbiology laboratories testing samples from the food chain;

— guidance for microbiological laboratories testing samples from the food chain on the technical requirements for conforming to ISO/IEC 17025. The requirements of this general standard supersede corresponding ones in existing specific standards. Additional instructions for examinations using the polymerase chain reaction (PCR) are specified in ISO 22174. This document is applicable to examinations for bacteria, yeasts and moulds and can be used, if supplemented with specific guidance, for parasites and viruses. It does not apply to examinations for toxins or other metabolites (e.g. amines) from microorganisms. This document is applicable to microbiology of the food chain, from primary production stage to food and animal feed products, including the premises where the food or feed production and handling takes place. It is also applicable to the microbiological examination of water where water is used in food production or is regarded as a food in national legislation.

**ZWS ISO 7238:2005**

**Butter – Determination of pH of the serum – potentiometric method.**

Price Code : Gr 5

5 pages

Identical to ISO 7238:2005

Specifies a potentiometric method of the determination of the pH of the serum from all types of butter.

**ZWS ISO 7251:2005**

**Microbiology – General guidance for enumeration of presumptive Escherichia coli – most probable number technique.**

Price Code: Gr 4

7 pages

Identical to ISO 7251

Gives general guidance for the enumeration of presumptive Escherichia coli products intended for human consumption or feeding of animals, by means of the Liquid-medium culture technique and calculation of the most probable number (MPN) after incubation at 35°C or 37°C, then incubation at 45°C.

**ZWS ISO 7256:2000**

**Sowing equipment**

**Part 1: Single seed drills (precision drills)**

Price Code: Gr 5

14 pages

Identical to ISO 7256 part 1 1984

Specifies test methods for single seed drills (precision drills)

**Part 2: Seed drills for sowing in lines**

Price Code: Gr 4

12 pages

Identical to ISO 7256 part 2 1984

Specifies a test method for seed drills for sowing in lines, including seed drills attached to a basic machine.

**ZWS ISO 7302:2003**

**Cereals and cereal products – Determination of total fat content**

Price Code: Gr 2

3 pages

Identical to ISO 7302: 1982

Specifies a method for the determination of the total fat content of cereals and cereal products intended for human consumption, including baked products and pasta.

**ZWS ISO 7328:2009**

**Milk based edible ices and ice mixes – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr 5

15 pages

Identical to ISO 7328:1999

Specifies the reference method for the determination of the fat content of most milk based edible ices and ice mixes.

**ZWS ISO 7439:2011**

**Copper-bearing contraceptive intrauterine devices – Requirements and tests**

Price Code:

Gr. 4

11 pages

Identical to ISO 7439:2011

Specifies requirements and tests for single-use, copper-bearing contraceptive intrauterine devices (IUDs) and their insertion instruments.

**ZWS ISO 7447:1998**

**Fruit and vegetable products – Determination of tin content**

Price Code: Gr.

3

4 pages

Identical to ISO 7447:1998

Specifies a method for the determination of the tin content in fruit and vegetable products.

**ZWS ISO 7458:2000**  
**Glass containers – Internal pressure resistance**

Price Code: Gr 4  
2 pages  
Identical to ISO 7458: 1984

Specifies two test methods for the internal pressure resistance of glass containers.

**ZWS ISO 7513:2003**  
**Instant tea in solid form – Determination of moisture content (loss in mass at 103°C)**

Price Code: Gr 2  
2 pages  
Identical to ISO 7513:1990

Specifies a method for the determination of the moisture content of instant tea in solid form as received (loss in mass at 103°C).

**ZWS ISO 7514:2003**  
**Instant tea in solid form – Determination of total ash**

Price Code: Gr 2  
2 pages  
Identical to ISO 7514:1990

Specifies a method for the determination of the total ash of instant tea in solid form.

**ZWS ISO 7516:2003**  
**Instant tea in solid form – Sampling**

Price Code: 4  
4 pages  
Identical to ISO 7516:1984

Specifies method of sampling instant tea in solid form . It applies to sampling from containers of all sizes.

**ZWS ISO 7535:1984**  
**Surface active agents — Detergents for domestic machine dishwashing — Guide for comparative testing of performance**

Price Code: Gr. 4  
9 pages  
Identical to ISO 7535:1984

This International Standard establishes guidelines for carrying out comparative tests on machine dishwashing products solid or liquid, in an attempt to reflect realistically the performance of products likely to be used by consumers. It lists and defines the performance characteristics considered; it gives details of the variables to be taken into account, indicates their significance and provides a basis for designing adequate comparative test methods.

**ZWS ISO 7708 :1999**  
**Air quality – particle size fraction definitions for health related sampling**

Price Code: Gr 4  
9 pages  
Identical to ISO 7708:1995

Defines sampling conventions for particle size fractions for use in assessing possible health effects of airborne particles in the workplace and ambient environment.

**ZWS ISO 7812: Part 1:2017**  
**Identification cards – Identification of issuers**  
**Part 1: Numbering system**

Price Code: Gr 5  
7 pages  
Identical to ISO 7812-1:2017

This document specifies a numbering system for the identification of the card issuers, the format of the issuer identification number (IIN) and the primary account number (PAN).

**ZWS ISO 7812: Part 2:2017**  
**Identification cards – Identification of issuers**  
**Part 2:2014: Application and registration procedures**

Price Code: Gr. 6  
13 pages  
Identical to ISO 7812-2:2017

This document specifies the application and registration procedures for Issuer Identification Numbers (IINs) issued in accordance with ISO/IEC 7812 1.

**ZWS ISO 7857:1999**  
**Intra-uterine devices**  
**Part 1: Determination of breaking force**

Price Code: Gr 1  
1 page  
Identical to ISO 7857 Part 1 1983

Specifies a method for the determination of the breaking force if intra-uterine devices (IUDs) with or without thread.

**Part 3: Packaging and labeling**

Price Code: Gr 1  
2 pages  
Identical to ISO 7857: Part 3 1983

Specifies requirements for the packaging and labeling of intra-uterine devices (IUDs).

**ZWS ISO 7864:2004**  
**Sterile hypodermic needles for single use**

Price Code: Gr 5  
11 pages  
Identical to ISO 8786:1993

Specifies requirements for sterile hypodermic needles for single use of normal diameters 0.3mm and 1.2mm.

**ZWS ISO 7886:2005**  
**Sterile hypodermic syringes for single use**  
**Part 1:Syringes for manual use**

Price Code: Gr 5  
23 pages  
Identical to ISO 7886: Part 1 1983

Specifies requirements for sterile single use hypodermic syringes made of plastic materials and intended for the aspiration of fluids immediately after filling.

**Part 2: Syringes for use with power driven syringe pumps**

Price Code: Gr 5  
14 pages  
Identical to ISO 7886:Part 2 1996

Specifies requirements for sterile single use hypodermic syringes of nominal capacity 5ml and above, made of plastics materials intended for use with power-driven syringe pump.

**Part 3: Auto-disable syringes for fixed-dose immunization**

Price Code: Gr 5  
13 pages  
Identical to ISO 7886: Part 3 2005

Specifies the properties and performance of sterile single-use hypodermic syringes with or without needle, made of plastic materials and stainless steel and intended for the aspiration of vaccines or for the injection of vaccines immediately after filling.

**Part 4:2011 Sterile hypodermic syringes for single use – Syringes with re-use prevention failure**

Price Code: Gr.4  
12 pages  
Identical to ISO 7886.4:2006

Specifies requirements for sterile single-use hypodermic syringes made of plastics material with or without needle and intended for the aspiration of fluids or for the injection of fluids immediately after filling and of design such that the syringe can be rendered unusable after use.

**ZWS ISO 7889:2005****Yogurt – Enumeration of characteristic microorganisms colony-count technique at 37°C**

Price Code: Gr 5  
11 pages  
Identical to ISO 7889:2003

Specifies a method for the enumeration of characteristic microorganisms in yogurt by means of the colony-count technique at 37°C.

**ZWS ISO 7934:2000****Stationary source emissions – Determination of the mass concentration of sulphur dioxide - Hydrogen peroxide/barium perchlorate/Thorin method**

Price Code: Gr 4  
6 pages  
Identical to ISO 7934:1989

Specifies a hydrogen peroxide/barium perchlorate/Thorine method for the determination of the mass concentration of dioxide emitted from combustion facilities and technical processes with negligible amount of sulphur acid.

**ZWS ISO 7935:2000****Stationary source emissions – Determination of the mass concentration of sulphur dioxide – Performance characteristics of automated measuring methods.**

Price Code: Gr 4  
11 pages  
Identical to ISO 7935:1992

Specifies a complete set of values of performance characteristics for automated measuring systems for the continuous measurement of the mass concentrations of sulphur dioxide in stationary source emissions.

**ZWS ISO 7954:2005****Microbiology – General guidance of enumeration of yeasts and moulds – Colony-count technique at 30°C**

Price Code: Gr 3  
3 pages

Gives general guidance for the enumeration of viable yeasts and moulds in products intended for human consumption or feeding of animals by means of the colony count technique at 25°C.

**ZWS ISO 7965****Packaging – sacks – drop test****Part 1:1999 Paper sacks**

Price Code: Gr 4  
8 pages  
Identical to ISO 7965:1984

Specifies a method vertical impact testing on a filled paper sack by dropping.

**Part 2: 1996 Sacks made from thermoplastic flexible film.**

Price Code: Gr 5  
15 pages  
Identical to ISO 7965: Part 2 1993

Specifies a method of vertical impact testing on a filled sack made from thermoplastic flexible film, by dropping.

**ZWS ISO 7971:1996****Cereals – Determination of bulky density, called “mass per hectoliter” (Reference method)**

Price Code: Gr 4  
11 pages  
Identical to ISO 7971:1986

Specifies the reference method for the determination of the bulky density, called “mass per hectoliter” of cereals.

**ZWS ISO 7996:2000****Ambient air – Determination of the mass concentration of nitrogen oxides – chemiluminescence method**

Price Code: Gr 4  
9 pages  
Identical to ISO 7996:1995

Specifies a chemiluminescence method for the determination of the mass concentration of nitrogen oxides present in ambient air.

**ZWS ISO 8009:2005****Mechanical contraceptives – Reusable natural and silicone rubber contraceptive diaphragms – Requirements and tests.**

Price Code: Gr 6  
26 pages  
Identical to ISO 8009:2005

Specifies the minimum requirements and test method to be used for reusable diaphragms made from natural rubber and silicone rubber and . These are intended for contraceptive use.

**ZWS ISO 8069:2006****Dried milk – Determination of content of lactic acid and lactates.**

Price Code: Gr 5  
13 pages  
Identical to ISO 8069:2005

Specifies an enzymatic method for the determination of the lactic acid and lactates content of all types of dried milk.

**ZWS ISO 8070:2007****Milk and milk products – Determination of calcium, sodium, potassium and magnesium contents – Atomic absorption spectrometric method**

Price Code: Gr 6  
14 pages  
Identical to ISO 8070:2007

Specifies a flame atomic absorption spectrometric method for the determination of calcium, sodium, potassium and magnesium contents in milk and milk products.



**ZWS ISO 8086:2005****Dairy plant – Hygiene conditions – General guidance on inspection and sampling procedures.**

Price Code: Gr 5

9 pages

Identical to ISO 8088:2004

Gives general guidelines for inspection and sampling procedures to be used to check the effectiveness of cleaning and disinfection methods used in dairy plants and receiving stations, including milk collection tankers.

**ZWS ISO 8113:2000****Glass containers – Resistance to vertical load**

Price Code: Gr 2

2 pages

Identical to ISO 8113:1985

Specifies a method of inspection and determination of the resistance of glass containers to external force in the direction of axis. The pass tests are intended especially for containers the resistance of which is specified.

**ZWS ISO 8156:2006****Dried milk and dried milk products – determination of insolubility index.**

Price Code: Gr 4

10 pages

Identical to ISO 8156:2005

Specifies a method of determining the insolubility index, as a means of assessing the solubility of dried whole milk, dried partly skimmed milk and dried skimmed milk, whether non instant or instant.

**ZWS ISO 8157:2015****Fertilizers and soil conditioners - Vocabulary**

Price Code: Gr 6

22 pages

Identical to ISO 8157:2015

Defines terms relating to fertilizers and soil conditioners.

**ZWS ISO 8186:2000****Ambient air – Determination of the mass concentration of carbon monoxide – Gas chromatographic method**

Price Code: Gr 6

8 pages

Identical to ISO 8186:1989

Specifies a gas chromatographic for the determination of the mass concentration of carbon monoxide in ambient air from a variety of sources.

**ZWS ISO 8199:2018****Water quality — General requirements and guidance for microbiological examinations by culture**

Price Code: Gr 6

55 pages

Identical to ISO 8199:2018

This document specifies requirements and gives guidance for performing the manipulations common to each culture technique for the microbiological examination of water, particularly the preparation of samples, culture media, and general apparatus and glassware, unless otherwise required in the specific standard. It also describes the various techniques available for detection and enumeration by culture and the criteria for determining which technique is appropriate. This document is mainly intended for examinations for bacteria, yeasts and

moulds, but some aspects are also applicable to bacteriophages, viruses and parasites. It excludes techniques not based on culturing microorganisms, such as polymerase chain reaction (PCR) methods.

**ZWS ISO 8196:2009****Milk – Definition of the overall accuracy of alternative methods of milk analysis****Part 1: Analytical attributes of alternative methods**

Price Code: Gr.5

13 pages

Identical to ISO 8196.1:2009

Specifies various performance characteristics that constitute and constitute and serve to characterize the overall accuracy of an analytical method. It furthermore establishes general principles for the design of experiments and gives guidelines for the procedures to be used to evaluate these characteristics quantitatively.

**Part 2: Calibration and quality control in the dairy laboratory**

Price Code:

Gr. 6

25 pages

Gives guidelines for the calibration of instruments and quality control procedures for milk analysis in dairy laboratories.

**Part 3: Protocol for the evaluation and validation of alternative quantitative methods of milk analysis**

Price Code: Gr 7

45 pages

Identical to ISO 8196.3:2009

Specifies A protocol for the evaluation and validation of alternative quantitative methods of milk analysis. The protocol is applicable to all milk components including somatic cells.

**ZWS ISO 8214:1985****Surface active agents — Washing powders — Determination of inorganic sulfates — Gravimetric method**

Price Code: Gr. 4

5 pages

Identical to ISO 8214:1985

This International Standard specifies a gravimetric method for the determination of inorganic sulfates content of all types of commercial washing powders, without interference from other compounds usually present.

**ZWS ISO 8215:1985****Surface active agents — Washing powders — Determination of total silica content — Gravimetric method**

Price Code: Gr. 4

4 pages

Identical to ISO 8215:1985

This International Standard specifies a gravimetric method for the determination of total silica content of all types of commercial washing powders, except those which contain acid insoluble substances other than silica.

**ZWS ISO 8260:2008****Milk and milk products – determination of organochlorine pesticides and polychlorobiphenyls – method using capillary gas – liquid chromatography with electron capture detection**

Price Code: Gr 5

14 pages

Identical to ISO 8260:2008

Specifies a method for the determination of the contents of individual organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) in milk, evaporated milk, sweetened condensed milk, powdered milk products, butter and butterfat, cheese and other milk products.

**ZWS ISO 8212:1986**  
**Soaps and detergents — Techniques of sampling during Manufacture**

Price Code: Gr 6  
15 pages  
Identical to ISO 8212:1986

This International Standard describes the general techniques of taking and preparing samples of soaps and detergents, for use in conjunction with a previously established sampling plan. This International Standard is only applicable during manufacture of soaps and detergents and only at the time of packaging (small and large packages) and it does not apply when a standard has been elaborated for a specific product. In the case of individual packages, this International Standard defines the techniques of preparing a bulk sample and a final sample.

**ZWS ISO 8317:2015**  
**Child-resistant packaging - Requirements and testing procedures for reclosable packages**

Price Code: Gr.6  
13 pages  
Identical to ISO 8317:2015  
Supersedes ZWS ISO 8317:2003

This International Standard specifies performance requirements and test methods for reclosable packages designated as resistant to opening by children. Acceptance criteria are given for the packages when tested by specified methods. These methods not only provide a measure of the effectiveness of the packaging in restricting access by children, but also cover the accessibility to the contents by adults. This International Standard is applicable to reclosable packages for any product intended to be exposed or removed from the packaging in normal use. This International Standard is intended for type approval only and is not intended for quality assurance purposes.

**ZWS ISO/TR 8357:1998**  
**Road vehicles – Instructions for the implementation of the assignment of world manufacturer identifier (WMI) codes for vehicle identification number (VIN) systems and for world parts manufacturer identifier (WPMI) codes.**

Price Code: Gr 2  
3 pages  
Identical to ISO/TR 8357:1996

Gives instructions relating to the requesting and assignment of the WMI codes and WPMI codes according to ISO 3780 and ISO 4100 and for the maintenance of the master assignment list and files.

**ZWS ISO 8381:2009**  
**Milk – Based infant foods – Determination of fat content – Gravimetric method (Reference method)**

Price Code: Gr 5  
15 pages  
Identical to ISO 8381:2008

Specifies the reference method for the determination of the fat content of milk based infant foods.

**ZWS ISO 8518:200**  
**Workplace air – Determination of particulate lead and lead compounds – Flame atomic absorption spectrometric method.**

Price Code: Gr 4  
10 pages  
Identification to ISO 8518:1990

Specifies a flame atomic absorption spectrometric method for the determination of the time weighted average mass concentration of particular lead and lead compounds in workplace air.

**ZWS ISO 8537:2016**  
**Sterile single use syringes , with or without needle for insulin.**

Price Code: Gr 7  
19 pages  
Identical to ISO 8537:2016

**ZWS ISO 8583:2023**  
**Financial-transaction-card-originated messages - Interchange message specifications**

Price Code: Gr 6  
19 pages  
Identical to ISO 8583:2023  
Replaces ISO 8583-1:2003, ISO 8583-2:1998 and ISO 8583-3:2003

This document specifies a common interface by which financial-transaction-card-originated messages can be interchanged between acquirers and card issuers. It specifies message structure and format, including normalized data types. Message, field, value definitions and supporting information are provided by the ISO 8583 maintenance agency (MA). Contact and web page information for the ISO 8583 MA can be found at: [https://www.iso.org/maintenance\\_agencies.html](https://www.iso.org/maintenance_agencies.html). The method by which messages are transported or settlement takes place is not within the scope of this document.

**NOTE:** With the proliferation of technology available to financial institutions to offer services to customers, a range of tokens now exist for identifying account relationships (e.g. financial transaction cards). In order to maintain clarity, this document will continue to use card terminology that applies to tokens and cards, unless the element is specific to tokens or cards, in which case it will be identified as such. However, the actual token numeric issued by a financial institution can be different from the associated card numeric.

**ZWS ISO 8601: Part 1: 2019**  
**Data elements and interchange formats – Information interchange – Representation of dates and times: Basic rules**

Price Code: Gr.7  
35 pages  
Identical to ISO 8601: Part 1: 2019

This document specifies representations of dates of the Gregorian calendar and times based on the 24-hour clock, as well as composite elements of them, as character strings for use in information interchange. It is also applicable for representing times and time shifts based on Coordinated Universal Time (UTC). This document excludes the representation of date elements from non-Gregorian calendars or times not from the 24-hour clock. This document does not address character encoding of representations specified in this document..

**ZWS ISO 8611:2000**  
**General – purpose flat pallet for through transit of goods – Test methods.**

Price Code: Gr 6  
17 pages  
Identical to ISO 8611:1991

Specifies test methods for general – purpose flat pallets.

**ZWS ISO 8672:2000****Air quality – Determination of the number concentration of airborne inorganic fibres by phase contrast optical microscopy – Membrane filter method**

Price Code: Gr 7

25 pages

Identical to ISO 8672:1993

Specifies the determination of the number of airborne inorganic fibres by phase contrast optical microscopy using the membrane filter method.

**ZWS ISO 8756:2000****Air quality – Handling of temperature, pressure and humidity data**

Price Code: Gr 2

4 pages

Identical to ISO 8756:1994

Describes procedures for adjusting air quality measurements for changes in temperature, pressure and humidity during the sampling.

**ZWS ISO 8760:2000****Workplace air – Determination of mass concentration of carbon monoxide – Method using detector tubes for short term sampling with direct indication.**

Price Code: Gr 4

6 pages

Identical to ISO 8756:1990

Specifies a method for the determination of the mass concentration of carbon monoxide present in the air at work places.

**ZWS ISO 8761:2000****Workplace air – Determination of mass concentration of nitrogen dioxide – Method using detector tubes for short-term sampling with direct indication.**

Price Code: Gr 4

8 pages

Identical to ISO 8761:1989

Specifies a method for the determination of the mass concentration of nitrogen dioxide present in the air at work places.

**ZWS ISO 8762:2000****Workplace air – Determination of vinyl chloride – Charcoal tube.**

Price Code: Gr 4

9 pages

Identical to ISO 8762:1988

Specifies a charcoal tube/gas chromatographic method for the determination of the vinyl chloride monomer concentration in workplace air.

**ZWS ISO 8791:****Paper and board – Determination of roughness/smoothness (air leak methods)****Part 2:1999: Bendtsen method**

Price Code: Gr 4

8 pages

Identical to ISO 8791: Part 2 1990

Specifies a method for the determination of the toughness of paper and board using the Bendtsen apparatus.

**Part 3:1999: Sheffield method**

Price Code: Gr 4

9 pages

Identical to ISO 8791:Part 3:1990

Specifies a method for the determination of the roughness of paper and board using the Sheffield apparatus.

**Part 4:1999:Print-surf method**

Price Code: Gr 4

12 pages

Specifies a method of determining the roughness of paper and board using the print- surf apparatus.

**ZWS ISO 8870:2009****Milk and milk based products – Detection of thermonuclease produced by coagulase – Positive staphylococci**

Price Code: Gr 3

7 pages

Identical to ISO 8870:2006

Specifies a method for the detection of heat-stable DNase (thermonuclease) produced by coagulase-positive staphylococci in milk and milk-based products.

**ZWS ISO 8967:2006****Dried milk and dried milk products – determination of bulk density**

Price Code: Gr 4

6 pages

Identical to ISO 8967:2005

Specifies a method for the determination of the bulk density of whole milk, dried partly skimmed milk and dried skimmed milk as defined in FAO/WHO standard A - 5<sup>1)</sup>, whether non instant or instant.

**ZWS ISO 8968.4:2016****Milk and milk products – Determination of nitrogen content. Part 4: Determination of protein and non-protein nitrogen content and true protein content calculation (Reference method)**

Price Code: Gr. 4

11 pages

Identical to ISO 8968.4/IDF20-4:2016

This standard specifies a method for the direct and indirect determination of the protein nitrogen content of liquid, whole or skimmed milk

**ZWS ISO 9000:2015****Quality management systems - Fundamentals and vocabulary**

Price Code: Gr.10

58 pages

Identical to ISO 9000:2015

Replaces ZWS ISO 9000:2006

Describes fundamental concepts and principles of quality management which are universally applicable to organizations seeking sustained success.

**ZWS ISO 9001:2015****Quality management systems – Requirements**

Price Code: Gr.10

35 pages

Replaces ZWS ISO 9001:2008

Identical to ISO 9001:2015

Specifies requirements for quality management systems.

**ZWS ISO 9002:2016**  
**Quality management systems – Guidelines for the Application of ISO 9001:2015**

Price Code: Gr. 10  
50 pages  
Identical to ISO 9002:2016

This standard provides guidance on the intent of the requirements in ISO 9001:2015, with examples of possible steps an organization can take to meet the requirements.

**ZWS ISO 9004:2018**  
**Quality management - Quality of an organization – Guidance to achieve sustained success**

Price Code: Gr.10  
60 pages  
Replaces ZWS ISO 9004-1  
Identical to ISO 9004:2018

Provides guidelines for enhancing an organization's ability to achieve sustained success. This guidance is consistent with the quality management principles given in ISO 9001:2015. This document provides a self-assessment tool to review the extent to which the organization has adopted the concepts in this document.

**ZWS ISO 9096:2000**  
**Stationary source emissions – Determination of concentration and mass flow rate of particulate material in gas carrying ducts – Manual gravimetric method.**

Price Code: Gr. 7  
30 pages  
Identical to ISO 9096:1992

Specifies a manual gravimetric method for the measurement of the concentration and mass flow rate of particulate matter in a moving gas stream in confined spaces as ducts, chimneys and flues.

**ZWS ISO 9227:2022**  
**Corrosion tests in artificial atmospheres – Salt sprays tests**

Price Code: Gr. 6  
22 pages  
Identical to ISO 9227:2022  
Supersedes ZWS ISO 9227:2017

This document specifies the apparatus, the reagents and the procedure to be used in conducting the neutral salt spray (NSS), acetic acid salt spray (AASS) and copper-accelerated acetic acid salt spray (CASS) tests for assessment of the corrosion resistance of metallic materials, with or without permanent or temporary corrosion protection. It also describes the method employed to evaluate the corrosivity of the test cabinet environment. It does not specify the dimensions or types of test specimens, the exposure period to be used for a particular product, or the interpretation of results. Such details are provided in the appropriate product specifications. The salt spray tests are particularly useful for detecting discontinuities, such as pores and other defects, in certain metallic, organic, anodic oxide and conversion coatings.

The NSS test is particularly applicable to:  
—metals and their alloys;  
—metallic coatings (anodic and cathodic);  
—conversion coatings;  
—anodic oxide coatings;  
—organic coatings on metallic materials.

The AASS test is especially useful for testing decorative coatings of copper + nickel + chromium, or nickel + chromium. It has also been found suitable for testing anodic and organic coatings on aluminium. The CASS test is useful for testing decorative coatings of copper + nickel + chromium, or nickel + chromium. It has also been found suitable for testing anodic and organic coatings on aluminium. The salt spray methods are all suitable for checking that the quality of a metallic material, with or without corrosion protection, is maintained.

They are not intended to be used for comparative testing as a means of ranking different materials relative to each other with respect to corrosion resistance or as means of predicting long-term corrosion resistance of the tested material.

**ZWS ISO 9231:2008**  
**Milk and milk products determination of benzoic and sorbic acid contents**

Price Code: Gr. 5  
9 pages  
Identical to ISO 9231:2008

Specifies a method for the determination of the benzoic and sorbic acid contents in milk and milk. The method is applicable to milk, dried milk, yogurt and other fermented milks and cheese and processed cheese and is suitable for measuring the contents of both compounds at levels of more than 5 mg/kg.

**ZWS ISO 9233**  
**Cheese, cheese rind and processed cheese – Determination of natamycin content**

**Part 1:2007 Molecular absorption spectrometric method for cheese rind**

Price Code: Gr.5  
12 pages  
Identical to ISO 9233.1:2007

Specifies a method for the determination in cheese rind of natamycin mass fraction of above 0,5 mg/kg and surface = area related natamycin mass of above 0.03 mg/dm<sup>2</sup>, cheese rind and processed cheese of above 0,5 mg/kg and of the surface-area –related natamycin mass in cheese rind of above 0,03mg/dm

**Part 2: High –performance liquid chromatographic method for cheese, cheese rind and processed cheese**

Price Code: Gr. 5  
12 pages  
Identical to ISO 9233.2:2007

Specifies a method for the determination of natamycin mass fraction in cheese, cheese rind and processed cheese of above 0,5 mg/kg and of the surface-area –related natamycin mass in cheese rind of above 0,03mg/dm

**ZWS ISO/TR 9310:1999**  
**Road vehicles – Smoke measurement of compression – Ignition (diesel) engines – Survey of short in-service tests.**

Price Code: Gr. 6  
18 pages  
Identical to ISO/TR 9310:1987

Describes and assesses the different simplified short tests for the determination of the exhaust smoke emission of diesel engines of vehicles in service.

**ZWS ISO 9359:2000**  
**Air quality – Stratified sampling method for assessment of ambient air quality**

Price Code: Gr 4  
12 pages  
Identical to ISO 9359:1989

Specifies a method for the assessment of certain aspect of ambient air quality in terms of percentiles and means using the principles of stratified sampling.

**ZWS ISO 9459:1999****Solar heating – Domestic water heating systems  
Part 2: Outdoor test methods for system performance characterization and yearly performance prediction of solar systems**

Price Code: Gr 8  
61 pages  
Identical to ISO 9459:Part 2:1995

Establishes test procedures for characterizing the performance of solar domestic water heating system with in-tank auxiliary boosting, and for predicting annual performance in any given climatic condition.

**Part 3: Performance test for solar plus supplementary systems**

Price Code: Gr 7  
61 pages  
Identical to ISO 9459:Part 3:1997

Establishes test procedures for characterizing the performance of solar domestic water heating system with in-tank auxiliary boosting, and for predicting annual performance in any given climatic condition.

**ZWS ISO 9362:2022****Banking – Banking telecommunication messages – Business identifier code (BIC)**

Price Code: Gr 4  
6 pages  
Identical to ISO 9362:2022

This document specifies the elements and structure of a universal identifier code, the business identifier code (BIC), for financial and non-financial institutions, for which such an international identifier is required to facilitate automated processing of information for financial services. The BIC is used for addressing messages, routing business transactions and identifying business parties. This document applies to organizations and excludes individual persons.

**ZWS ISO 9486:2000****Workplace air – Determination of vaporous chlorinated hydrocarbons – Charcoal tube/solvent desorption/gas chromatographic method.**

Price Code: Gr. 4  
12 pages  
Identical to ISO9486:1991

Specifies a charcoal tube or gas chromatographic method for the determination of the concentration of vaporous chlorinated hydrocarbons in workplace air.

**ZWS ISO 9487:2000****Workplace air – Determination of vaporous aromatic hydrocarbons – Charcoal tube/solvent desorption/gas chromatographic method**

Price Code: Gr. 4  
12 pages  
Identical to ISO 9487:1991

Specifies charcoal tube or gas chromatographic method for the determination of the concentration of vaporous aromatic hydrocarbons in workplace air.

**ZWS ISO 9622:2013****Milk and liquid milk products – Guidelines for the application of mid-infrared spectrometry**

Price Code: Gr. 6  
16 pages  
Identical to ISO 9622:2013

Gives guidelines for the quantitative compositional analysis of milk and liquid milk products such as raw milk, processed milk, cream and whey by measurement of the absorption of mid-infrared radiation.

**ZWS ISO 9626:2016****Stainless steel needle tubing for manufacture of medical devices – Requirements and test methods**

Price Code: Gr. 6  
22 pages  
Identical to ISO 9626:2016

Provides requirements and test methods for the tubes manufactured for the needles as component used in medical devices. Specifies the dimensions and mechanical properties of steel tubing of designated metric sizes 3.4 mm (10 Gauge) to 0,18mm (34 Gauge).

**ZWS ISO 9712:2013****Non - destructive testing – Qualification and certification of NDT personnel**

Price Code: Gr.7  
37 pages  
Identical to ISO 9712:2012

Specifies requirements for principles for the qualification and certification of personnel who perform industrial non-destructive testing (NDT).

**ZWS ISO 9768:2003****Tea – determination of water extract**

Price Code: Gr. 2  
3 pages

Specifies a method for the determination of water extract from tea.

**ZWS ISO/IEC 9798:2024****SIT Security techniques- Entity authentication  
Part 3: Mechanisms using digital signature techniques**

Price Code: Gr. 6  
28 pages

This document specifies entity authentication mechanisms using digital signatures based on asymmetric techniques. A digital signature is used to verify the identity of an entity. Ten mechanisms are specified in this document. The first five mechanisms do not involve an on-line trusted third party and the last five make use of on-line trusted third parties. In both of these two categories, two mechanisms achieve unilateral authentication and the remaining three achieve mutual authentication.

**Annex A** defines the object identifiers assigned to the entity authentication mechanisms specified in this document.

**ZWS ISO 9835:2000****Ambient air – Determination of a black smoke index.**

Price Code: Gr. 4  
9 pages  
Identical to ISO 9835:1993

Specifies a method for measuring the black smoke index of an ambient air sample.

**ZWS ISO 9852:2007****Unplasticized poly(vinyl chloride) (PVC-U) pipes — Dichloromethane resistance at specified temperature (DCMT) — Test method**

Price Code: Gr. 5  
6 pages  
Identical to ISO 9852:2007

This International Standard specifies a method for determining the resistance of unplasticized poly (vinyl chloride) (PVC U) pipes to dichloromethane at a specified temperature (DCMT). It is applicable to all PVC U pipes, irrespective of their intended use. The method can be used as a rapid means of quality control during manufacture.

**ZWS ISO 9855:2000****Ambient air – Determination of the particular lead content of aerosols collected on filters – Atomic absorption spectrometric method**

Price Code: Gr. 4  
7 pages  
Identical to ISO 9855:1993

Specifies a method based on acid digestion and atomic absorption spectrometry for the chemical analysis of lead samples collected on filters from ambient air.

**ZWS ISO 9874:2009****Milk determination of total phosphorus content – Method using molecular absorption spectrometry**

Price Code: Gr. 3  
7 pages  
Identical to ISO 9874:2006

Specifies a molecular absorption spectrometric method for the determination of the total phosphorus content of milk.

**ZWS ISO 9884:2003****Tea sacks****Part 1: Reference sack for palletized and containerized transport of tea**

Price Code: Gr. 4  
6 pages  
Identical to ISO 9884:2003

Specifies the materials, construction and dimensions of a reference sack suitable for the palletized and containerized transport of tea.

**Part 2: Performance specification for sacks for palletized and containerized transport of tea.**

Price Code: Gr. 4  
12 pages  
Identical to ISO 9884-1:1999

Specifies requirements and tests to determine the suitability of sack for the palletized and containerized transport of tea on standard pallets of standard unit load size in standard container.

**ZWS ISO 9934:2016****Non-destructive testing – magnetic particle testing****Part 1: General principles**

Price Code: Gr. 5  
14 pages  
Identical to ISO 9934:2013

Specifies the surface preparation of the part to be tested, magnetization techniques requirements and application of the detection media and the recording and interpretation of results..

**Part 2: Detection media**

Price Code: Gr. 7  
21 pages

Specifies the significant properties of magnetic particle testing products (including magnetic ink, powder, carrier liquid, contrast aid paints) and the methods for checking their properties.

**Part 3: Equipment**

Price Code: Gr. 5  
12 pages

Specifies the properties to be provided by the equipment supplier, minimum requirements for application and the method of measuring certain parameters.

**ZWS ISO 10001:2018****Quality management – Customer satisfaction – Guidelines for codes of conduct for organizations**

Price Code: Gr. 10  
20 pages  
Identical to ISO 10001:2018

Provides guidance for planning, designing, developing, implementing, maintaining and improving customer satisfaction codes of conduct. It is applicable to product related codes containing promises made to consumers by an organization concerning its behavior. Such promises and related provisions are aimed at enhanced customer satisfaction.

**ZWS ISO 10002:2018****Quality management – Customer satisfaction – Guidelines for complaints handling in organizations.**

Price Code: Gr. 10  
29 pages  
Identical to ISO 10002:2018  
Supersedes ZWS ISO 10002:2004

Provides guidance on the process of complaints handling related to products within an organization, including planning, design, operation, maintenance and improvement.

**ZWS ISO 10003:2018****Quality management – Customer satisfaction – Guidelines for dispute resolution external to organizations**

Price Code: Gr. 10  
35 pages  
Identical to ISO 10003:2018  
Supersedes ZWS ISO 10003:2009

Provides guidance for an organization to plan, design, develop, operate, maintain and improve an effective and efficient dispute-resolution process for complaints that have been resolved by the organization.

**ZWS ISO 10004:2018****Quality management – Customer satisfaction – Guidelines for monitoring and measuring**

Price Code: Gr. 10  
35 pages  
Identical to ISO 10004:2018  
Replaces ZWS ISO 10004:2012

Provides guidance in defining and implementing processes to monitor and measure customer satisfaction. Intended for use by organizations regardless of type, size or product provided. The focus of this international standard is on customers external to the organization.

**ZWS ISO 10005:2018****Quality management – Guidelines for quality plans**

Price Code: Gr. 10  
28 pages  
Identical to ISO 10005:2018  
Replaces ZWS ISO 10005:2005

Contains guidelines to assist suppliers in the preparation, review acceptance and revision of quality plans.

**ZWS ISO 10006:2017**  
**Quality Management - Guidelines for quality management in projects**

Price Code: Gr. 10  
34 pages  
Supersedes ZWS ISO 10006:2003

This document gives guidelines for the application quality management in projects. It is applicable to organizations working on projects of varying complexity, small or large, of short or long duration, being an individual project to being part of a programme or portfolio of projects, in different environments, and irrespective of the kind of product/service or process involved, with the intention of satisfying project interested parties by introducing quality management in projects.

**ZWS ISO 10007:2017**  
**Quality management systems – Guidelines for configuration management**

Price Code: Gr. 5  
12 pages  
Identical to ISO 10007:2017  
Supersedes ZWS 10007:2003

Gives guidance on the use of configuration a management within an organization applicable to the support of products and services from concept to disposal.

**ZWS ISO 10008:2022**  
**Quality management – Customer satisfaction – Guidance for business-to-consumer electronic commerce transactions**

PriceCode: Gr. 8  
34 pages  
Identical to ISO 10008:2022  
Supersedes ZWS 10008:2013

This document gives guidance on planning, designing, developing, implementing, maintaining and improving an effective and efficient business-to-consumer electronic commerce transaction (B2C ECT) system within an organization. It is applicable to any organization engaged in, or planning to be engaged in, a B2C ECT, regardless of size, type and activity. The focus of this document is on organizations that directly offer and provide products and services to consumers. This document aims to enable organizations to set up a fair, effective, efficient, transparent and secure B2C ECT system, in order to enhance consumers' confidence in B2C ECTs and increase the satisfaction of consumers. It is aimed at B2C ECTs concerning consumers as a subset of customers. The guidance given in this document can complement an organization's quality management system.

**ZWS ISO 10010:2022**  
**Quality management - Guidance to understand, evaluate and improve organizational quality culture**

PriceCode: Gr. 6  
19 pages  
Identical to ISO 10010:2022

This document gives guidance on the evaluation, development and improvement of organizational quality culture to help an organization to achieve sustained success. This document takes into account the fundamental concepts and quality management principles, with specific focus on people engagement and leadership. The recommendations in this document are generic and are intended to be applicable to any organization, regardless of its size, industry, location, maturity or the products and services it provides.

**ZWS ISO 10012:2003**  
**Measurement management systems – Requirements for measurement processes and measuring equipment.**

Price Code: Gr. 6  
19 pages  
Identical to ISO 10012:2003

Specifies generic requirements and provides guidance for the management of measurement processes and metrological confirmation of measuring equipment used in support and demonstrate compliance with metrological requirements.

**ZWS ISO 10013:2021**  
**Quality management systems – Guidance for documented information**

Price Code: Gr. 6  
14 pages  
Identical to ISO 10013:2001  
Supersedes ZWS ISO 10013:2012

Provides guidelines for the development and maintenance of the documented information necessary to support an effective quality management system, tailored to the specific needs of the organization. This document can also be used to support other management systems, eg environmental or occupational health and safety management systems.

**ZWS ISO 10014:2009**  
**Quality management – Guidelines for realizing financial and economic benefits**

Price Code: Gr.7  
25 pages  
Identical to ISO 10014:1998

Provides guidelines for realizing financial and economic benefits from the application of the ISO 9000 quality management principles.

**ZWS ISO/TR 10015:2019**  
**Quality management – Guidance for competence management and people development**

Price Code: Gr 5  
8 pages  
Identical to ISO 10015:2019  
Supersedes ZWS ISO/TR 10015:2000

Gives guidelines for an organization to establish, implement, maintain and improve systems for competence management and people development to positively affect outcomes related to the conformity of products and services and the needs and expectations of relevant interested parties.

**ZWS ISO/ TR 10017:2003**  
**Guidance on statistical techniques for ISO 9001:2000**

Price Code: Gr.7  
26 pages  
Identical to ISO/ TR 10017:2003

Provides guidance of the selection of appropriate statistical techniques that may be useful to an organization in developing, implementing or maintaining a quality system in compliance with ISO 9001.

**ZWS ISO 10018:2020**  
**Quality Management – Guidance on people engagements**

Price Code: Gr. 6  
12 pages  
Identical to ISO 10018:2020  
Supersedes ZWS ISO 10018:2012

Provides guidance on engaging people in an organization's quality management system and on enhancing their involvement and competence within it. This international standard is applicable to any organization, regardless of size, type or activity.

**ZWS ISO/TR 10019:2005**  
**Guidelines for the selection of quality management systems consultants and use of their services**

PriceCode: Gr. 5  
13 pages  
Identical to ISO 10019:2005

Provides guidance for the selection of quality management system consultants and the use of their services.

**ZWS ISO TS 10020:2022**  
**Quality management Systems - Organizational change management - Processes**

PriceCode: Gr. 6  
41 pages  
Identical to ISO TS 10020:2022

This document specifies processes that can be used to govern, manage and implement organizational change management (OCM) for organizations, projects or smaller activities. It comprises generic process descriptions that describe the OCM processes. Supporting diagrams describing the processes are also provided. This document is applicable, but not limited, to change sponsors, change agents, change team members and project managers, particularly those responsible for governing, managing and implementing organizational change.

**ZWS ISO 10272-1:2017**  
**Microbiology of the food chain – Horizontal method for the detection and enumeration of Listeria monocytogenes and of campylobacter SPP**

**Part 1: Detection method**  
Price Code: Gr.7  
21 pages  
Identical to ISO 10272-1:2017

Specifies a horizontal method for the detection by enrichment or direct plating of campylobacter spp.

**ZWS ISO 10302:2011**  
**Acoustics – Measurement of airborne noise emitted and structure-borne vibration induced by small air-moving devices.**

**Part 1: Airborne noise measurements**  
Price Code: Gr 7  
37 pages  
Identical to ISO 10302.1:2011

Specifies methods for measuring the airborne noise emitted by small air-moving devices (AMD), such as those for cooling electronic, electrical, and mechanical equipment where the sound power level of the AMD is of interest.

**Part 2: Structure-borne vibration measurement**

Price Code: Gr 6  
25pages  
Identical to ISO 10302.2:2011

Covers vibration levels from small air-moving devices with mounting footprints of less than 0.48m x 0,90 m for the full size test plenum defined in part 1 and less than 0.18m x 0.3m for the half-size plenum.

**ZWS ISO 10313:2000**  
**Ambient air – Determination of the mass concentration of ozone – chemilumescence method.**

Price Code: Gr 4  
8 pages  
Identical to ISO 10396:1993

Specifies a chemiluminiscene method for the determination of the mass concentration of ozone in ambient air.

**ZWS ISO 10396:2000**  
**Stationary source emissions – Sampling for the automated determination of gas concentrations.**

Price Code: Gr 6  
15 pages  
Identical to ISO 10396:1993

Specifies procedures and equipment that will permit, within certain limits, representative sampling for the automated determination of gas concentrations of effluent gas streams.

**ZWS ISO 10397:2000**  
**Stationery souce emissions – Determination of asbestos plant emission method by fibre count measurement.**

Price Code: Gr 6  
19 pages  
Identical to ISO 10397:2000

Specifies a method, using a fibre count technique, for the assessment of fibre concentrations in flowing gas streams in ducts, chimneys or flues from industrial process using asbestos.

**ZWS ISO 10555:2005**  
**Intravascular catheters – Sterile and single use catheters**  
**Part 1: General requirements**

Price Code: Gr 4  
9 pages  
Identical to ISO 10555-1:1995

Specifies general requirements for intravascular catheters, supplied in the sterile condition and intended for single use, for any application.

**Part 2: Angiographic catheters**

Price Code: Gr 3  
5 pages  
Identical to 10555-2:1996

Specifies requirements for angiographic catheters supplied in the sterile condition, and intended for single use.

**Part 3: Central venous catheters**

Price Code: Gr 3  
5 pages  
Identical to ISO 10555-3:1996

Specifies requirements for central venous catheters supplied in the sterile condition and intended for single use.



**Part 4: Balloon dilatation catheters**

Price Code: Gr. 4  
 6 pages  
 Identical to ISO 10555-5:1996

Specifies requirements for balloon dilatation catheters in the sterile condition and intended for single use.

**Part 5: Over-needle peripheral catheters**

Price Code: Gr 4  
 Identical to ISO 10555.5:2013  
 10 pages  
 Replaces ISO 10555-5:1996

Specifies requirements for over the needle peripheral intravascular catheters, intended for accessing the peripheral vascular system, supplied in the sterile condition and intended for single use.

**Part 6:2015 Subcutaneous implanted ports**

Price Code: Gr 6  
 Identical to ISO 10555.6:2015  
 14 pages

Specifies requirements, performance, and user safety issues related to subcutaneous implanted ports and catheters for intravascular long term use supplied in sterile condition and intended for single use.

**ZWS ISO 10667:2020****Assessment service delivery- Procedures and methods to assess people in work and organisational settings****Part 1: Requirements for the client**

Price Code: Gr 7  
 24 pages  
 Identical to ISO 10667-1:2020

Establishes requirements and guidance for clients working with one or more service provider(s) to carry out the assessment of an individual, a group or an organization for work related purposes. The document enables the client to base its decisions on sound assessment results.

**ZWS ISO 10667:2020****Assessment service delivery- Procedures and methods to assess people in work and organisational settings****Part 2: Requirements for service providers**

Price Code: Gr 7  
 24 pages  
 Identical to ISO 10667-2:2020

Establishes requirements and guidance for clients working with one or more service provider(s) to carry out the assessment of an individual, a group or an organization for work related purposes. The document enables the client to base its decisions on sound assessment results.

**ZWS ISO 10668:2010****Brand valuation — Requirements for monetary brand valuation**

Price Code: Gr. 5  
 11 pages  
 Identical to ISO 10668:2010

This International Standard specifies requirements for procedures and methods of monetary brand value measurement. This International Standard specifies a framework for brand valuation, including objectives, bases of valuation, approaches to valuation, methods of valuation and sourcing of quality data and assumptions. It also specifies methods for reporting the results of such valuation.

**ZWS ISO 10727:2003****Tea and instant tea in solid form – Determination of caffeine content – Method using high-performance liquid chromatography.**

Price Code: Gr 4  
 8 pages  
 Identical to ISO 10727:2002

Specifies a method for the determination by high-performance liquid chromatography (HPLC) of the caffeine content of teas and instant teas. Applicable to green tea, black tea and decaffeinated tea products.

**ZWS ISO 10845****Construction Procurement****Part 1: 2010 Processes , Methods and Procedures**

Price Code: Gr.9  
 111 pages  
 Identical to ISO 10845.1:2010

Describes processes,methods and procedures for the establishment within an organization of a procurement system that is fair,equitable,transparent,competitive and cost-effective.

**Part 2: 2011 Formatting and compilation of procurement documentation**

Price Code: Gr. 7  
 41 pages  
 Identical to ISO 10845.2:2011

Establishes in respect of supply ,service and engineering and construction works contracts at both main and subcontract levels.

**Part 3: 2011 Standard conditions of tender**

Price Code:Gr. 7  
 59 pages  
 Identical to ISO 10845.3:2011

Sets out standard conditions of tender which bind the employer and tenderer to behave in a particular manner,establish what a tenderer is required to do in order to submit a compliant tender,make known the evaluation criteria to tenders and establish the manner in which the employer conducts the process of offer and acceptance and provide the necessary feedback to tenderers on the outcomes of the process.

**Part 4: 2011 Standard conditions for the calling for expressions of interest**

Price Code: Gr. 6  
 20 pages  
 Identical to ISO 10845.4:2011

Sets out standard conditions for the calling for expressions of interest which bindthe employer and respondent to behave in a particular manner,establish what is required for a respondent to submit a compliant submission,make known to respondents the evaluation criteria and establish the manner in which the employer conducts the process of calling for expressions of interest.

**Part 5: 2011 Participation of targeted enterprises in contracts**

Price Code: Gr.7  
 48 pages  
 Identical to ISO 10845:2011

Establishes a key performance indicator in the form of a contract participation goal (CPG),relating to the engagement of targeted enterprises on a contract for the provision of goods,services or engineering and construction works.A CPG may be used to measure the outcomes of a contract in relation to the engagement of targeted enterprises or to establish a target level of performance for the contractor to achieve or exceed in the performance of a contract.

**Part 6: 2011 Participation of targeted partners in joint ventures in contracts**

Price Code: Gr. 7  
42 pages  
Identical to ISO 10845.6:2011

Establishes a key performance indicator, in the form of a contract participation goal, relating to the engagement of targeted partners in a joint venture on a contract for the provision of goods, services or engineering and construction works.

**Part 7: 2011 Participation of local enterprises and labour in contracts**

Price Code: Gr. 7  
39 pages  
Identical to ISO 10845.7:2011

Establishes a key performance indicator in the form of a contract participation goal (CPG) relating to the engagement of local enterprises and labour on a contract for the provision of services or engineering and construction works.

**Part 8: 2011 Participation of targeted labour in contracts**

Price Code: Gr. 6  
27 pages  
Identical to ISO 10845.8:2011

Establishes a key performance indicator, in the form of a contract participation goal (CPG), relating to the engagement of targeted labour on a contract for the provision of services or engineering and construction works.

**ZWS ISO 11070:2014  
Sterile single-use intravascular introducers, dilators and guide-wires**

Price Code: Gr. 7  
25 pages  
Identical to ISO 11070:2014

Specifies requirements for introducer needles, introducer catheters, sheath introducers, guidewires and dilators supplied in the sterile condition, and intended for single use in conjunction with intravascular catheters specified in ISO 10555.1.

**ZWS ISO/IEEE 11073: Part 40102:2022  
Health informatics - device interoperability  
Part 40102:2022: Foundational - cybersecurity - capabilities for mitigation**

Price Code: Gr. 7  
20 pages  
Identical to ISO/IEEE 11073-40102:2011

Within the context of secure plug-and-play interoperability, cybersecurity is the process and capability of preventing unauthorized access or modification, misuse, denial of use, or the unauthorized use of information that is stored on, accessed from, or transferred to and from a PHD/PoCD. The capability part of cybersecurity is information security controls related to both digital data and the relationships to safety and usability. For PHDs/PoCDs, this standard defines a security baseline of application layer cybersecurity mitigation techniques for certain use cases or for times when certain criteria are met. This standard provides a scalable information security toolbox appropriate for PHD/PoCD interfaces, which fulfills the intersection of requirements and recommendations from National Institute of Standards and Technology (NIST) and the European Network and Information Security Agency (ENISA). This standard maps to the NIST cybersecurity framework [B15]; IEC TR 80001-2-2 [B8]; and the Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, and Elevation of Privilege (STRIDE) classification scheme. The mitigation techniques are based on the extended CIA triad (Clause 4) and

are described generally to allow manufacturers to determine the most appropriate algorithms and implementations.

**ZWS ISO 11093  
Part 9:2000 Paper and board – Testing of cores part 9: Determination of flat crush resistance.**

Price Code: Gr 1  
2 pages

Specifies a method for determining the maximum flat crush resistance of wound paper and board cores.

**ZWS ISO 11133:2014  
Microbiology of food, animal feed and water – Preparation, Production, storage and performance testing of culture media**

Price Code: Gr 9  
91 pages  
Identical to ISO 11133:2014

Specifies the requirements for the preparation of culture media intended for the microbiological analysis of food, animal feed, and samples from the food or feed production environment as well as all kinds of water intended for consumption or used in food production.

**ZWS ISO 11238:2024  
Health informatics - Identification of medicinal products - Data elements and structures for the unique identification and exchange of regulated information on substances**

Price Code: Gr 8  
61 pages  
Identical to ISO 11238:2024

This document provides an information model to define and identify substances within medicinal products or substances used for medicinal purposes, including dietary supplements, foods and cosmetics. The information model can be used in the human and veterinary domain since the principles are transferrable. Other standards and external terminological resources are referenced that are applicable to this document.

**ZWS ISO 11239:2023  
Health informatics - Identification of medicinal products - Data elements and structures for the unique identification and exchange of regulated information on pharmaceutical dose forms, units of presentation**

Price Code: Gr 7  
29 pages  
Identical to ISO 11239:2023

This document specifies:  
—the data elements, structures and relationships between the data elements required for the exchange of information, which uniquely and with certainty identify pharmaceutical dose forms, units of presentation, routes of administration and packaging items (containers, closures and administration devices) related to medicinal products;  
—a mechanism for the association of translations of a single concept into different languages, which is an integral part of the information exchange;  
—a mechanism for the versioning of the concepts in order to track their evolution;  
—rules to help regional authorities to map existing regional terms to the terms created using this document, in a harmonized and meaningful way.

**ZWS ISO 11286:2003****Tea – Classification of grades by particle size analysis**

Price Code: Gr 3

4 pages

Identical to ISO 10727:2002

Specifies a method for the classification of grades of tea according to an analysis of their particle size. May not be suitable for blends of tea.

**ZWS ISO 11290:2017****Microbiology of the food chain – Horizontal method for the detection and enumeration of Listeria monocytogenes and Listeria SPP****Part 1: Detection method**

Price Code: Gr.7

34 pages

Identical to ISO 11290

Specifies a horizontal method for the detection of L. monocytogenes and the detection of Listeria spp. (including L. monocytogenes).

**Part 2: Enumeration method**

Price Code: Gr. 7

29 pages

Identical to ISO 11290

Specifies a horizontal method for the enumeration of L. mono-cytogenes and the enumeration of Listeria spp. (including L. monocytogenes).

**ZWS ISO 11608:2014****Needle based injection systems for medical use – Requirements and test methods****Part 1: Needle based injection system**

Price Code: Gr 7

40 pages

Identical to ISO 11608.1:2014

Specifies requirements and test methods for needle based injection systems (NISs) intended to be used with needles and with replaceable or non-replaceable containers. Containers covered in this part of ISO 11608 include single and multi-dose syringe-based and cartridge-based systems filled either by the manufacturer or by the end user.

**Part 2: Needles – requirements and test methods.**

Price Code: Gr 4

10 pages

Identical to ISO 11608-2:2000

Specifies requirements and test methods for single-use, double ended, sterile needles for pen-injectors which fulfil the specification of ISO 11608-1.

**Part 3:2012 Finished containers**

Price Code: Gr 4

10 pages

Identical to ISO 11608.3:2012

Specifies the functional and design considerations for containers to be used with needle-based injection systems (NIS) that fulfill the specifications of ISO 11608.1. It is applicable to single and multi-dose containers (either filled by the manufacturer or by the end-user) which can be provided to the end-user integrated in the NIS or assembled with the NIS at the time of use.

**Part 5:2012 Automated functions**

Price Code:

15pages

Identical to ISO 11608.5:2012

Gr. 5

Specifies requirements and test methods for the automated functions of needle-based injection systems with automated functions (NIS-AUTO) for the administration of medicinal products in humans.

**Part 7:2016 Accessibility for persons with visual impairment**

Price

20 pages

Identical to ISO 11608.7:2016

Specifies particular requirements to make needle based drug delivery systems or NIS (needle based injection systems) accessible for persons with visual impairments. It applies to devices intended for patient or caregiver administration of medicinal products to humans.

Code:Gr.6

**ZWS ISO 11615:2017/Amd.1:2022****Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated medicinal product information**

Price Code: Gr 6

78 pages

Identical to ISO 11615:2017

This document establishes definitions and concepts and describes data elements and their structural relationships, which are required for the unique identification and the detailed description of Medicinal Products. Taken together, the standards listed in the Introduction define, characterise and uniquely identify regulated Medicinal Products for human use during their entire life cycle, i.e. from development to authorisation, post-marketing and renewal or withdrawal from the market, where applicable. Furthermore, to support successful information exchange in relation to the unique identification and characterisation of Medicinal Products, the use of other normative IDMP messaging standards is included, which are to be applied in the context of this document.

**ZWS ISO 11616:2017****Health informatics -Identification of medicinal products- Data elements and structures for unique identification and exchange of regulated pharmaceutical product information**

Price Code: Gr 7

34 pages

Identical to ISO 11616:2017

This document is intended to provide specific levels of information relevant to the identification of a Medicinal Product or group of Medicinal Products. It defines the data elements, structures and relationships between data elements that are required for the exchange of regulated information, in order to uniquely identify pharmaceutical products. This identification is to be applied throughout the product lifecycle to support pharmacovigilance, regulatory and other activities worldwide. In addition, this document is essential to ensure that pharmaceutical product information is assembled in a structured format with transmission between a diverse set of stakeholders for both regulatory and clinical (e.g. e-prescribing, clinical decision support) purposes. This ensures interoperability and compatibility for both the sender and the recipient. This document is not intended to be a scientific classification for pharmaceutical products. Rather, it is a formal association of particular data elements categorised in prescribed combinations and uniquely identified when levelling degrees of information are incomplete. This allows for Medicinal Products to be unequivocally identified on a global level. References to other normative IDMP and messaging standards for pharmaceutical product information are included in Clause 2, to be applied in the context of this document.

Medicinal products for veterinary use are out of scope of this document.

**ZWS ISO 11620:2023****Information and documentation – Library performance indicators**

Price Code: Gr 7

138 pages

Identical to ISO 11620:2023

This document specifies the requirements of a performance indicator for libraries and establishes a set of indicators to be used by libraries of all types. It also provides guidance on how to implement performance indicators in libraries where such indicators are not already in use. This document is applicable to all types of libraries in all countries. However, not all performance indicators apply to all libraries. Limitations on the applicability of individual performance indicators are listed in the scope clause of the description of each indicator (see Annex A). This document provides a standardized terminology and concise definitions of the performance indicators. Furthermore, it contains detailed descriptions of the indicators and of the collection and the analysis of data needed. This document is not intended to exclude the use of performance indicators not specified in it.

**ZWS ISO 11697:1995****Bases for design of structures – Loads due to bulk materials**

Price Code: Gr 10

20 pages

Identical to ISO 11697:1995

This International Standard deals with pressure conditions in hoppers, bunkers, bins and Silos constructed using normal structural engineering materials. For the purposes of definition, the term Silo is used throughout this International Standard to represent all forms of storage. The methods given in clause 3 for the determination of loads are intended for use with the practical range of containment structures subject to the following limitations:

filling is a continuous process involving small inertia effects and inconsequential impact loads;

b) the maximum particle size of the ensiled bulk material is not greater than  $0,1R$  ( $R$  = hydraulic radius);

c) where discharge devices are used (e.g. feeders, internal flow tubes, etc.), material flow is effectively continuous and centric within the eccentricity limitation given in e);

d) in bottom-discharging Silos, the bulk material is free-flowing and has a low cohesion [i.e.  $d_a \leq 1,0R$  (see annex A)];

e) the eccentricity  $e$  of the filling or discharge process, relative to the Silo centreline, is less than  $0,25d$  for cylindrical Silos, and less than  $0,25a$  in the case of rectangular Silos;

f) the ratio of height to diameter is not greater than 10; the height is not greater than 100 m and the diameter is not greater than 50 m.

Loads determined using this International Standard Consider

- a defined range of bulk material properties;

- variations in the surface friction conditions;

- the geometry of the structure;

- attachment to or loading by other structures and/or equipment;

- the methods of filling, storage and discharge.

All the above Parameters shall be agreed with the client and written into all contract documents. Design of the Silo shall be checked if any of the above criteria are changed.

**ZWS ISO 11699:2008****Non-Destructive testing – Industrial radiographic film****Part 1: Classification of film systems for industrial radiography**

Price Code: Gr 5

9 pages

Identical to ISO 11699.1:2008

The purpose of the standard is to establish the performance of film systems. It is applicable for the classification of film systems in combination with specified lead screens for industrial radiography.

**Part 2: Control of film processing by means of reference values**

Price Code: Gr 5

9 pages

Identical to ISO 11699.2:1998

Describes a procedure for the control of film processing systems.

**ZWS ISO 11815:2007****Milk – Determination of total milk – clotting activity of Bovine rennets.**

Price Code: Gr 6

11 pages

Identical to ISO 11815:2007

Describes a method for the determination of the total milk clotting activity of bovine rennet containing only chymosin and bovine pepsin as the active coagulating enzymes on a standard milk substrate at pH 6,5.

**ZWS ISO 11816:2013****Milk and milk products – Determination of alkaline phosphatase activity.****Part 1: Fluorimetric method for milk and milk based drinks.**

Price Code: Gr 4

11 pages

Identical to ISO 11816.1:2013

Specifies a fluorimetric method for the determination of alkaline phosphatase activity in pasteurized whole milk, semi-skimmed milk and flavoured milks. The method is applicable for milk from cows, sheep and goats and milk based drinks.

**Part 2:2016 Fluorimetric method for cheese.**

Price Code: Gr 4

15 pages

Identical to ISO 11816.2:2016

Specifies a fluorimetric method for the determination of alkaline phosphatase activity in cheese. The method is applicable to soft cheeses, semi-hard and hard cheeses provided that the mould is only on the surface of the cheese and not also the inner part.

**ZWS ISO 11866:2006****Milk and milk products – Enumeration of presumptive Escherichia coli.****Part 1: Most probable number technique using 4-methylumbelliferyl – B – D – glucuronide (MUG).**

Price Code: Gr 4

11 pages

Identical to ISO 11866-1:2005

Specifies a combined method for the enumeration of presumptive Escherichia coli and of presumptive coliforms by means of a culture technique involving a liquid medium with MUG and calculation of the number of presumptive Escheria coli and or coliforms per gram or per milli litre by the most probable number (MPN) technique after incubation at 30°C.

**Part 2: Colony – Count technique at 44°C using membranes.**

Price Code: Gr 5

9 pages

Identical to ISO 11866-2:2005

Specifies a method for the enumeration of presumptive Escheria coli by means of a colony-count technique at 44°C.

**ZWS ISO/TS 11869:2012****Fermented milks – Determination of titratable acidity – Potentiometric method**

Price Code: Gr. 6

Specifies a potentiometric method for the determination of the titratable acidity of natural yoghurt, flavoured yoghurt, fruit yoghurt, drinking yoghurt, fresh cheese with or without fruit, buttermilk with or without fruit and other fermented milk products.

**ZWS ISO 11929:2010****Determination of the Characteristic Limits (decision Threshold, Detection Limit, and Limits of The Confidence Interval) For Measurements Of Ionising Radiation –Fundamentals And Application**

Price Code: Gr. 8

58 pages

Identical to ISO 11929:2010

Specifies a procedure in the field of ionizing metrology for the calculation of the decision threshold, the detection limit and the limits of the confidence interval for a non negative ionizing radiation measurement, when counting measurements with preselection of time or counts are carried out, and the measurand results from a gross count rate and a background count rate as well as from further quantities on the basis of a model of the evaluation.

**ZWS ISO 12078:2007****Anhydrous milk fat – Determination of sterol composition by gas liquid chromatography (reference method).**

Price Code: Gr 5

16 pages

Identical to ISO 12078:2006

Specifies a gas liquid chromatographic reference method for the determination of the sterol composition of anhydrous milk fat extracted from dairy products.

**ZWS ISO 12625:2009****Tissue paper and tissue products****Part 1: General guidance on terms**

Price Code: Gr 7

23 pages

Identical to ISO 12625.1:2005

Establishes general principles for the use of terms in the entire working field of tissue paper and tissue products.

**Part 3: Determination of thickness, bulking thickness and apparent bulk density**

Price Code: Gr 5

10 pages

Identical to ISO 12625.3:2005

Specifies a test method for the determination of thickness and bulking thickness and the calculation of apparent bulk density of tissue paper and tissue products under a pressure of 2,0 kPa

**ZWS ISO 12706:2009****Non destructive testing – penetrant testing - Vocabulary**

Price Code: Gr. 4

5 pages

Identical to ISO 12706:2009

It defines technical terms relating to penetrant testing

**ZWS ISO 12721:2000****Non-Destructive testing-Thermal neutron radiographic testing-Determination of beam L/D ratio**

Price Code: Gr. 4

10 pages

Identical to ISO 12721:2000

Defines an empirical technique for the measurement of the effective collimation ratio and effective L/D of thermal neutron radiography beams for values between 20 and 1 000. The technique is based upon analysis of a neutron radiographic image and is independent of measurements and calculations based on physical dimensions of the collimator system.

**ZWS ISO 12779:2011****Lactose – Determination of water content – Karl Fischer Method**

Price Code: Gr. 4

9 pages

Identical to ISO 12779:2011

Specifies a method for the determination of the water content of lactose by Karl Fischer (KF) titration.

**ZWS ISO 13082:2011****Milk and milk products – Determination of the lipase activity of pregastric lipase preparation**

Price Code: Gr. 4

9 pages

Identical to ISO 13082:2011

Specifies a method for the determination of the lipase activity. It is intended for the preparation of pregastric lipase and rennet paste, both of animal origin.

**ZWS ISO 13106:2014****Plastic – blow-moulded polypropylene containers for packaging of liquid foodstuffs**

Price Code: Gr. 6

18 pages

Identical to ISO 13106:2014

This International Standard provides the requirements of polypropylene resins intended for use in blow-moulded, round containers with capacities up to, and including two litres intended for the packaging of liquids for human consumption. This International Standard also provides tolerances on mass, dimensions, methods of sampling, testing, and performance requirements. It is not to be implied that polypropylene resins are the only polymers suitable for these applications, as many other polymers, including PE-HD, PET, etc. are also suitable.

**ZWS ISO 13366:2009****Milk – Enumeration of somatic cells****Part 1: Microscopic method (Reference method)**

Price Code: Gr 5

17 pages

Identical to ISO 13366:2009

Specifies a microscopic method (reference method) for the counting of somatic cells in both raw and chemically preserved milk

**ZWS ISO 13485:2004****Medical devices – Quality management systems-Requirements for regulatory purposes.**

Price Code: Gr 8

15 pages

Identical to ISO 13485:2004

Specifies requirements for a quality management system where an organization needs to demonstrate its ability to provide medical devices and related services that consistently meet customer requirements and regulatory requirement applicable to medical devices and related services.

**ZWS ISO 13492:2007**

**Financial services – Key management related data element – Application and Usage of ISO 8583 data elements 53 and 96**

Price Code: Gr 6

10 pages

Identical to ISO 13492:2007

Describes key management related data element that can be transmitted either in transaction messages to convey information about cryptographic keys used to secure the current transaction or I cryptographic service messages to convey information about cryptographic keys to be used to secure future transactions.

**ZWS ISO 13606: Part 4:2019**

**Health informatics - Electronic health record communication**

**Part 4: Security**

Price Code: Gr 7

23 pages

Identical to ISO 13606-4:2019

This document describes a methodology for specifying the privileges necessary to access EHR data. This methodology forms part of the overall EHR communications architecture defined in ISO 13606-1. This document seeks to address those requirements uniquely pertaining to EHR communications and to represent and communicate EHR-specific information that will inform an access decision. It also refers to general security requirements that apply to EHR communications and points at technical solutions and standards that specify details on services meeting these security needs.

**NOTE:** Security requirements for EHR systems not related to the communication of EHRs are outside the scope of this document.

**ZWS ISO 13616: Part 1:2020**

**Financial services - International bank account number (IBAN)**

**Part 1: Structure of the IBAN**

Price Code: Gr 7

7 pages

Identical to ISO 13616-1:2020

This document specifies the elements of an international bank account number (IBAN) used to facilitate the processing of data internationally in data interchange, in financial environments as well as within and between other industries. The IBAN is designed for automated processing but can also be used conveniently in other media interchange when appropriate (e.g. paper document exchange). This document does not specify internal procedures, file organization techniques, storage media or languages to be used in its implementation, nor is it designed to facilitate the routing of messages within a network. It is applicable to the textual data which might be conveyed through a system (network).

**ZWS ISO 13616: Part 2:2020**

**Financial services - International bank account number (IBAN)**

**Part 2: Role and responsibilities of the Registration Authority**

Price Code: Gr 4

3 pages

Identical to ISO 13616-2:2020

This document describes the Registration Authority (RA) responsible for the registry of IBAN formats that conform with ISO 13616-1, the procedures for registering IBAN formats that conform with the ISO 13616 series and the structure of the registry.

**ZWS ISO 13810:2015**

**Tourism services – Industrial tourism – Service provision**

Price Code: Gr 6

17 pages

Identical to ISO 13810:2015

It establishes general requirements for industrial tourism offered by service providers intending to transmit knowledge of production, scientific and technical activities, both present and past, based on processes, know-how, products or services.

**ZWS ISO 13875:2007**

**Liquid milk – Determination of acid –soluble b-Lactoglobulin content – reverse-phase HPLC method**

Price Code: Gr.5

14 pages

Identical to ISO 13875:2005

Specifies a method for the quantitative determination of the b-Lactoglobulin content, soluble at pH 4,6 in liquid milk.

**ZWS ISO 14001:2015**

**Environmental management systems – Requirements with guidance for use**

Price Code: Gr 10

14 pages

Identical to ISO 14001:2015

Replaces ZWS ISO 14001:2004

Specifies requirements for an environmental management system that an organisation can use to enhance its environmental performance. It helps organization achieve the intended outcomes of its environmental management system, which provide value for the environment, the organization itself and interested parties

**ZWS ISO 14002: Part 1: 2019**

**Environmental management systems – Guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area**

**Part 1: General**

Price Code: Gr 10

12 pages

Identical to ISO 14002-1:2019

Gives general guidelines for organisations seeking to systematically manage environmental aspects or respond to the effects of changing environmental conditions within one or more environmental topic areas, based on ISO 14001. This document also constitutes a framework for common elements of subsequent parts of the ISO 14002 series.

**ZWS ISO 14002: Part 2: 2023**

**Environmental management systems — guidelines for using iso 14001 to address environmental aspects and conditions within an environmental topic area**

**Part 2: Water**

Price Code: Gr 7

36 pages

Identical to ISO 14002-2:2023

This document gives general guidelines for organizations seeking to address water-related environmental aspects, environmental impacts, environmental conditions, and the associated risks and opportunities within an environmental management system in accordance with ISO 14001. The document addresses issues for environmental management related to water quantity and quality, such as water withdrawal, efficient use of water, and water discharge, as well as approaches to cope with water-related events such as flooding and droughts. The document considers the interconnections of water with other environmental media and takes a

holistic approach to the management of water due to its impacts on ecosystems, ecosystem services, related biodiversity, as well as human life and well-being. This document is applicable to organizations irrespective of their size, type, financial resources, location and sector. It is applicable to all types of water and considers a life cycle perspective.

**ZWS ISO 14004:2016**  
**Environmental management systems – General guidelines on implementation**

Price Code: Gr 10  
74 pages  
Identical to ISO 14004:2016

Provides guidance for an organization on the establishment, implementation, maintenance and improvement of a robust, credible and reliable environmental management system. The guidance provided is intended for an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability.

**ZWS ISO 14005:2010**  
**Environmental management systems – Guidelines for the phased implementation of an environmental management system including the use of environmental performance evaluation**

Price Code: Gr. 8  
69 pages  
Identical to ISO 14005:2010

Provides guidance for all organizations but particularly small and medium sized enterprises (SMEs) on the phased development, implementation, maintenance and improvement of an environmental management system. It also includes advice on the integration and use of environmental performance evaluation techniques.

**ZWS ISO 14006:2011**  
**Environmental management systems – Guidelines for incorporating ecodesign**

Price Code: Gr.10  
32 pages  
Identical to ISO 14006:2011

Provides guidelines to assist organizations in establishing, documenting, implementing, maintaining and continually improving their management of ecodesign as part of an environmental management systems (EMS).

**ZWS ISO 14007:2019**  
**Environmental management systems- guidelines for determining environmental costs and benefits**

Price Code: Gr 10  
25 pages  
Identical to ISO 14007:2019

It gives guidelines for organisations on determining the environmental costs and benefits associated with their environmental aspects. It addresses the dependencies of an organization on the environment. eg natural resources and the context in which the organization operates or is located.

**ZWS ISO 14008:2019**  
**Monetary valuation Of Environmental Impacts And Related Environmental Aspects**

Price Code: Gr.7  
30 pages  
Identical to ISO 14008:2019

This document specifies a methodological framework for the monetary valuation of environmental impacts and related environmental aspects. Environmental impacts include impacts on human health, and

on the built and natural environment. Environmental aspects include releases and the use of natural resources.

**ZWS ISO 14009:2020**  
**Environmental management systems — Guidelines for incorporating material circulation in design and development**

Price Code: Gr.7  
46 pages  
Identical to ISO 14009:2020

This document gives guidelines for assisting organizations in establishing, documenting, implementing, maintaining and continually improving material circulation in their design and development in a systematic manner, using an environmental management system (EMS) framework.

**ZWS ISO 14015:2022**  
**Environmental management — Guidelines for environmental due diligence assessment**

Price Code : Gr. 7  
29 pages  
Identical to ISO 14015:2022

This document gives guidance on how to conduct an environmental due diligence (EDD) assessment through a systematic process of identifying environmental aspects, issues and conditions as well as determining, if appropriate, their business consequences. This document does not provide guidance on how to conduct other types of environmental assessment, such as:

- a) environmental audits;
- b) environmental impact assessments;
- c) environmental performance, efficiency, or reliability assessment;
- d) intrusive environmental investigations and remediation.

**ZWS ISO 14025:2006**  
**Environmental labels and declarations – Type III environmental declarations - Principles and procedures**

Price Code: Gr 6  
25 pages  
Identical to ISO/TR 14025:2006

Establishes the principles and specifies the procedures for developing Type III environmental declaration programmes and Type III environmental declarations. It specifically establishes the use of the ISO 14040 series of standards in the development of Type III environmental declaration programme and Type III environmental declarations.

**ZWS ISO 14026:2017**  
**ARS ISO ZWS HT 14026:2024**  
**Environmental labels and declarations — Principles, requirements and guidelines for communication of footprint information**

Price Code: Gr.6  
18 pages  
Identical to ISO 14026:2017

Provides principles ,requirements and guidelines for footprint communications for products addressing areas of concern relating to the environment.

**ZWS ISO 14027:2017**  
**Environmental labels and declarations – Development of product category rules**

Price Code: Gr 6  
25 pages  
Identical to ISO/TS 14027:2017

Standard provides principles, requirements and guidelines for developing, reviewing, registering and updating PCR within type III environmental declaration or footprint communication programme based on life cycle assessment.

**ZWS ISO/TS 14029:2022**

**ARSO ISO ZWS HT 14029:2024**

**Environmental statements and programmes for products — Mutual recognition of Environmental Product Declarations (EPDs) and footprint communication programmes**

Price Code: Gr 6

20 pages

Identical to ISO TS 14029:2022

This document specifies requirements for mutual recognition arrangements (MRAs) and gives guidance on how to initiate developments on MRAs between environmental product declaration (EPD) and footprint communication programme operators. It addresses administrative and operational duties, through evaluation of such programmes, and how to externally communicate the results of the cooperation as well as plans for future related activities. This document is primarily applicable to MRAs but can also be a basis for bilateral agreements.

**ZWS ISO 14031:2013**

**Environmental management - Environmental performance evaluation – Guidelines**

Price Code: Gr 7

41 pages

Identical to ISO 14031:2013

Gives guidance on the design and use of environmental performance evaluation (EPE) within an organization. It is applicable to all organizations regardless of type, size, location and complexity.

**ZWS ISO/TR 14032:2000**

**Environmental management- Examples of environmental performance evaluation (EPE).**

Price Code: Gr 8

93 pages

Identical to ISO/TR 14012:1999

Provides examples of EPE that represent a range of applications from simple to elaborate. They also represent a range of organizations (e.g. manufacturing and service companies, non-governmental organizations, government agencies, small, medium and large enterprises) and geographic locations.

**ZWS ISO/TR 14033:2012**

**Environmental management – Quantitative environmental information – Guidelines and examples**

Price Code: Gr. 7

36 pages

Identical to ISO 14033:2012

Supports the application of standard sand reports on environmental management. It provides guidelines on how to acquire quantitative environmental information and data implement methodology. It gives guidelines to organizations on general principles, policy, strategy and activities necessary to obtain quantitative environmental information for internal and/or external purposes.

**ZWS ISO 14034:2016**

**Environmental management – Quantitative environmental information – Guidelines and examples**

Price Code: Gr. 7

22 pages

Identical to ISO 14034:2016

Specifies principles, procedures and requirements for environmental technology verification (ETV)

**ZWS ISO 14040:2006 /Amd 1:2020**

**Environmental management – Life cycle assessment – Principles and framework**

Price Code: Gr 6

20 pages

Identical to ISO 14040:2006/Amd:2020

Cancels and replaces ISO 14040:1997, 14041:1998, 14042:2000 and 14043:2000, ZWS ISO 14040:2006

Describes the principles and framework for life cycle assessment (LCA). It also covers life assessment (LCA) studies and life cycle inventory (LCI) Studies but however does not describe the life cycle assessment (LCA) technique in detail nor does it specify methodologies for the individual phases for the life assessment (LCA).

**ZWS ISO 14044:2006/ Amd 2:2020**

**Environmental management – Life cycle assessment – Requirements and guidelines**

Price Code: Gr 7

45 pages

Identical to ISO 14044:2006/Amd 2:2020

Supersedes ZWS ISO 14044:2006

Specifies requirements and provides guidelines for life cycle assessment (LCA). It covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies.

**ZWS ISO 14045:2012**

**Environmental Management Eco-efficiency assessment of product systems – Principles, requirements and guidelines**

Price Code: Gr. 7

38 pages

Identical to ISO 14045:2012

Describes the principles, requirements and guidelines for eco-efficiency assessment for product systems.

**ZWS ISO 14046:2014**

**Environmental management – Water footprint – principles requirements and guidelines**

Price Code: Gr.7

37 pages

Identical to ISO 14046:2014

Specifies principles, requirements and guidelines related to water footprint assessment of products, processes and organisations based on lifecycle assessment

**ZWS ISO/TR 14047:2012**

**Environmental management – Life cycle impact assessment – Illustrative examples on how to apply ISO 14044 to impact assessment situations**

Price Code: Gr. 9

85 pages

Identical to ISO/TR 14047:2012

Replaces ZWS ISO/TR 14047:2004

Provides examples to illustrate current practice of life cycle impact assessment in according to ISO 14044. They offer a way or ways rather than the unique way of applying ISO 14044. They reflect the key elements of the life cycle impact assessment (LCIA) phase of the LCA.



**ZWS ISO/TS 14048:2002****Environmental management – Life cycle assessment – Data documentation format**

Price Code: Gr. 7

41 pages

Identical to ISO/TS 14048:2002

Provides the requirements and a structure for a data documentation format, to be used for transparent and unambiguous documentation and exchange of Life Cycle Assessment (LCA) and Life Cycle Inventory (LCI) data, thus permitting consistent documentation of data, reporting of data collection, data calculation and data quality, by specifying and structuring relevant information.

**ZWS ISO/TR 14049:2012****Environmental management – Life cycle assessment – Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis**

Price Code: Gr. 7

48 pages

Identical to ISO/TR 14049:2012

Replaces ZWS ISO 14049:2004

Provides examples about practices in carrying out a life cycle inventory analysis (LCI) as a means of satisfying certain provisions of ISO 14044:2006. These examples are only a sample of the possible cases satisfying the provisions of ISO 14044. They offer a way rather than the unique way for the application of ISO 14044. They reflect only portions of a complete LCI study.

**ZWS ISO 14050:2020****Environmental management – Vocabulary**

Price Code: Gr. 7

8 pages

Identical to ISO 14050:2020

Replaces ZWS ISO 14050:2020

Contains definitions of fundamental concepts related to environmental management, published in the ISO 14000 series of standards.

**ZWS ISO 14051:2011****Environmental management – Material flow cost accounting – General framework**

Price Code: Gr. 7

38 pages

Identical to ZWS ISO 14051:2011

Provides a general framework for material flow cost accounting (MFCA). Under MFCA the flows and stocks of materials within an organization are traced and quantified in physical units (e.g. mass, volume) and the costs associated with those material flows are also evaluated. The resulting information can act as a motivator for organizations and managers to seek opportunities to simultaneously generate financial benefits and reduce adverse environmental impacts.

**ZWS ISO 14052:2017****Environmental management – Material flow cost accounting – Guidance for practical implementation in a supply chain**

Price Code: Gr. 6

12 pages

Identical to ZWS ISO 14052:2017

Provides guidance for the implementation of material flow cost accounting (MFCA) in supply chain. MFCA fundamentally traces the flow and stock of materials within an organization, quantifies these material flows in physical units and evaluates the cost associated with material flows and energy uses.

**ZWS ISO 14053:2021****Environmental management – material flow cost accounting – guidance for phased implementation in organisations**

Price Code: Gr. 6

17 pages

Identical to ZWS ISO 14053:2021

This document gives practical guidelines for the phased implementation of material flow cost accounting (MFCA) that organizations, including small and medium-sized enterprises (SMEs), can adopt to enhance their environmental performance and material efficiency. The phased approach provides flexibility that allows organizations to develop their MFCA activities at their own pace, according to their own circumstances. The resulting information can act as a motivator for organizations to seek opportunities to simultaneously generate financial and environmental benefits by reducing material losses and energy consumption. This document is applicable to any organization, regardless of its level of development, the nature of its activities, or the location at which these activities occur.

**ZWS ISO 14055: Part 1:2017****Environmental – Guidelines for establishment good practices for establishing good practices for combatting land degradation and desertification**

Price Code: Gr 6

33 pages

Identical to ISO 14055-1:2017

This document provides guidelines for establishing good practices in land management to prevent or minimize land degradation and desertification. It does not include management of coastal wetlands. This document defines a framework for identifying good practices in land management, based on assessment of the drivers of land degradation and risks associated with current and past practices. Guidance on monitoring and reporting implementation of good practices is also provided. This document is intended for use by private and public sector organizations with responsibility for land management and will allow an organization to communicate implementation of good practices.

**ZWS ISO TR 14055: Part 2:2022****Environmental management — guidelines for establishing good practices for combatting land degradation and desertification****Part 2: Regional case study examples**

Price Code: Gr 8

78 pages

Identical to ISO TS 14055(2022).

This document provides regional case studies of good practices in land management to prevent or minimize land degradation and desertification in support of ISO 14055-1:2017. The case studies are presented to facilitate the application of ISO 14055-1 across a wide range of geographical and local conditions.

**ZWS ISO/TR 14061:1999****Information to assist forestry organizations in the use of environmental management system standards ISO 14001 and 14004.**

Price Code: Gr 8

65 pages

Identical to ISO/TR 14061:1998

Designed to be used in conjunction with ISO 14001 and ISO 14004. Provides a link between the management system approach of ISO 14001 and the range of forest policy and forest management

performance objectives, including SFM principles and inter-governmental criteria and indicators, that a forestry organisation can consider.

#### **ZWS ISO/TR 14062:2003**

##### **Environmental management – Integrating environmental aspects into product design and development.**

Price Code: Gr 6

24 pages

Identical to ISO/TR 14062:2002

Describes concepts and current practices relating to the integration of environmental aspects into product design and development.

#### **ZWS ISO 14063:2008**

##### **Environmental management – Environmental communication – Guidelines and examples**

Price Code: Gr 7

27 pages

Identical to ISO 14063:2006

Gives guidance to an organization on general principles, policy, strategy and activities relating to both internal and external environmental communication. It utilizes proven and well established approaches for communication, adapted to the specific conditions that exist in environmental communication.

#### **ZWS ISO 14064:2018**

##### **Greenhouse gases**

##### **Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.**

Price Code: Gr 6

20 pages

Identical to ISO 14064-2:2006

Amended by MD 681

Specifies principles and requirements at the organization level for quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's inventory.

##### **Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.**

Price Code: Gr. 7

28 pages

Identical to ISO 14064-2:2006

Specifies principles and requirements and provides guidance at the project level for quantification, monitoring and reporting of activities intended to cause greenhouse gas (GHG) emission reductions or removal enhancements. It includes requirements for planning a GHG project, identifying and selecting GHG sources, sinks and reservoirs relevant to the project and baseline scenario, monitoring, quantifying, documenting and reporting GHG project performance and managing data quality.

##### **Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.**

Price Code: Gr. 7

34 pages

Identical to ISO 14972:1998

Amended by MD 681:2014

Specifies principles and requirements and provides guidance for those conducting or managing the validation and / or verification of greenhouse gas (GHG) assertions. It can be applied to organizational or GHG project quantification, including GHG quantification, monitoring and reporting carried out in accordance with ISO 14064-1 or ISO

14064-2. It also specifies requirements for selecting GHG validations or verifiers, establishing the level of assurance, objective, criteria and scope, determining the validation or verification approach, assessing GHG data, information, information systems and controls, evaluating GHG assertions and preparing validation/verification statements.

#### **ZWS ISO 14065:2020**

##### **Greenhouse gases — General principles and requirements for bodies validating and verifying environmental information**

Price Code: Gr. 7

32 pages

Identical to ISO 14065:2020

Supersedes ZWS ISO 14065:2007

Follow ISO/IEC 17029:2019, Clause 1. This document specifies principles and requirements for bodies performing validation and verification of environmental information statements. Any programme requirements related to bodies are additional to the requirements of this document..

#### **ZWS ISO 14066:2011**

##### **Greenhouse gases – Competence requirements for greenhouse gases validation teams and verification teams**

Price Code: Gr. 5

25 pages

Identical to ISO 14066:2011

Specifies competence requirements for validation teams and verification teams. The standard complements the implementation of ISO 14065.

#### **ZWS ISO/TS 14067:2013**

##### **Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication**

Price Code: Gr. 8

59 pages

Identical to ISO/TS 14067:2013

Specifies principles, requirements and guidelines for the quantification and communication of the carbon footprint of a product (CFP) based on international standards on life cycle assessment (ISO 14040 and ISO 14044) for quantification and on environmental labels and declarations (ISO 14020, ISO 14024 and ISO 14025) for communication.

#### **ZWS ISO 14068:Part 1:2023**

##### **Climate change management — Transition to net zero Part 1: Carbon neutrality**

Price Code: Gr. 7

42 pages

Identical to ISO 14068:2023

This document specifies principles, requirements and guidance for achieving and demonstrating carbon neutrality through the quantification, reduction and offsetting of the carbon footprint. This document defines terms used in relation to carbon neutrality and provides guidance on the actions necessary to achieve and demonstrate carbon neutrality. In accordance with common practice, it uses the word “carbon” to refer to all greenhouse gases (GHGs) in compound expressions such as “carbon neutrality”. It is applicable to a wide range of subjects such as organizations (including companies, local authorities and financial institutions) and products (goods or services, including buildings and events). It is not intended to be used for territories (such as regions, countries, states or cities), including signatories to the United Nations Framework Convention on Climate Change (UNFCCC) when reporting national outcomes for the purposes of that Convention. This document establishes a hierarchy for carbon neutrality where GHG emission reductions (direct and indirect) and GHG

removal enhancements within the value chain take priority over off-setting. It includes requirements for carbon neutrality commitments and making carbon neutrality claims. This document is GHG programme neutral. If a GHG programme is applicable, the requirements of that GHG programme are additional to the requirements of this document.

**ZWS ISO/TS 14074:2022**

**Environmental management — life cycle assessment — principles, requirements and guidelines for normalization, weighting and interpretation**

Price Code: Gr. 6

13 pages

Identical to ISO TS 14074:2022.

This document specifies principles, requirements and guidelines for normalization, weighting and life cycle interpretation, in addition to those given in ISO 14040 and ISO 14044.

The document is applicable to any life cycle assessment (LCA) and footprint quantification study.

In particular, this document addresses:

- the use of normalization and its limitations;
- the use of weighting and its limitations;
- the selection or development of weighting factors;
- the generation of single scores;
- requirements that relate to documentation and reporting.

For the interpretation phase, it provides, in addition to ISO 14044, procedures and guidance for:

- performing completeness, sensitivity and consistency checks;
- addressing uncertainties and limitations;
- documenting conclusions and recommendations.

This document does not specify the composition of panels for weighting nor does it specify multi-criteria decision analysis.

This document does not intend to recommend or require a specific weighting approach or method or any priority of one weighting approach or method over another as they are based on value choices. Organizations have the flexibility to implement LCA in accordance with the intended application and the requirements of the organization.

**ZWS ISO 14090:2019**

**Adaptation to climate change – Principles, requirements and guidelines**

Price Code: Gr 7

28 pages

Identical to ISO 14090:2019

This document specifies principles, requirements and guidelines for adaptation to climate change. This includes the integration of adaptation within or across organizations, understanding impacts and uncertainties and how these can be used to inform decisions. This document is applicable to any organization, regardless of size, type and nature, e.g. local, regional, international, business units, conglomerates, industrial sectors, natural resource management units. This document can support the development of sector-, aspect- or element-specific climate change adaptation standards.

**ZWS ISO 14091:2021**

**Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment**

Price Code: Gr 8

40 pages

Identical to ISO 14091:2021

This document gives guidelines for assessing the risks related to the potential impacts of climate change. It describes how to understand vulnerability and how to develop and implement a sound risk assessment in the context of climate change. It can be used for assessing both present and future climate change risks. Risk assessment according to this document provides a basis for climate change adaptation

planning, implementation, and monitoring and evaluation for any organization, regardless of size, type and nature.

**ZWS ISO 14092:2020**

**Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities**

Price Code: Gr 7

41 pages

Identical to ISO 14092:2020

This document gives guidelines for assessing the risks related to the potential impacts of climate change. It describes how to understand vulnerability and how to develop and implement a sound risk assessment in the context of climate change. It can be used for assessing both present and future climate change risks. Risk assessment according to this document provides a basis for climate change adaptation planning, implementation, and monitoring and evaluation for any organization, regardless of size, type and nature.

**ZWS ISO 14093:2022**

**Mechanism for financing local adaptation to climate change – Performance-based climate resilience grants – Requirements and guidelines**

Price Code: Gr 8

44 pages

Identical to ISO 14093:2022

This document gives guidelines for assessing the risks related to the potential impacts of climate change. It describes how to understand vulnerability and how to develop and implement a sound risk assessment in the context of climate change. It can be used for assessing both present and future climate change risks. Risk assessment according to this document provides a basis for climate change adaptation planning, implementation, and monitoring and evaluation for any organization, regardless of size, type and nature.

**ZWS ISO 14096:2005**

**Non-Destructive testing – Qualification of radiographic film digitisation systems**

**Part 1: Definitions, quantitative measurements of image quality parameters, standard reference film and qualitative control**

Price Code: Gr 6

11 pages

Identical to ISO 14096.1:2005

The standard specifies procedures for the evaluation of basic performance parameters of radiographic film digitisation process such as spatial linearity, density contrast sensitivity and characteristic transfer curve.

**Part 2: Minimum requirements**

Price Code: Gr 6

5 pages

Identical to ISO 14096.2:2005

The standard specifies three film-digitisation quality classes for the requirement of non-destructive testing. The selected class depends on the radiation energy, penetrated material thickness and the quality level of the original radiographic film.

**ZWS ISO/TS 14071:2014**

**Life cycle assessment – Critical review processes and reviewer competencies – Additional requirements and guidelines to ISO 14044:2006**

Price Code: Gr. 5

12 pages

Identical to ISO/TS 14071:2014

Provides additional specifications to ISO 14040:2006 and ISO 14044:2006. It provides requirements and guidelines for conducting a critical review of any type of LCA study and the competencies required for the review.

#### **ZWS ISO/TS 14072:2014**

**Environmental management – Life cycle assessment – requirements and guidelines for organizational life cycle assessment**

Price Code: Gr. 7

27 pages

Identical to ISO/TS 14072:2014

Provides additional requirements and guidelines for an effective application of ISO 14040 and ISO 14044 to organizations. Application of LCA principles and methodology to organizations benefits of LCA and specific considerations when dealing with LCI, LCIA and interpretation and the limitations regarding reporting, environmental declarations, and comparative assertions.

#### **ZWS ISO/TR 14073:2017**

**Environmental management –**

Price Code: Gr. 8

27 pages

Identical to ISO/TS 14073:2017

Provides illustrative examples of how to apply ISO 14046, in order to assess the water footprint of products, processes and organisations based on life cycle assessment.

#### **ZWS ISO/IEC 14763:2019**

**Information technology – Implementation and operation of customer premises cabling**

**Part 2: 2019: Planning and installation**

Price Code: Gr. 10

172 pages

Identical to ISO/IEC TS 14763:2019

This part of ISO/IEC 14763 specifies requirements for the planning, installation and operation of telecommunications cabling and cabling infrastructures including cabling, pathways, spaces and telecommunications bonds (other than that specified in ISO/IEC 30129) in support of generic cabling standards and associated documents.

The following aspects are addressed:

- a) specification of the installation;
- b) quality assurance;
- c) installation planning;
- d) installation practice;
- e) documentation;
- f) administration;
- g) testing;
- h) inspection;
- i) operation;
- j) maintenance;
- k) repair.

The requirements and recommendations of Clauses 5 to 14 are premises-independent. Annexes C through G contain premises-specific amendments of and additions to these requirements and recommendations. In addition, this document describes the methodology for the assessment of spaces, pathways, pathway systems and cabling (either installed or planned) in support of remote powering objectives.

This document excludes specific requirements applicable to other cabling systems (e.g. power supply cabling); however, it takes account of the effects other cabling systems may have on the installation of telecommunications cabling (and vice versa) and gives general advice. This document excludes those aspects of installation associated with the transmission of signals in free space between transmitters, receivers or their associated antenna systems (e.g. wireless, radio, microwave or satellite). This document is applicable to certain hazardous environments but does not exclude additional requirements which are applicable in particular circumstances (e.g. electricity supply and

electrified railways). Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document can be of assistance in meeting these standards and regulations.

#### **ZWS ISO 14785:2014**

**Adventure tourism – Information for participation**

Price Code: Gr. 5

12 pages

Identical to ISO 14785:2014

Establishes minimum quality requirements for services provided by tourist information offices (TIO) of any type and size, whether publicly or privately operated, in order to satisfy visitors' expectation.

#### **ZWS ISO 14837:2005**

**Mechanical – Vibration – Ground-borne noise and vibration arising from rail systems.**

**Part 1: General guidance**

Price Code: Gr. 7

45 pages

Identical to ISO 14837.1:2005

Provides general guidance on ground-borne vibration generated by the operation of rail systems and the resultant ground-borne noise in buildings

#### **ZWS ISO 14972:2005**

**Sterile obturators for single-use with over-needle peripheral intravascular catheters.**

Price Code: Gr. 3

6 pages

Identical to ISO 14972:1998

Specifies requirements for obturators supplied in the sterile condition and intended for single use for plugging over-needle peripheral catheters.

#### **ZWS ISO 15022: Part 1:1999**

**Securities — Scheme for messages (Data Field Dictionary)**

**Part 1: Data field and message design rules and guidelines**

Price Code: Gr. 6

23 pages

Identical to ISO 15022:1999

This part of ISO 15022 consists of:

- the description of the Enhanced ISO 7775 syntax and message design rules;
- the contents and organization of the dictionary of Enhanced ISO 7775 and EDIFACT fields for securities messages; and
- the contents and organization of the catalogue of securities messages built in the Enhanced ISO 7775 and EDIFACT syntaxes. It refers to the EDIFACT syntax when necessary to ensure an easy cross-reference between Enhanced ISO 7775 concepts and EDIFACT concepts. The EDIFACT syntax is not described in this part of ISO 15022; it is defined in ISO 9735 which is incorporated by reference. This part of ISO 15022 is used for electronic data interchange between securities industry participants, independently of the communication network. Network dependent rules, for example, on how to specify where and when the message is to be sent, message acknowledgement and message protection are outside the scope of this part of ISO 15022.

The maintenance of this part of ISO 15022 is described in part 2 of ISO 15022.

**ZWS ISO 15022: Part 2:1999**  
**Securities — Scheme for messages (Data Field Dictionary)**  
**Part 2: Maintenance of the data field dictionary and catalogue of messages**  
Price Code: Gr .6  
13 pages  
Identical to ISO 15022-2:1999

This part of ISO 15022 describes the responsibilities of the parties involved in the maintenance of the Data Field Dictionary (DD) and the Catalogue of Messages (CM). There is a Registration Authority (RA) which is the operating authority responsible for maintaining the Data Field Dictionary and the Catalogue of Messages, and a Registration Management Group (RMG). The RMG is the governing body of the RA, and monitors its performance.

**ZWS ISO 15161:2002**  
**Guidelines on the application of ISO 9001:2000 for the food and drink industry.**  
Price Code: Gr .8  
33 pages  
Identical to ISO 15161:2001

Gives guidance to organizations in applying requirements of ISO 9001 in the food and drink industry.

**ZWS ISO 15163:2012**  
**Milk and milk products – Calf rennet and adult bovine rennet – Determination by chromatography of chymosin and bovin pepsin contents**  
Price Code: Gr. 6  
19 pages  
Identical to ISO 15163:2012

Specifies a reference method for the determination of the amounts of chymosin and bovine pepsin present in a test sample of calf rennet and adult bovine rennet. In addition it can be used for mixtures of calf/bovine rennet with fermentation-produced bovine chymosin (FPC).

**ZWS ISO 15174:2012**  
**Milk and milk products – Microbial coagulants – Determination of total milk-clotting activity**  
Price Code: Gr. 6  
9 pages  
Identical to ISO 15174:2012

Specifies a method for comparison of the total milk-clotting activity of a microbial coagulant sample with the milk-clotting activity of an international microbial coagulant reference standard on a standard milk substrate prepared with a calcium chloride solution of concentration 0,5 g/l (Ph – 6.5).

**ZWS ISO 15189:2022**  
**Medical laboratories – Requirements for quality and competence**  
Price Code: Gr.10  
61 pages  
Identical to ISO 15189:2022  
Replaces ZWS ISO 15189:2012

This document specifies requirements for quality and competence in medical laboratories. This document is applicable to medical laboratories in developing their management systems and assessing their competence. It is also applicable for confirming or recognizing the competence of medical laboratories by laboratory users, regulatory authorities and accreditation bodies. This document is also applicable to point-of-care testing (POCT).

**ZWS ISO 15190:2020**  
**Medical laboratories – Requirements for safety**  
Price Code: Gr .7  
39 pages  
Identical to ISO 15195:2003

Specifies requirements for safe practices in the medical laboratory.

**ZWS ISO 15193:2011**  
**In vitro diagnostic medical devices – Measurement of quantities in samples of biological origin – Requirements for content and presentation of reference measurement procedures**  
Price Code: Gr.6  
19 pages  
Identical to ISO 15193:2009

Specifies requirements for the content of a reference measurement procedures for in vitro diagnostic medical devices and medical laboratories.

**ZWS ISO 15194:2011**  
**In vitro diagnostic medical devices – Measurement of quantities in samples of biological origin – Requirements for certified reference materials and the content of supporting documentation**  
Price Code: Gr.5  
16 pages  
Identical to ISO 15194:2009

Specifies requirements for certified reference materials and the content of their supporting documentation, in order for them to be considered of higher metrological order in accordance with ISO 17511.

**ZWS ISO 15195:2004**  
**Laboratory medicine – Requirements for reference measurements measurement laboratories**  
Price Code: Gr 5  
12 pages  
Identical to ISO 15195:2003

Gives specific requirements for reference measurement laboratories in laboratory medicine. Examination of properties with results on a nominal or ordinal scale are not included.

**ZWS ISO 15197:2013**  
**In vitro diagnostic test systems – Requirements for blood-glucose monitoring systems for self-testing in managing diabetes mellitus**  
Price Code: Gr.7  
51 pages  
Identical to ISO 15197:2013

Specifies requirements for in vitro glucose monitoring systems that measure glucose concentrations in capillary blood samples for specific design verification procedures and for the validation of performance by the intended users. These systems are intended for self measurement by lay persons for management of diabetes.

**ZWS ISO 15198:2004**  
**Clinical laboratory medicine – In vitro diagnostic medical devices – Validation of user quality control procedures by the manufacturer.**  
Price Code: Gr. 5  
10 pages  
Identical to ISO 15198:2004

Describes a process for manufacturers of in vitro diagnostic medical devices to validate quality control procedures they recommend to their users.

**ZWS ISO 15394:2017**

**Packaging - Bar code and two-dimensional symbols for shipping, transport and receiving labels**

Price Code: Gr. 8

67 pages

Identical to ISO 15394:2017

This document specifies the minimum requirements for the design of labels containing linear bar code and two-dimensional symbols on transport units to convey data between trading partners; provides for traceability of transported units using a unique transport unit identifier (licence plate); provides guidance on the formatting on the label of data presented in linear bar code, two-dimensional symbol or human-readable form; provides specific recommendations regarding the choice of bar code symbologies, and specifies quality requirements; provides recommendations as to label placement, size and the inclusion of free text and any appropriate graphics; provides guidance on the selection of the label material. This document is not applicable to the direct printing on to kraft coloured corrugated surfaces. Guidance on the direct printing of bar code symbols on to kraft coloured corrugated surfaces are provided in references such as The Fibre Box Handbook[10].

**ZWS ISO 15489: Part 1:2016**

**Information and documentation – Records management**

**Part 1: Concepts and principles**

Price Code: Gr. 7

21 pages

Identical to ISO 15489-1:2016

This part of ISO 15489 defines the concepts and principles from which approaches to the creation, capture and management of records are developed. This part of ISO 15489 describes concepts and principles relating to the following:

- a) records, metadata for records and records systems;
- b) policies, assigned responsibilities, monitoring and training supporting the effective management of records;
- c) recurrent analysis of business context and the identification of records requirements;
- d) records controls;
- e) processes for creating, capturing and managing records.

This part of ISO 15489 applies to the creation, capture and management of records regardless of structure or form, in all types of business and technological environments, over time.

**Part 2: Guidelines**

Price Code: Gr.7

9 pages

Identical to ISO/TR 15489-2:2001

Provides one methodology that will facilitate the implementation of ISO 15489-1 in all organizations that have a need to manage their records. Gives an overview of the processes and factors to consider in organizations wishing to comply with ISO 15489-1.

**ZWS ISO 15598:2003**

**Tea – Determination of crude fibre content.**

Price Code: Gr.4

7 pages

Identical to ISO 15589:1999

Specifies a method for the determination of crude fibre content in tea.

**ZWS ISO 15708:2011**

**Non-Destructive – Radition methods – Computed tomography**

**Part 1: Principles**

Price Code: Gr. 8

64 pages

Identical to ISO 15708.1:2002

It gives guidance for, and defines terms for addressing the general principles of X-ray CT as they apply to industrial imaging. It also gives guidelines for a consistent set of CT performance parameter definition, including how these performance parameters relate to CT system specification.

**Part 2: Examination practices**

Price Code: Gr. 6

19 pages

Identical to ISO 15708.2:2002

It gives guidance for procedures for procedures for procedures for performing CT examination. It is intended to address the general use of CT technology and thereby facilitate its use.

**ZWS ISO 15883: Part 2:2023**

**Washer disinfectors**

**Part 2: Requirements and tests for washer-disinfectors employing thermal disinfection for critical and semi-critical medical devices**

Price Code: Gr. 6

20 pages

Identical to ISO 15883-2:2023

This document specifies requirements for washer-disinfectors (WD) that are intended for use for the cleaning and thermal disinfection, in a single operating cycle, of reusable medical devices such as surgical instruments, anaesthetic equipment, bowls, dishes and receivers, utensils and glassware. The requirements specified in this document are applicable in conjunction with the general requirements specified in ISO/DIS 15883 1:2020. The specified performance requirements of this document might not ensure the inactivation or removal of the causative agent(s) (prion protein) of transmissible spongiform encephalopathies..

**ZWS ISO 15883: Part 3:2006**

**Washer disinfectors**

**Part 3: Requirements and tests for washer-disinfectors employing thermal disinfection for human waste containers**

Price Code: Gr. 5

20 pages

Identical to ISO 15883-3:2006

This part of ISO 15883 specifies particular requirements for washer-disinfectors (WD) that are intended to be used for emptying, flushing, cleaning and thermal disinfection of containers used to hold human waste for disposal by one operating cycle. This part of ISO 15883 is to be applied in conjunction with ISO 15883 1.

**ZWS ISO 15883: Part 4:2018**

**Washer disinfectors**

**Part 4: Requirements and tests for washer-disinfectors employing chemical disinfection for thermolabile endoscopes**

Price Code: Gr. 8

81 pages

Identical to ISO 15883-3:2006

This document specifies the particular requirements, including performance criteria for washer-disinfectors (WD) that are intended to be used for cleaning and chemical disinfection of thermolabile endoscopes. This document also specifies the performance requirements for the cleaning and disinfection of the

washer-disinfector and its components and accessories which can be required to achieve the necessary performance criteria.

**ZWS ISO 15883: Part 5:2021**

**Washer disinfectors**

**Part 5: Performance requirements and test method criteria for demonstrating cleaning efficacy**

Price Code: Gr. 8

62 pages

Identical to ISO 15883-5:2021

This document specifies procedures and test methods used to demonstrate the cleaning efficacy of washer-disinfectors (WD) and their accessories intended to be used for cleaning of reusable medical devices.

**NOTE 1:** The requirements can be used for washer-disinfectors intended for use with other articles used in the context of medical, dental, laboratory, pharmaceutical and veterinary practice.

**NOTE 2:** This document does not apply to the activities to be performed by the manufacturers of reusable medical devices.

**ZWS ISO 16037:2003**

**Rubber condoms for clinical trials – Measurement of physical properties.**

Price Code: Gr. 3

5 pages

Identical to ISO 16037:2002

Suggests a series of laboratory tests to be conducted on the products to be used in any clinical investigations so that it will be easier to relate the clinical results to the design and quality of the condoms used.

**ZWS ISO 16038:2006**

**Rubber condoms – Guidance on the use of ISO 4074 in the quality management of natural rubber latex condoms.**

Price Code: Gr. 4

11 pages

Identical to ISO 16038:2006

Provides guidance on using ISO 4074 and addresses quality issues to be considered during the development, manufacture, quality verification and procurement of condoms. It encompasses the aspects of quality management systems in design, manufacture and delivery of condoms with emphasis on performance, safety and reliability of condoms.

**ZWS ISO 16256:2012**

**Clinical laboratory testing and in vitro diagnostic test systems – Reference method for testing the in-vitro activity of antimicrobial agents against yeast fungi involved in infectious diseases**

Price Code: Gr. 6

18 pages

Identical to ISO 16256:2012

Describes a method for testing the susceptibility to antifungal agents of yeasts, including *Candida spp.* and *Cryptococcus neoformans*, that cause infections. The reference method described here has not been used in studies of the yeast forms of dimorphic fungi, such as *B. dermatitidis* and/or *H. capsulatum* variety *capsulatum*.

**ZWS ISO 16297:2013**

**Milk – bacterial count – Protocol for the evaluation of alternative methods**

Price Code: Gr. 6

13 pages

Identical to ISO 16297:2013

Gives guidelines for the evaluation of instrumental alternative methods for total bacterial count in raw milk from animals of different species.

**ZWS ISO ISO 16358-1:2013/Amd 1:2019**

**Air-cooled air conditioners and air-to-air heat pumps -- Testing and calculating methods for seasonal performance factors: Part 1: Cooling seasonal performance factor**

Price Code: Gr. 7

27 pages

Identical to ISO 16358-1:2013/AMD 1:2019:2019

This part of ISO 16358 specifies the testing and calculating methods for seasonal performance factor of equipment covered by ISO 5151, ISO 13253 and ISO 15042. This part of ISO 16358 also specifies the seasonal performance test conditions and the corresponding test procedures for determining the seasonal performance factor of equipment, as specified in 1.1, under mandatory test conditions and is intended for use only in marking, comparison, and certification purposes. For the purposes of this part of ISO 16358, the rating conditions are those specified under T1 in the reference standards in 1.1. The procedures in this part of ISO 16358 may be used for other temperature conditions. This part of ISO 16358 does not apply to the testing and rating of:

- a) water-source heat pumps or water-cooled air conditioners;
- b) portable units having a condenser exhaust duct;
- c) individual assemblies not constituting a complete refrigeration system; or
- d) equipment using the absorption refrigeration cycle.

**ZWS ISO 16358: Part 2:2013**

**Air-cooled air conditioners and air-to-air heat pumps -Testing and calculating methods for seasonal performance factors Part 2: Heating seasonal performance factor**

Price Code: Gr. 7

41 pages

Identical to ISO 16358-2:2013

This part of ISO 16358 specifies the testing and calculating methods for seasonal performance factor of equipment covered by ISO 5151, ISO 13253 and ISO 15042. For the purposes of this part of ISO 16358, it is assumed that any make-up heating will be provided by electric heaters running concurrently with the heat pump. This part of ISO 16358 also specifies the seasonal performance test conditions and the corresponding test procedures for determining the seasonal performance factor of equipment, as specified in 1.1, under mandatory test conditions and is intended for use only in marking, comparison, and certification purposes. This part of ISO 16358 does not apply to the testing and rating of:

- a) water-source heat pumps or water-cooled air conditioners;
- b) portable units having a condenser exhaust duct;
- c) individual assemblies not constituting a complete refrigeration system; or
- d) equipment using the absorption refrigeration cycle.

**ZWS ISO 16358:Part 3:2013**

**Air-cooled air conditioners and air-to-air heat pumps -- Testing and calculating methods for seasonal performance factors: Part 3: Annual performance factor**

Price Code: Gr. 5

5 pages

Identical to ISO 16358-1:2013/AMD 1:2019:2019

This part of ISO 16358 specifies the testing and calculating methods for seasonal performance factor of equipment covered by ISO 5151, ISO 13253 and ISO 15042. This part of ISO 16358 also specifies the seasonal performance test conditions and the corresponding test procedures for determining the seasonal performance factor of equipment, as specified in 1.1, under mandatory test conditions and is intended for use only in marking, comparison, and certification purposes. For the purposes of this part of ISO 16358, the rating conditions are those specified under T1 in the reference standards in 1.1. The procedures in this part of ISO 16358 may be

used for other temperature conditions. This part of ISO 16358 does not apply to the testing and rating of:

- a) water-source heat pumps or water-cooled air conditioners;
- b) portable units having a condenser exhaust duct;
- c) individual assemblies not constituting a complete refrigeration system; or
- d) equipment using the absorption refrigeration cycle.

#### **ZWS ISO 16371-2:2017**

##### **Non-Destructive Testing – Industrial computed radiography with storage phosphor imaging plates**

##### **Part 2: General Principles for testing of Metallic materials using X-rays and Gamma Rays**

Price Code: Gr 7

32 pages

Identical to ISO 16371-2:2017

This document specifies fundamental techniques of computerized radiography with the aim of enabling satisfactory and repeatable results to be obtained economically. The techniques are based on the fundamental theory of the subject and tests measurements. This document specifies the general rules for industrial computerized X-rays and gamma radiography for flaw detection purposes, using storage phosphor imaging plates.

#### **ZWS ISO 16526:2011**

##### **Non-destructive testing – Measurement and evaluation of the X-ray tube voltage.**

##### **Part 1: Voltage divider method**

Price Code: Gr. 3

2 pages

Identical to ISO 16526.1:2011

Specifies a method for the direct and absolute measurement of the average high voltage of constant potential (DC) X-ray system on the secondary side of the high voltage generator. The intention is to check the correspondence with the indicated high voltage value on the control unit of the X-ray system.

##### **Part 2: 2011 Constancy check by the thick filter method**

Price Code: Gr. 3

5 pages

Identical to ISO 16526.2:2011

Specifies a constancy check of a X-ray system where mainly the X-ray voltage is checked and also the tube current and the constitution of the target which can be changing due to ageing of the tube.

#### **ZWS ISO 16649: 2018**

##### **Microbiology of the food chain - Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli - Part 1: Colony-count technique at 44 °C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide**

Price Code: Gr. 6

11 pages

Identical to ISO 16649:2018

This document specifies a horizontal method for the enumeration of  $\beta$ -glucuronidase-positive Escherichia coli by colony-count technique after resuscitation using membranes and incubation at 44 °C on a solid medium containing a chromogenic ingredient for detection of the enzyme:

$\beta$ -glucuronidase. It is applicable to

- products intended for human consumption,
- products intended for feeding animals,
- environmental samples in the area of food production and food handling, and
- samples from the primary production stage such as animal faeces, dust, and swabs.

**WARNING** — Some strains of Escherichia coli may grow poorly or not at all in media incubated at 44 °C. This includes strains of E. coli O157:H7 and O157:H-. Additionally, some strains of Escherichia coli, notably those belonging to serotype O157:H7, are mostly  $\beta$ -glucuronidase negative. Consequently, some strains of E. coli, including pathogenic ones, will not be detected by this method.  $\beta$ -glucuronidase activity may also be exhibited at 44 °C by certain other members of the Enterobacteriaceae, notably Shigella and Salmonella.

#### **ZWS ISO/TS 16782:2016**

##### **Antimicrobial susceptibility testing – Criteria for Acceptable lots of dehydrated Mueller-Hinton agar and broth for antimicrobial susceptibility testing**

Price Code: Gr. 6

20 pages

Identical to ISO 16782:2016

Provides a standard description of the physical properties of dehydrated Mueller-Hinton broth (dMHB) and Mueller-Hinton agar (dMHA) and performance criteria by which manufacturers can assess the performance characteristics of their production lots of dMHB and dMHA

#### **ZWS ISO 16809:2017**

##### **Non destructive Testing – Ultrasonic Thickness Measurement**

Price Code: Gr 7

35 pages

Identical to ISO 16809

This document specifies the principles for ultrasonic thickness measurement of metallic and non-metallic materials by direct contact, based on measurement of time of flight of ultrasonic only.

#### **ZWS ISO 16923:2016**

##### **Natural gas fuelling stations — CNG stations for fuelling vehicles**

Price Code: Gr .7

45 pages

Identical to ISO 16923:2016

This document covers the design, construction, operation, inspection and maintenance of stations for fuelling compressed natural gas (CNG) to vehicles, including equipment, safety and control devices. This document also applies to portions of a fuelling station where natural gas is in a gaseous state and dispensing CNG derived from liquefied natural gas (LCNG) according to ISO 16924. This document applies to fuelling stations supplied with natural gas as defined in local applicable gas composition regulations or ISO 13686. It also applies to other gases meeting these requirements including biomethane, upgraded coal-bed methane (CBM) and gas supplies coming from LNG vaporization (on-site or off-site). This document includes all equipment for downstream gas supply connection (i.e. point of separation between the CNG fuelling station piping and the pipeline network). Fuelling station nozzles are not defined in this document. This document covers fuelling stations with the following characteristics: slow fill; fast fill; private access; public access (self-service or assisted); fuelling stations with fixed storage; fuelling stations with mobile storage (daughter station); multi-fuel stations. This document is not applicable to domestic CNG fuelling devices without buffer storage. This document is based on the condition that the gas entering the fuelling station is odorized. For unodorized gas fuelling stations, additional safety requirements are included in Clause 10.



**ZWS ISO 16924:2016**  
**LNG stations for fuelling vehicles**

Price Code: Gr .8

81 pages

Identical to ISO 16924:2016

This document specifies the design, construction, operation, maintenance and inspection of stations for fuelling liquefied natural gas (LNG) to vehicles, including equipment, safety and control devices. This document also specifies the design, construction, operation, maintenance and inspection of fuelling stations for using LNG as an onsite source for fuelling CNG to vehicles (LCNG fuelling stations), including safety and control devices of the station and specific LCNG fuelling station equipment. This document is applicable to fuelling stations receiving LNG and other liquefied methane-rich gases that comply with local applicable gas composition regulation or with the gas quality requirements of ISO 13686. This document includes all equipment from the LNG storage tank filling connection up to the fuelling nozzle on the vehicle. The LNG storage tank filling connection itself and the vehicle fuelling nozzle are not covered in this document. This document includes fuelling stations having the following characteristics

**ZWS ISO/TS 16949:2009**

**Quality management systems – Particular requirements for the application of ISO 9001:2008 for automotive production and relevant service part organizations.**

Price Code:

Gr.7

39 pages

Replaces ZWS ISO/TS 16949:2004

Identical to ISO/TS 16949:2009

Specifies requirements for a quality management system where an organization (i) needs to demonstrate its ability to consistently provide products that meet customer and applicable regulatory requirements and (ii) aims to enhance customer satisfaction through effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.

**ZWS ISO/TS 16958:2015**

**Milk, Milk products, Infant formula and nutritionals – determination of fatty acids composition – capillary gas chromatographic method**

Price Code: Gr .7

48 pages

Identical to ISO 16958:2015

Specifies a method for the quantification of individual and/or all fatty acids in the profile of milk, milk products, infant formula and adult nutritional formula, containing milk fat and/or vegetable oils supplemented or not supplemented with oils rich in long chain polyunsaturated fatty acids (LC-PUFA).

**ZWS ISO/IEC 16963:2017**

**Information technology — Digitally recorded media for information interchange and storage — Test method for the estimation of lifetime of optical disks for long-term data storage**

Price Code: Gr .8

54 pages

Identical to ISO/IEC 16963:2017

This document specifies an accelerated ageing test method for estimating the lifetime of the retrievability of information stored on recordable or rewritable optical disks. The method is based on the theoretical assumption that the lifetime of data recorded on an optical disk has a lognormal distribution. Detailed testing is specified for the following formats: DVD-R/RW/RAM disks, +R/+RW disks, CD-R/RW disks and BD recordable/rewritable disks. The testing can be

applied to additional optical-disk formats with substitution of the appropriate specifications and can also be updated by the committee in the future as required.

This document includes:

—stress conditions:

—Basic and Rigorous stress-conditions for testing and subsequent analysis using both the Eyring and Arrhenius methods;

—ambient storage conditions in which the lifetime of data stored on optical disk is estimated:

—a Controlled storage-condition, Temp = 25 °C and RH = 50 %, representing full-time air conditioning. The Eyring method is used to estimate the lifetime under this storage condition;

—a Harsh storage-condition, Temp = 30 °C and RH = 80 %, representing the most severe conditions in which users handle and store optical disks. The Arrhenius method is used to estimate the lifetime under this storage condition;

—a description of the evaluation system;

—procedures for specimen preparation and data acquisition;

—definitions and methods used in testing specific disk types;

—analysis of test results to determine the lifetime of stored data;

—a format for reporting the estimated lifetime of stored data.

The methodology includes only the effects of temperature and relative humidity. It does not attempt to model degradation due to complex failure mechanism kinetics, nor does it test for exposure to light, corrosive gases, contaminants, handling, or variations in playback subsystems. Disks exposed to these additional sources of stress or higher levels of temperature and relative humidity are expected to experience shorter usable lifetime.

**ZWS ISO 17000:2020**

**Conformity assessment – Vocabulary and general principles.**

Price Code: Gr .5

22 pages

Identical to ISO/IEC 17000:2020

Specifies general terms and definitions relating to conformity assessment, including the accreditation of conformity assessment bodies and to the use of conformity assessment to facilitate trade.

**ZWS ISO/PAS 17001:2007**

**Conformity Assessment – Impartiality – Principles and requirements.**

Price Code: Gr .3

5 pages

Identical to ISO/PAS 17001:2005

Contains principles and requirements for the element of impartiality as it relates to standards for conformity assessment.

**ZWS ISO/PAS 17002:2005**

**Conformity assessment – Confidentiality – Principles and requirements.**

Price Code: Gr .3

3 pages

Identical to ISO/PAS 17002:2004

Contains principles and requirements for the element of confidentiality as it relates to conformity assessment.

**ZWS ISO/PAS 17003:2005**

**Conformity assessment – Complaints and appeals – Principles and requirements.**

Price Code: Gr 5

5 pages

Identical to ISO/PAS 17003:2004

Contains principles and requirements for the elements of complaints and appeals as they relate to conformity assessment.

**ZWS ISO /PAS 17004:2007**  
**Conformity assessment – Disclosure of information – Principles and requirements.**

Price Code: Gr .3  
4 pages  
Identical to ISO/PAS 17004:2005

Contains principles and requirements for the element of disclosure of information as it relates to standards for conformity assessment.

**ZWS ISO/IEC 17011:2017**  
**Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies.**

Price Code: Gr 7  
21 pages  
Identical to ISO/IEC 17011:2017

Specifies general requirements for accreditation bodies assessing and accrediting conformity assessment bodies (CABs).

**ZWS ISO/IEC 17020:2012**  
**Conformity assessment – Requirements for the operation of various types of bodies performing inspection**

Price Code: Gr .6  
18 pages  
Replaces ZWS ISO/IEC 17020:2001  
Identical to ISO/IEC 17020:2012

Contains requirements for the competence of bodies performing inspection and for the impartiality and consistency of their activities. It applies to inspection bodies of type A, B , or C as defined in the international standard and it applies to any stage of inspection

**ZWS ISO/IEC TS 17021.1:2015**  
**Conformity assessment – Requirements for bodies providing audit and certification of management systems.**

**Part 1:2015 Requirements**  
Price Code: Gr. 7  
54 pages  
Replaces ZWS ISO/IEC 17021:2007  
Identical to ISO/IEC 17021.1:2015

Contains principles and requirements for the competence, consistency and impartiality of bodies providing audit and certification of all management systems. Certification bodies operating to this International Standard need not offer all types of management system certification.

**Part 2:2016 Competence requirements for audit and certification of management systems**

Price Code: Gr.6  
12 pages  
Identical to ISO/IEC 17021.2:2016

Specifies additional competence requirements for personnel involved in the audit and certification process for Environmental Management Systems (EMS) and complements the existing requirements of ISO/IEC 17021-1

**Part 3:2017 Competence requirements for auditing and certification of quality management systems**

Price Code: Gr. 4  
6 pages  
Identical to ISO/IEC TS 17021.3:2017

Complements the existing requirements of ISO/IEC 17021.It includes specific competence requirements for personnel involved in the certification process for quality management systems (QMS).

**Part 5:2014 Competence requirements for audit and certification of asset management systems**

PriceCode:Gr.4  
6 pages  
Identical to ISO/IEC TS 17021.5:2014

Complements the existing requirements of ISO/IEC 17021.It specifies additional competence requirements for personnel involved in the certification process for asset management systems (QMS).

**Part 9:2016 Competence requirements for auditing and certification of anti-bribery management systems**

Price Code: Gr.7  
5 pages  
Identical to ISO 17021.9:2016

Complements the existing requirements of ISO/IEC 17021.1 It includes specific competence requirements for personnel involved in the certification process for anti-bribery management systems (ABMS).

**Part 10:2018 Competence requirements for auditing and certification of occupational health and safety management systems**

Price Code: Gr.5  
11 pages  
Identical to ISO 17021.10:2018

This document specifies additional competence requirements for personnel involved in the audit and certification process for an occupational health and safety (OH&S) management system and complements the existing requirements of ISO/IEC 17021-1.

Three types of personnel and certification functions are defined: — auditors; — personnel reviewing audit reports and making certification decisions; — other personnel.

**NOTE** This document is applicable for auditing and certification of an OH&S management system based on ISO 45001. It can also be used for other OH&S applications.

**ZWS ISO/IEC TS 17022:2012**  
**Conformity assessment – Requirements and recommendations for content of a third-party audit report on management systems**

Price Code:Gr. 3  
5 pages  
Identical to ISO/IEC TS 17022:2012

Specification contains requirements and recommendations to be addressed in a third-party management system certification audit report based on the relevant requirements in ISO/IEC 17021.

**ZWS ISO/IEC TS 17023:2013**  
**Conformity assessment – Guidelines for determining the duration of management system certification audits**

Price Code: Gr. 5  
8 pages  
Identical to ISO/IEC TS 17023:2013

Provides guidelines for determining the duration of management system certification audits to the bodies providing audit and certification of management systems and to those that develop and maintain certification schemes.

**ZWS ISO 17024:2012**  
**Conformity assessment – General requirements for bodies operating certification of persons.**

Price Code: Gr 4  
21 pages  
Identical to ISO/IEC 17024:2012  
Replaces ISO/IEC 17024:2005

Contains principles and requirements for a body certifying persons against specific requirements and includes the development and maintenance of a certification scheme for persons.

#### **ZWS ISO/IEC 17025:2017**

##### **The general requirements of the competence of testing and calibration laboratories**

Price Code: Gr.10

28 pages

Technically identical to ISO/IEC 17025:2005

Replaces ZWS ISO/IEC 17025:2001

Specifies the general requirements for the competence to carry out tests and/or calibrations, including sampling. It covers testing and calibration performed using standard methods, non standard methods and laboratory-developed methods.

#### **ZWS ISO/IEC TR 17026:2015**

##### **Conformity assessment – Example of a certification scheme for tangible products**

Price Code: Gr. 7

23 pages

Identical to ISO/IEC 1703426:2015

It provides an example of a type 5 product certification scheme for tangible products as described in ISO/IEC 17067

#### **ZWS ISO/IEC TS 17027:2014**

##### **Conformity assessment – Vocabulary related to competence of persons used for certification of persons**

Price Code: Gr. 5

16 pages

Identical to ISO/IEC TS 17027:2014

Specifies terms and definitions related to the competence of persons used in the field of certification of persons in order to establish a common vocabulary. These terms and definitions can also be used as applicable in other documents specifying competence of persons such as regulations, standards, certification schemes, research, training, licensing and registration.

#### **ZWS ISO/IEC TR 17028:2017**

##### **Conformity assessment – Guidelines And Examples Of A Certification Scheme For Services**

Price Code: Gr. 7

43 pages

Identical to ISO/IEC 17028:2019

This contains general principles and requirements for the competence, consistent operation and impartiality of bodies performing validation/verification as conformity assessment activities.

#### **ZWS ISO/IEC TR 17029:2019**

##### **Conformity assessment – General principles and requirements for validation and verification bodies**

Price Code: Gr. 10

30 pages

Identical to ISO/IEC TR 17028:2017

Provides guidelines and principles of service certification schemes.

#### **ZWS ISO/IEC 17030:2005**

##### **Conformity assessment – General requirements for third party marks of conformity.**

Price Code: Gr. 3

5 pages

Identical to ISO/IEC 17030:2003

Provides general requirements for third-party marks of conformity, including their issue and use.

#### **ZWS ISO 17033:2019**

##### **Ethical claims and supporting information – principles and requirements**

Price Code:

Gr. 6

16 pages

Identical to ISO 17033:2019

This document contains principles and requirements for developing and declaring ethical claims and for providing supporting information, where specific standards have not been developed, or to supplement existing standards. This document is intended for use by all types of organizations and is applicable to all types of ethical claims relating to a product, process, service or organization. This document can also be used by those seeking a better understanding of ethical claims and their use. This document can support the development of programmes for aspect-specific and sector-specific ethical claims.

#### **ZWS ISO 17034:2016**

##### **General requirements for the competence of reference material producers**

Price Code: Gr. 7

26 pages

Identical to ISO 17034:2016

Specifies general requirements for the competence and consistent operation of reference material producers.

#### **ZWS ISO/IEC 17040:2005**

##### **Conformity assessment – General requirements for peer assessment of conformity assessment bodies and accreditation bodies.**

Price Code: Gr. 5

13 pages

Identical to ISO/IEC 17040:2005

Specifies the general requirements for the peer assessment of process to be carried out by agreement groups of accreditation bodies or conformity assessment bodies. It addresses the structure and operation of the agreement group only in so far as they relate to the peer assessment process.

#### **ZWS ISO/IEC 17043:2023**

##### **Conformity assessment – General requirements for the competency of proficiency testing providers**

Price Code: Gr. 7

39 pages

Identical to ISO/IEC 17043:2023

This document specifies general requirements for the competence and impartiality of proficiency testing (PT) providers and consistent operation of all proficiency testing schemes. This document can be used as a basis for specific technical requirements for particular fields of application. Users of proficiency testing schemes, regulatory authorities, organizations and schemes using peer-assessment, accreditation bodies and others can use these requirements in confirming or recognizing the competence of proficiency testing providers.

#### **ZWS ISO/IEC 17050:2005**

##### **Conformity assessment – Suppliers declaration of conformity. Part 1: General requirements**

Price Code: Gr 4

6 pages

Identical to ISO/IEC 17050-1:2004

Specifies general requirements for a supplier's declaration of conformity in cases where it is desirable, or necessary, that conformity of an object to the specified requirements be attested, irrespective of the sector involved.

**Part 2: Supporting documentation.**

Price Code: Gr 3

2 pages

Identical to ISO/IEC 17050-2:2004

Specifies general requirements for supporting documentation to substantiate a supplier's declaration of conformity as described in part 1.

**ZWS ISO/IEC 17065:2012****Conformity assessment – Requirements for bodies certifying products, processes and services**

Price Code:Gr. 6

27 pages

Identical to ISO/IEC 17065:2012

Contains requirements for the competence, consistent operation and impartiality of product, processes and service certification bodies. Certification bodies operating to this international standard need not offer all types of products, processes and services certification. Certification of products, processes and services is a third-party conformity assessment activity.

**ZWS ISO/IEC 17067:2013****Conformity Assessment – Fundamentals of Product Certification and Guidelines for Product Certification Schemes**

Price Code: Gr. 4

19 pages

Identical to ISO/IEC 17067:2013

Describes the fundamentals of product certification and provides guidelines for understanding, developing, operating or maintaining certification schemes for products, processes and services.

**ZWS ISO/TS 17193:2012****Milk – Determination of the lactoperoxidase activity – Photometric method (Reference Method)**

Price Code:Gr. 5

7 pages

Identical to ISO/TS 17193:2012

Specifies a photometric method for the determination of the lactoperoxidase activity in milk in amounts exceeding 50U/l.

**ZWS ISO 17442: Part 1:2020****Financial services - Legal entity identifier (LEI)****Part 1: Assignment**

Price Code:Gr. 5

8 pages

Identical to ISO/TS 17442-1:2020

This document specifies the minimum elements of an unambiguous legal entity identifier (LEI) scheme to identify the legal entities relevant to any financial transaction. It is applicable to "legal entities", which include, but are not limited to, unique parties that are legally or financially responsible for the performance of financial transactions or have the legal right in their jurisdiction to enter independently into legal contracts, regardless of whether they are incorporated or constituted in some other way (e.g. trust, partnership, contractual). It includes governmental organizations, supranationals and individuals when acting in a business capacity, but excludes natural persons. It also includes international branches as defined in 3.5. The LEI is designed for automated processing. It can also be conveniently used in other media interchange when appropriate (e.g. paper document exchange).

**NOTE:** Examples of eligible legal entities include, without limitation:

- all financial intermediaries;
- banks and finance companies;
- international branches;

—all entities that issue equity, debt or other securities for other capital structures;

—all entities listed on an exchange;

—all entities that trade financial instruments or are otherwise parties to financial transactions, including business entities, pension funds and investment vehicles such as collective investment funds (at umbrella and sub-fund level) and other special purpose vehicles that have a legal form;

—all entities under the purview of a financial regulator and their affiliates, subsidiaries and holding companies;

—sole traders (as an example of individuals acting in a business capacity);

—counterparties to financial transactions.

**ZWS ISO 17442:2020: Part 2:2020****Financial services - Legal entity identifier (LEI)****Part 2: Application in digital certificates**

Price Code:Gr. 5

5 pages

Identical to ISO 17442-2:2020

This document specifies a standardised way of embedding the legal entity identifier (LEI) code, as represented in ISO 17442-1, in digital certificates, represented by the International Telecommunications Union (ITU) Recommendation X.509 and its ISO equivalent standard, ISO/IEC 9594-8. This document specifies the structure of a public key certificate conforming with ISO/IEC 9594-8 in which the LEI is embedded.

**ZWS ISO 17678:2011****Milk and milk products – Determination of milk fat purity by gas chromatographic analysis of triglycerides (Reference Method)**

Price Code: Gr.6

22 pages

Identical to ISO 17678:2010

Specifies a reference method for the determination of milk fat purity using gas chromatographic analysis of triglycerides. Both vegetable fats and animal fats such as beef tallow and lard can be detected. By using defined triglyceride equations the integrity of milk fat is determined.

**ZWS ISO 17694:2016****Footwear – Test methods for uppers and lining – Flex resistance**

Price Code: Gr.4

6 pages

Identical to ISO 17694:2016

This International Standard specifies a test method for determining the flex resistance of uppers and linings irrespective of the material in order to assess the suitability for the end use.

**ZWS ISO 17699:2003****Footwear – Test methods for uppers and lining – Water vapour permeability and absorption**

Price Code: Gr.5

9 pages

Identical to ISO 17699:2003

This standard specifies two test methods for assessing, respectively, the water vapour permeability and the water vapour absorption of uppers or complete upper assembly irrespective of the material, in order to assess the suitability for the end use.

**ZWS ISO 17700:2019****Footwear - Test methods for upper components and insoles -Colour fastness to rubbing and bleeding**

Price Code: Gr.6

16 pages

Identical to ISO 17700:2019

This document specifies three test methods (method A, method B and method C) for assessing the degree of transfer of a material's surface colour during dry or wet rubbing and a method (method D) for determining the likelihood of colour bleeding. The methods are applicable to all footwear uppers, linings and insoles, irrespective of the material. Method D is also applicable to sewing threads and shoelaces.

The methods are:

—method A: to-and-fro square rubbing finger fastness testing machine;

—method B: rotative rub fastness testing machine;

—method C: to-and-fro circular rubbing finger fastness testing machine;

—method D: colour fastness to bleeding.

**ZWS ISO 17707:2005****Footwear -Test methods for outsoles - Flex resistance**

Price Code: Gr.5

8 pages

Identical to ISO 17707:2005

This European Standard specifies a method for determining the flex resistance of outsoles. This method is intended to assess the effect of sole materials and surface patterns on cut growth. This method is applied to outsoles that, in accordance with the test mentioned in Clause 6, have a maximum longitudinal rigidity of 30 N.

**NOTE:** The method described in this standard is based on the method for the determination of the flex resistance for outsoles described in EN ISO 20344.

**ZWS ISO 17758:2014****Instant dried milk – Determination of the dispersibility and wet-tability**

Price Code: Gr.6

10 pages

Identical to ISO 17758:2014

Specifies method for the determination of the dispersibility in water of instant dried milk. The method is applicable to instant dried skimmed milk manufactured by either the “strait-through” or the “re-wet” process and also to instant dried whole milk.

**ZWS ISO 17792:2006****Milk, milk products and mesophilic starter cultures- Enumeration of citrate-Fermenting lactic acid bacteria – Colony count technique at 25°C**

Price Code: Gr.6

13 pages

Identical to ISO 17792:2006

Specifies methods for the enumeration of citrate-fermenting lactic acid bacteria using a colony-count technique at 25°C.

**ZWS ISO 17822:2020****In vitro diagnostic test systems — Nucleic acid amplification-based examination procedures for detection and identification of microbial pathogens — Laboratory quality practice guide**

Price Code: Gr 7

41 pages

Identical to ISO/TS 17822:2020

This document describes the particular clinical laboratory practice requirements to ensure the quality of detection, identification and quantification of microbial pathogens using nucleic acid amplification

tests (NAAT). It is intended for use by laboratories that develop, and/or implement and use, or perform NAAT for medical, research or health-related purposes. This document does not apply to the development of in vitro diagnostic (IVD) medical devices by manufacturers. However, it does include verification and validation of such devices and/or the corresponding processes when implemented and used by the laboratories.

**ZWS ISO 17825:2024****Information technology — Security techniques — Testing methods for the mitigation of non-invasive attack classes against cryptographic modules**

Price Code: Gr 7

38 pages

Identical to ISO 17825:2024

This document specifies the non-invasive attack mitigation test metrics for determining conformance to the requirements specified in ISO/IEC 19790:2012 for security levels 3 and 4. The test metrics are associated with the security functions addressed in ISO/IEC 19790:2012. Testing is conducted at the defined boundary of the cryptographic module and the inputs/outputs available at its defined boundary. This document is intended to be used in conjunction with ISO/IEC 24759:2017 to demonstrate conformance to ISO/IEC 19790:2012.

**NOTE ISO/IEC 24759:2017** specifies the test methods used by testing laboratories to assess whether the cryptographic module conforms to the requirements specified in ISO/IEC 19790:2012 and the test metrics specified in this document for each of the associated security functions addressed in ISO/IEC 19790:2012. The test approach employed in this document is an efficient “push-button” approach, i.e. the tests are technically sound, repeatable and have moderate costs.

**ZWS ISO/TS 17837:2009****Processed cheese products - Determination of nitrogen content and crude protein calculation – Kjeldahl method**

Price Code: Gr.5

13 pages

Identical to ISO/TS 17837:2008

Specifies a method for the determination of the nitrogen content and crude protein content by calculation in processed cheese products by using the Kjeldahl principle both traditional and block digestion methods.

**ZWS ISO/IEC 17917:2024****Smart cities – guidance to establishing a decision-making framework for sharing data and information services**

Price Code: Gr.6

47 pages

Identical to ISO/IEC 17917:2024

This standard gives guidance on establishing a decision-making framework for sharing data and information services in smart cities. It covers:

- a) types of data in smart cities;
- b) establishing a data sharing culture;
- c) data value chain – roles and responsibilities;
- d) purposes for data use;
- e) assessing data states;
- f) defining access rights for data; and
- g) data formats/format of transportation.

This standard aims to support the sharing of data and information services within cities. For some cities there will also be a need to establish specific data sharing agreements, particularly where data is being shared by multiple organizations at once. This standard supports a transparent approach to making decisions and creating specific data sharing agreements in order to fully realise the benefits and value of data and information services in a city. Missing

data or misinterpretation of data can lead to the wrong actions being taken by city decision-makers. A decision-making framework for sharing data can help ensure that they have the best overall data on which to base decisions.

This standard does not cover:

- a) national security issues;
- b) good practice for use of data by the citizen;
- c) existing interoperability agreements between cities;
- d) defining application programming interfaces (API) networks; or
- e) any data sharing rules and regulations specific to a particular jurisdiction. It is assumed that a security-minded approach to data sharing is used by cities.

**NOTE 1:** Further details on the areas not covered in this standard, including information on relevant standards publications, are given in Annex A.

This standard is for use by decision-makers in smart cities from the public, private and third sectors. It is also of interest to any city organization wishing to share data.

#### **ZWS ISO 17997**

##### **Milk – Determination of casein – nitrogen content**

###### **Part 1: 2014 Indirect method (Reference method)**

Price Code: Gr.5

8 pages

Identical to ISO 17997.1:2014

Specifies a reference method for the indirect determination of the casein-nitrogen content of bovine milk that can be modified for milk from other species or liquid dairy products.

###### **Part 2:2004 Direct method**

Price Code: Gr.5

7 pages

Identical to ISO 17997:2004

Specifies a routine method for the direct determination of the casein-nitrogen content of bovine milk.

#### **ZWS ISO 18065:2015**

##### **Adventure tourism – Information for participation**

Price Code: Gr. 6

15 pages

Identical to ISO 18065:2015

Establishes the requirements for tourist services provided directly by NPAA in order to satisfy visitors while giving priority to the NPA conservation objectives, excluding the marine protected areas.

#### **ZWS ISO 18091:2014**

##### **Quality management systems – Guidelines for the application of ISO 9001:2008 in local government**

Price Code: Gr. 10

70 pages

Identical to ISO 18091:2014

Provides local governments with guidelines for achieving reliable results through the application of ISO 9001:2008 on an integral basis. These guidelines do not however add change or modify the requirements of ISO 9001:2008

#### **ZWS ISO 18113: Part 1:2022**

##### **In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)**

###### **Part 1: Terms , definitions and general requirements**

Price Code: Gr.8

54 pages

Identical to ISO 18113-1:2022

Replaces ZWS ISO 18113-1:2011

This document defines concepts, establishes general principles, and specifies essential requirements for information supplied by the manufacturer of IVD medical devices. This document does not address language requirements since that is the domain of national laws and regulations. This document does not apply to: a) IVD medical devices for performance evaluation (e.g. for investigation sheets / Safety Data Sheets); b) shipping documents; c) material safety data sheets / Safety Data Sheets; d) marketing information (consistent with applicable legal requirements).

#### **Part 2:2022**

##### **In vitro diagnostic reagents for professional use**

Price Code: Gr. 6

11 pages

Identical to ISO 18113.2:2022

Replaces ZWS ISO 18113-2:2011

This document specifies requirements for information supplied by the manufacturer of in vitro diagnostic (IVD) reagents, calibrators and controls intended for professional use. This document can also be applicable to accessories. This document is applicable to the labels for outer and immediate containers and to the instructions for use. This document does not apply to: a) IVD instruments or equipment; b) IVD reagents for self-testing.

#### **Part 3:2022**

##### **In vitro diagnostic instruments for professional use**

Price Code: Gr.5

10 pages

Identical to ISO 18113.3:2022

Replaces ZWS ISO 18113-3:2011

This document specifies requirements for information supplied by the manufacturer of in vitro diagnostic (IVD) instruments intended for professional use. This document also applies to apparatus and equipment intended to be used with IVD instruments for professional use. This document can also be applicable to accessories. This document does not apply to:

- a) instructions for instrument servicing or repair;
- b) IVD reagents, including calibrators and control materials for use in control of the reagent;
- c) IVD instruments for self-testing.

#### **Part 4:2022**

##### **In vitro diagnostic reagents for self testing**

Price Code: Gr.5

10 pages

Identical to ISO 18113.4:2022

Replaces ZWS ISO 18113-4:2011

This document specifies requirements for information supplied by the manufacturer of in vitro diagnostic (IVD) reagents, calibrators, and controls intended for self-testing. This document can also be applicable to accessories. This document is applicable to the labels for outer and immediate containers and to the instructions for use. This document does not apply to:

- a) IVD instruments or equipment;
- b) IVD reagents for professional use.

#### **Part 5:2022**

##### **In vitro diagnostic instruments for self testing**

Price Code: Gr.5

9 pages

Identical to ISO 18113.5:2009

Replaces ZWS ISO 18113-5:2011

This document specifies requirements for information supplied by the manufacturer of in vitro diagnostic (IVD) instruments intended for self-testing. This document is also applicable to apparatus and

equipment intended to be used with IVD instruments for self-testing.

This document can also be applicable to accessories.

This document does not apply to:

- a) instructions for instrument servicing or repair;
- b) IVD reagents, including calibrators and control materials for use in control of the reagent;
- c) IVD instruments for professional use.

#### **ZWS ISO 18153:2003**

**In vitro diagnostic medical devices — Measurement of quantities in biological samples — Metrological traceability of values for catalytic concentration of enzymes assigned to calibrators and control materials**

Price Code: Gr. 6

11 pages

Identical to ISO 18153:2003

This European Standard specifies how to assure the metrological traceability of values assigned to calibrators and control materials intended to establish or verify trueness of measurement of the catalytic concentration of enzymes. The calibrators and control materials are those provided by the manufacturers as part of, or to be used together with, in vitro diagnostic medical devices.

#### **ZWS ISO 18252:2009**

**Anhydrous milk fat — Determination of sterol composition by gas liquid chromatography (Routine method)**

Price Code: Gr 5

13 pages

Identical to ISO 18252:2006

Specifies a routine gas liquid chromatographic method for the determination of the sterol composition in anhydrous milk fat extracted from dairy products directly on the unsaponifiable matter, without purification and derivatization.

#### **ZWS ISO 18295:Part 1:2017**

**Customer contact centres**

**Part 1:2017: Requirements for customer contact centres**

Price Code: Gr 6

16 pages

Identical to ISO 18295-1:2017

This document specifies service requirements for customer contact centres (CCC). It specifies a framework for any CCC that aims to assist in providing clients and customers with services that continuously and proactively meet or exceed their needs. This document is applicable to both in-house (captive) and outsourced (third party operator) CCCs of all sizes, across all sectors and all interaction channels, including inbound and outbound. It specifies performance metrics (KPIs) as and where required.

#### **ZWS ISO 18295:Part 2:2017**

**Customer contact centres**

**Part 2:2017**

**Requirements for clients using the services of customer contact centres**

Price Code: Gr 6

5 pages

Identical to ISO 18295-2:2017

This document specifies requirements for organizations using the services of customer contact centres (CCC). It aims to ensure that customer expectations are consistently met through the provision and management of appropriate arrangements with CCCs meeting the requirements of ISO 18295 1. This document is applicable to clients using CCCs of all sizes, across all sectors including in-house (captive) centres and outsourced (third party operator) centres, across multiple contact channels, including voice and non-voice media.

#### **ZWS ISO 18326:2018**

**Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct – Testing and rating for performance**

Price Code: Gr 7

48 pages

Identical to ISO 18326:2018

This document specifies service requirements for customer contact centres (CCC). It specifies a framework for any CCC that aims to assist in providing clients and customers with services that continuously and proactively meet or exceed their needs. This document is applicable to both in-house (captive) and outsourced (third party operator) CCCs of all sizes, across all sectors and all interaction channels, including inbound and outbound. It specifies performance metrics (KPIs) as and where required.

#### **ZWS ISO 18601:2013**

**Packaging and the environment — General requirements for the use of ISO standards in the field of packaging and the environment**

Price Code: Gr 6

10 pages

Identical to ISO 18601:2013

This International Standard specifies requirements and procedures for the other International Standards in this series on packaging and the environment: ISO 18602, ISO 18603, ISO 18604, ISO 18605, and ISO 18606. This International Standard is applicable to a supplier responsible for placing packaging or packaged goods on the market.

#### **ZWS ISO 18603:2013**

**Packaging and environment— reuse**

Price Code: Gr 6

13 pages

Identical to ISO 18603:2013

This International Standard specifies the requirements for packaging to be classified as reusable and sets out procedures for assessment of meeting the requirements, including the associated systems. The procedure for applying this International Standard is contained in ISO 18601.

#### **ZWS ISO 18604:2013**

**Packaging and environment - material recycling**

Price Code: Gr 6

20 pages

Identical to ISO 18604:2013

This International Standard specifies the requirements for packaging to be classified as recoverable in the form of material recycling while accommodating the continuing development of both packaging and recovery technologies and sets out procedures for assessment of meeting the requirements of this International Standard. This International Standard cannot by itself provide presumption of meeting the requirements. The procedure for applying this International Standard is contained in ISO 18601.

#### **ZWS ISO 18605:2013**

**Packaging and the environment – energy recovery**

Price Code: Gr 6

15 pages

Identical to ISO 18605:2013

This International Standard specifies the requirements for packaging to be classified as recoverable in the form of energy recovery and sets out assessment procedures for fulfilling the requirements of this International Standard. This International Standard is a part

of a series of International Standards. The procedure for applying it is contained in ISO 18601.

#### **ZWS ISO 18606:2013**

##### **Packaging and the environment – organic recovery**

Price Code: Gr 6

21 pages

Identical to ISO 18606:2013

This International Standard specifies procedures and requirements for packaging that are suitable for organic recycling. Packaging is considered as recoverable by organic recycling only if all the individual components meet the requirements. Therefore, packaging is not considered recoverable by organic recycling if only some of the components meet the requirements laid down in this International Standard. However, if the components can be easily, physically separated before disposal, then the physically separated components can be individually considered for organic recycling. This International Standard is applicable to organic recycling of used packaging but does not address regulations that exist regarding the recoverability of any residual packaged goods.

#### **ZWS ISO 18644:2016**

##### **Fertilizers and soil conditioners – Controlled release fertilizer – General requirements**

Price Code: Gr. 4

6 pages

Identical to ISO 18644:2016

Specifies requirements for testing methods, sampling and preparation of test sample, marking and labelling, as well as package, transport and storage of controlled-release fertilizer.

#### **ZWS ISO 18788:2015**

##### **Management system for private security operations - Requirements with guidance for use**

Price Code: Gr. 9

119 pages

Identical to ISO 18788(2015).

This International Standard provides a framework for establishing, implementing, operating, monitoring, reviewing, maintaining and improving the management of security operations. It provides the principles and requirements for a security operations management system (SOMS). This International Standard provides a business and risk management framework for organizations conducting or contracting security operations and related activities and functions while demonstrating:

- a)conduct of professional security operations to meet the requirements of clients and other stakeholders;
- b)accountability to law and respect for human rights;
- c)consistency with voluntary commitments to which it subscribes.

#### **ZWS ISO 19001:2013**

##### **In vitro diagnostic medical devices – Information supplied by the manufacturer with in vitro diagnostic reagents for staining in biology**

Price Code: Gr. 6

15 pages

Identical to ISO 19001:2013

Specifies requirements for information supplied by the manufacturer with reagents used in staining in biology. It applies to producers, suppliers and vendors of dyes, stains,chromogenic reagents and other reagents used for staining in histology and cytology including bacteriology haematology, histochemistry as performed in medical laboratories both routine nad research bacteriology.

#### **ZWS ISO 19011:2018**

##### **Guidelines for auditing management systems**

Price Code: Gr.10

49 pages

Identical to ISO 19011:2018

Replaces ZWS ISO 10011, 14010, 14011 and 14012,19011:2002

Provides guidance on auditing management systems,including the principles of auditing,managing an audit programme and conducting management system audits as well as guidance on the evaluation of competence of individuals involved in the audit process including the person managing the audit programme,auditors and audit teams.

#### **ZWS ISO 19046:2017**

##### **Cheese – Determination of propionic acid level by chromatography**

###### **Part 1: Method by gas chromatography**

Price Code: Gr.5

9 pages

Identical to ISO 19046.1:2017

Specifies a method for the determination of propionic acid level in cheese, using gas chromatography.

###### **Part 2: Method by ion exchange chromatography**

Price code: Gr 5

7 pages

Identical to ISO 19046.2:2017

Specifies a method for the determination of propionic acid level in cheese, using ion exchange chromatography

#### **ZWS ISO/IEC 19086: Part 4:2019**

##### **Cloud computing – Service level agreement (SLA) framework Part 4: 2019: Components of Security and of Protection of PII**

Price Code: Gr.6

19 pages

Identical to ISO/IEC 19086: Part 4:2019

This document specifies security and protection of personally identifiable information components, SLOs and SQOs for cloud service level agreements (cloud SLA) including requirements and guidance.

This document is for the benefit and use of both CSPs and CSCs.

#### **ZWS ISO 19244:2014**

##### **Guidance on transition periods for standards developed by ISO TC 84- Devices for administration of medicinal products and intravascular**

Price Code: Gr.4

3 pages

Identical to ISO 11608:2014

It outlines the recommended transition plans for all the TC 84 standards: needle based injection systems, sharp injury protection, sharp containers,aerosol drug delivery devices, needle-free injection system, syringes, needles intravascular catheters and ports.

#### **ZWS ISO 19344 |IDF 232:2015**

##### **Milk and milk products – Starter cultures, probiotics and fermented products – Quantification of lactic acid bacteria by flow cytometry**

Price Code: Gr.7

26 pages

Identical to ISO 19344|IDF 232:2015

Specifies a standardized method for the quantification of active/or total lactic acid bacteria and probiotic strains in starter cultures used in dairy products by means of flow cytometry. Method



also applicable to probiotics used in dairy products and to fermented milk products such as yogurts containing primarily lactic acid bacteria.

#### **ZWS ISO/IEC 19479:2019**

##### **Information technology for learning, education, and training - Learner mobility achievement information (LMAI)**

Price Code: Gr.7

29 pages

Identical to ISO/IEC 19479:2019

This document defines a model for the recording and exchange of learner achievement information among student information systems (SIS) (also known as student management information systems), as well as the aggregation of information by third party suppliers. In addition, this document defines refinements to the learner mobility achievement award (LMAI) model for representing the digital diploma supplement (DDS).

**NOTE:** The proposed model proposed is not intended to define the representation of the entire spectrum of learner mobility information but to define the formally structured representation of official, institutionally attested achievement information for learners engaged in formal learning processes, in order to facilitate its recording and subsequent exchange within any international area within which learner mobility is possible. Achievement information structured and presented in compliance with this document could, of course, be used for other purposes, for instance, to provide descriptions of achievement to enrich a learner-owned report in an e-portfolio. However, guidance on the document and the organisation of information for purposes other than the representation of formal achievement reports is outside the scope of this document..

#### **ZWS ISO 19574:2022**

##### **Footwear and footwear components -Qualitative test method to assess antifungal activity (growth test)**

Price Code: Gr.5

10 pages

Identical to 19574:2022

This document specifies a test method (growth test) for the qualitative evaluation of the antifungal activity of footwear and footwear components exposed to the action of filamentous micro-fungi. This document is only applicable to footwear and components that claim to have antifungal (antimycotic) or antimicrobial treatment effects.

#### **ZWS ISO/IEC 19650:2019**

##### **Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling**

###### **Part 1: 2018: Concepts and principles**

PriceCode: Gr.7

34 pages

Identical to ISO/IEC 19650:2019

This document outlines the concepts and principles for information management at a stage of maturity described as “building information modelling (BIM) according to the ISO 19650 series”. This document provides recommendations for a framework to manage information including exchanging, recording, versioning and organizing for all actors. This document is applicable to the whole life cycle of any built asset, including strategic planning, initial design, engineering, development, documentation and construction, day-to-day operation, maintenance, refurbishment, repair and end-of-life. This document can be adapted to assets or projects of any scale and complexity, so as not to hamper the flexibility and versatility that characterize the large range of potential procurement strategies and so as to address the cost of implementing this document.

#### **ZWS ISO/TS 19657:2017**

##### **Definition and technical criteria for food ingredients to be considered as natural**

Price Code:

Gr.6

37 pages

Identical to ISO/TS 16957:2017

Specifies definitions and technical criteria (acceptable sources, materials and processes) to be fulfilled for food ingredients to be considered as natural.

#### **ZWS ISO 19867: Part 1:2018**

##### **Clean cookstoves and clean cooking solutions -Harmonized laboratory test protocols**

###### **Part 1:2018 Standard test sequence for emissions and performance, safety and durability of cookstoves**

Price Code:

Gr. 9

122 pages

Identical to ISO/TR 19867-1:2018

This document is applicable to cookstoves used primarily for cooking or water heating in domestic, small-scale enterprise, and institutional applications, typically with firepower less than 20 kW and cooking vessel volume less than 150 l, excluding cookstoves used primarily for space heating. For solar cookstoves, the provisions of this document are applicable only for evaluating cooking power, safety, and durability. Solar cookstoves have zero on-site emissions, and their cooking power can be determined according to ASAE S 580.1. This document does not cover electric stoves. Safety evaluation of electric stoves can be found in IEC 60335-2-6[62]. This document specifies laboratory measurement and evaluation methods for a)particulate and gaseous air pollutant emissions, b)energy efficiency, c)safety, and d)durability of cookstoves.

This document does not include evaluation of off-gassing from manufacturing oils, coatings, adhesives, and other materials (which can be found in ISO 10377 and ISO 14159). This document does not include evaluation of safety for cookstoves designed to burn a liquid and/or gaseous fuel, such as LPG (liquefied petroleum gas), alcohol, plant oil, kerosene, etc. Safety evaluation of gas-fuelled cookstoves can be found in ISO 23550 and ISO 23551 (all parts). This document does not include durability evaluation of rechargeable batteries in fan-assisted cookstoves. This document provides a standard test sequence to establish international comparability in measurement of cookstove emissions and efficiency. Guidelines for reporting results from the laboratory measurement and evaluation methods are described. For cookstoves used in applications covered by additional requirements (e.g., local air quality and safety regulations), additional test conditions and special evaluation methods may apply.

#### **ZWS ISO 19867: Part 3:2018**

##### **Clean cookstoves and clean cooking solutions- Harmonized laboratory test protocols**

###### **Part 3:2018: Voluntary performance targets for cookstoves**

Price Code:

Gr. 6

18 pages

Identical to ISO/TR 19867-3:2018

This document provides voluntary performance targets for cookstoves and is intended to supplement ISO 19867-1. These voluntary performance targets are intended for use with the results of the laboratory testing specified in ISO 19867-1. These voluntary performance targets are provided as informative guidance, and are not intended as normative requirements for the testing of cookstoves. Performance targets can be considered as an approach to benchmarking potential performance of cookstoves

and clean cooking solutions, and provide guidance to help organizations and countries with international collaboration and trade in household energy technologies, fuels, and related products. This document is therefore not intended to serve as the sole basis for decisions about which technologies/fuels to promote for a given setting, since the performance of a given technology will likely differ under real-use conditions. The best way to assess real-world impacts of a stove intervention or program is through field studies, see ISO 19869, as well as other existing methods[2][3]. In addition to the limitations arising from differences from real-world performance, laboratory test metrics (efficiency, emissions, safety, and durability) do not inform other factors that are critical to the impacts a product, program, or intervention may achieve. These factors include, but are not limited to geographic/cultural suitability, price-affordability, acceptability to the target user group, and other socio-economic factors. These voluntary performance targets for emissions are intended to evaluate cookstoves used for small-scale household applications, with maximum firepower of up to 10 kW. Cookstoves that have firepower above 10 kW could emit substantially more overall pollutants into the household environment than those under 10 kW, while still meeting targets based on grams emitted per megajoule of useful energy delivered.

**ZWS ISO 19869:2019**  
**Clean cookstoves and clean cooking solutions - Field testing methods for cookstoves**

Price Code: Gr. 6  
 111 pages  
 Identical to ISO 19869 published in 2019

This document provides field testing methods to evaluate cooking system performance in real-world conditions. This document is intended to:

- a) Provide quantitative and qualitative measurements of cooking system performance. Requirements and guidance are provided for evaluation of usage, usability, fuel consumption, energy consumption, power, emissions, safety, and durability. These measurements include uncontrolled and controlled cooking tests.
- b) Provide guidance for measurements of household air pollution and personal exposure to PM<sub>2.5</sub> and CO.
- c) Provide guidance for field assessments that compare cooking system performance metrics either to defined performance levels or to a counterfactual scenario that enables assessment of whether the new cooking system is improved compared to what would have been observed without the implementation of a new cooking system.
- d) Provide guidance for prioritizing measurements that balance comprehensiveness and feasibility. The parts of the cooking system include the cookstove, cooking vessel, fuel, user practice, and additional cooking devices (such as pot skirts and retained heat cookers). Several measurements in this document are presented as measurements of “cookstoves” or “cooking devices” for simplicity, but are intended to be interpreted as measurements of cooking systems. Some measurements (usage, kitchen energy consumption, and pollutant exposure) pertain to household-level cooking systems that include all cookstoves, cooking devices, fuels, and user practices in a household. Cooking systems can also include other aspects of the cooking environment (such as ventilation when measuring exposure). This document is applicable to cookstoves used primarily for cooking or water heating in domestic, small-scale enterprise and in institutional applications, typically with firepower less than 20 kW and cooking vessel volume less than 150 l. The provisions of this document are applicable to solar cookers. This document does not cover electric stoves or cookstoves used primarily for space heating. Although some parts of this document can be applicable to electric stoves (usage, usability, safety, durability, cooking power, and household energy consumption), specific considerations required for testing electric stoves are not provided. This document is intended for manufacturers, implementing organizations, researchers, governments, or other entities that need to evaluate cooking system performance in the field.

**ZWS ISO/IEC 20000:2011**  
**Information Technology – Service Management**  
**Part 1: Service management system requirements**

Price Code: Gr. 6  
 26 pages  
 Identical to ISO/IEC 20000:2011

A service management system (SMS) standard. It specifies requirements for the service provider to plan, establish, implement, operate, monitor, review, maintain and improve an SMS. The requirements include the design, transition, delivery and improvement of service to fulfil service requirements.

**Part 2:2012 Guidance on the application of service management systems**

Price Code: Gr. 8  
 85 pages  
 Identical to ISO/IEC 20000.2:2012

Provides guidance on the application of an SMS based on ISO/IEC 20000.1. This part ISO/IEC 20000 provides examples and suggestions to enable organizations to interpret and apply ISO/IEC 20000.1 including references to other parts of ISO/IEC 20000 and other relevant standards. This part of ISO/IEC 20000 is independent of specific best practice frameworks and the service provider can apply a combination of generally accepted guidance and their own techniques.

**Part 5:2013 Exemplar implementation plan for ISO/IEC 20000-1**

Price Code: Gr. 7  
 46 pages  
 Identical to ISO/IEC 20000.5:2013

Provides guidance for an approach to implement an SMS that can fulfil the requirements specified in ISO/IEC 20000-1:2011. Illustrates a generic three-phased plan to manage implementation activities taking into consideration the design, transition, delivery, management and improvement of services.

**Part 10:2013 Concepts and terminology**

Price Code: Gr. 7  
 22 pages  
 Identical to ISO IEC/TR 20000.10:2013

Describes the core concepts of ISO/IEC 20000, identifying how the different parts support ISO/IEC 20000-1:2011 as well as the relationships between ISO/IEC 20000 and other International Standards and Technical reports. It explains terminology used in ISO/IEC 20000 so that organizations and individuals can interpret the concepts correctly.

**ZWS ISO 20072:2011**  
**Aerosole drug device design verification – Requirements and test methods**

Price Code: Gr.8  
 43 pages  
 Identical to ISO 20072:2009

Applies to the design labelling, instructions for use and testing requirement for hand-held single and multi-use aerosol drug delivery devices (ADDDs) intended to deliver a metered or pre-metered aerosolized medication to or by means of the human respiratory tract (including nasal, oral, tracheal, bronchial and alveolar sites). Applies to both refillable and disposable devices intended for personal use.

**ZWS ISO 20128:2006****Milk products – Enumeration of presumptive lactobacillus acidophilus in milk products on a selective medium – colony count technique at 37°C.**

Price Code: Gr .4

11 pages

Identical to ISO 20128:2006

Specifies a method for the enumeration of presumptive Lactobacillus acidophilus in milk products on a selective medium by using a colony-count technique at 37°C.

**ZWS ISO 20150:2019****Footwear and footwear components — Quantitative challenge test method to assess antifungal activity**

Price Code: Gr .6

11 pages

Identical to ISO 20150:2019

This document specifies quantitative challenge test methods for evaluating the antifungal activity of footwear and footwear components. This document is applicable only to footwear and components that claim to have antifungal (antimycotic) properties or antimicrobial properties. Two methods can be applied. The choice of method depends on the material properties and test microorganisms. Dynamic challenge test method can be applied to all types of materials. For single absorbent materials, static challenge test method is recommended. Brief descriptions of each method are given in 11.2 and 11.3.

**ZWS ISO 20166: Part 1:2018****Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:****Part 1: Isolated RNA**

Price Code: Gr .7

26 pages

Identical to ISO 20166: Part 1:2018

This document gives guidelines on the handling, documentation, storage and processing of formalin-fixed and paraffin-embedded (FFPE) tissue specimens intended for RNA examination during the pre-examination phase before a molecular assay is performed. This document is applicable to molecular in vitro diagnostic examinations including laboratory developed tests performed by medical laboratories and molecular pathology laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. NOTE International, national or regional regulations or requirements can also apply to specific topics covered in this document.

**ZWS ISO 20166: Part 2:2018****Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:****Part 2: Isolated proteins**

Price Code: Gr .6

20 pages

Identical to ISO 20166: Part 2:2018

This document gives guidelines on the handling, documentation, storage and processing of formalin-fixed and paraffin-embedded (FFPE) tissue specimens intended for the examination of isolated proteins during the pre-examination phase before a molecular assay is performed. This document is applicable to molecular in vitro diagnostic examinations including laboratory developed tests performed by medical laboratories and molecular pathology laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial or-

ganizations performing biomedical research, and regulatory authorities. This document is not applicable for protein examination by immunohistochemistry.

**ZWS ISO 20166: Part 3:2018****Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:****Part 3: Isolated DNA**

Price Code: Gr .7

19 pages

Identical to ISO 20166: Part 3:2018

This document gives guidelines on the handling, documentation, storage and processing of formalin-fixed and paraffin-embedded (FFPE) tissue specimens intended for DNA examination during the pre-examination phase before a molecular assay is performed. This document is applicable to molecular in vitro diagnostic examinations including laboratory developed tests performed by medical laboratories and molecular pathology laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. NOTE: International, national or regional regulations or requirements can also apply to specific topics covered in this document.

**ZWS ISO 20184: Part 1:2018****Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for frozen tissue:****Part 1: Isolated RNA**

Price Code: Gr .6

20 pages

Identical to ISO 20184: Part 1:2018

This document gives guidelines on the handling, documentation, storage and processing of frozen tissue specimens intended for RNA examination during the pre-examination phase before a molecular assay is performed. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories and molecular pathology laboratories that evaluate RNA extracted from frozen tissue. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organisations performing biomedical research, and regulatory authorities. Tissues that have undergone chemical stabilization pre-treatment before freezing are not covered in this document. NOTE International, national or regional regulations or requirements can also apply to specific topics covered in this document.

**ZWS ISO 20184: Part 2:2018****Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for frozen tissue:****Part 2: Isolated proteins**

Price Code: Gr .6

17 pages

Identical to ISO 20184: Part 2:2018

This document gives guidelines on the handling, documentation, storage and processing of frozen tissue specimens intended for the examination of isolated proteins during the pre-examination phase before a molecular assay is performed. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories and molecular pathology laboratories that evaluate proteins isolated from frozen tissue. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organisations performing biomedical research, and regulatory authori-

ties. NOTE International, national or regional regulations or requirements can also apply to specific topics covered in this document.

**ZWS ISO 20186: Part 1:2019**

**Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:**

**Part 1: Isolated cellular RNA**

Price Code: Gr .6

20 pages

Identical to ISO 20186: Part 1:2019

This document gives guidelines on the handling, storage, processing and documentation of venous whole blood specimens intended for cellular RNA examination during the pre-examination phase before a molecular examination is performed. This document covers specimens collected in venous whole blood collection tubes. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. Different dedicated measures are taken for stabilizing blood cell free circulating RNA and RNA in exosomes circulating in blood. These are not described in this document. Different dedicated measures are taken for collecting, stabilizing, transporting and storing capillary blood as well as for collecting and storing blood by paper based technologies or other technologies generating dried blood. These are not described in this document. This document does not cover the isolation of specific blood cells and subsequent isolation of cellular RNA therefrom. RNA in pathogens present in blood is not covered by this document.

**ZWS ISO 20186: Part 2:2019**

**Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:**

**Part 2: Isolated genomic DNA**

Price Code: Gr .6

19 pages

Identical to ISO 20186: Part 2:2019

This document gives guidelines on the handling, storage, processing and documentation of venous whole blood specimens intended for genomic DNA examination during the pre-examination phase before a molecular examination is performed. This document covers specimens collected in venous whole blood collection tubes. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. Different dedicated measures are taken for stabilizing blood cell free circulating DNA, which are not described in this document. NOTE Circulating cell free DNA in blood is covered in ISO 20186-3. Different dedicated measures are taken for collecting, stabilizing, transporting and storing capillary blood as well as for collecting and storing blood by paper based technologies or other technologies generating dried blood. These are not described in this document. This document does not cover the isolation of specific blood cells and subsequent isolation of genomic DNA therefrom. DNA in pathogens present in blood is not covered by this document.

**ZWS ISO 20186: Part 3:2019**

**Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:**

**Part 2: Isolated circulating cell free DNA**

Price Code: Gr .5

18 pages

Identical to ISO 20186: Part 3:2019

This document provides recommendations and requirements on the handling, storage, processing and documentation of venous whole

blood specimens intended for circulating cell free DNA (ccfDNA) examination during the pre-examination phase before an analytical test is performed. This document covers specimens collected in venous whole blood collection tubes. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. Different dedicated measures are taken for stabilizing blood genomic DNA, which are not described in this document. Blood genomic DNA is covered in ISO 20186-2. Different dedicated measures are taken for preserving DNA in circulating exosomes, which are not described in this document.

**ZWS ISO 20252:2019**

**Market, opinion and social research, including insights and data analytics — Vocabulary and service requirements**

Price Code: Gr. 8

68 pages

Identical to ISO 20252:2019

Supersedes ZWS ISO 20252:2007

This document establishes terms, definitions and service requirements for service providers conducting market, opinion and social research, including insights and data analytics (hereinafter referred to as “service providers”). Non-market research activities, such as direct marketing, are outside the scope of this document.

**ZWS ISO 20344:2021**

**Personal protective equipment — Test methods for footwear**

PriceCode: Gr.7

89 pages

Identical to ISO 20344:2021

This document specifies methods for testing footwear designed as personal protective equipment.

**ZWS ISO 20345:2021/Amd 1:2024**

**Personal protective equipment - Safety footwear**

Price Code: Gr.7

42 pages

Identical to ISO 20345:2021

Specifies basic and additional requirements for safety footwear used for general purpose. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behavior.

**ZWS ISO 20347:2021/Amd 1:2024**

**Personal protective equipment — Occupational footwear**

Price Code: Gr.7

37 pages

Identical to ISO 20347:2021

This document specifies basic and additional (optional) requirements for occupational footwear used for general purpose. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour. It also specifies requirements for occupational footwear equipped with customized insoles, customized occupational footwear or individual manufactured customized occupational footwear. This standard does not cover the property of high visibility because of interaction with the clothing (e.g. trousers cover the footwear) and work area conditions (e.g. dirt, mud). Special risks are covered by complementary job-related standards (e.g. footwear for firefighters, electrical insulating footwear, protection against chain saw injuries, protection against chemicals and against molten metal splash, protection for motorcycle riders).

**ZWS ISO 20400:2017**  
**Sustainable Procurement**  
Price Code: Gr.10  
55 pages  
Identical to ISO 20400:2017

This document provides guidance to organizations, independent of their activity or size, on integrating sustainability within procurement, as described in ISO 26000. It is intended for stakeholders involved in, or impacted by, procurement decisions and processes.

**ZWS ISO/TS 20428:2024**  
**Genomics Informatics — Data elements and their metadata for describing structured clinical genomic sequence information in electronic health records**  
PriceCode: Gr.7  
31 pages  
Identical to ISO/TS 20428:2024

The document defines the data elements and the requisite metadata essential for implementing a structured clinical genomic sequencing report in electronic health records, particularly focusing on the genomic data generated by next-generation sequencing technology. This document:

- defines the composition of a structured clinical sequencing report (see Clause 6);
- defines the required data fields and their metadata for a structured clinical sequencing report (see Clause 7);
- defines the optional data (see Clause 8);
- covers the DNA-level variation from human samples using whole genome sequencing, whole exome sequencing, and targeted sequencing (disease-targeted gene panels) by next-generation sequencing technologies (though whole transcriptome sequencing and other technologies are important to provide better patient care and enable precision medicine, this document only deals with DNA-level changes);
- covers mainly clinical applications and clinical research such as clinical trials and translational research which uses clinical data (basic research and other scientific areas are outside the scope of this document);
- does not cover the other biological species, i.e. genomes of viruses and microbes;
- does not cover the Sanger sequencing methods.

**ZWS ISO 20471:2013/Amd 1:2016**  
**High visibility clothing — Test methods and requirements**  
PriceCode: Gr.7  
23 pages  
Identical to ISO 20471:2013

This International Standard specifies requirements for high visibility clothing which is capable of visually signalling the user's presence. The high visibility clothing is intended to provide conspicuity of the wearer in any light condition when viewed by operators of vehicles or other mechanized equipment during daylight conditions and under illumination of headlights in the dark. For further information concerning risk situations, see Annex A. This International Standard is not applicable to medium-risk and low-risk situations. Performance requirements are included for colour and retroreflection as well as for the minimum areas and for the placement of the materials in protective clothing.

**ZWS ISO 20541:2011**  
**Milk and milk products – Determination of nitrate content – Method by enzymatic reduction and molecular absorption spectrometry after griess reaction**  
Price Code: Gr.7  
15 pages  
Identical to ISO 20541:2008

Specifies a method for the determination of the nitrate content of milk and milk products by molecular-absorption spectrometry after Griess reaction (preceded by enzymatic reduction).

**ZWS ISO 20675:2018**  
**Biogas - Biogas production, conditioning, upgrading and utilization - terms, definitions and classification scheme**  
Price Code: Gr.5  
20 pages  
Identical to ISO 20675:2018

This document defines terms and describes classifications related to biogas production by anaerobic digestion, gasification from biomass and power to gas from biomass sources, biogas conditioning, biogas upgrading and biogas utilization from a safety, environmental, performance and functionality perspective, during the design, manufacturing, installation, construction, testing, commissioning, acceptance, operation, regular inspection and maintenance phases. Biogas installations are, among others, applied at industrial plants like food and beverage industries, waste water treatment plants, waste plants, landfill sites, small scale plants next to agricultural companies and small scale household installations. The following topics are excluded from this document:

- boilers, burners, furnaces and lightening, in case these are not specifically applied for locally produced biogas;
- gas-fuelled engines for vehicles and ships;
- the public gas grid;
- specifications to determine biomethane quality;
- transportation of compressed or liquefied biogas;
- transportation of biomass or digestate;
- assessment and determination whether biomass is sourced sustainably or not.

This document describes the following for information purposes as well:

- the parameters to determine the size (e.g. small, medium-sized, or large scale);
- the parameters to determine the type of installation (e.g. domestic, industrial);
- the parameters to describe the type of technique;
- terms and processes in order to develop health, safety and environmental protection guidelines for biogas installations.

**ZWS ISO 20776: 2009**  
**Clinically laboratory testing and in vitro diagnostic test systems – Susceptibility testing of infectious agents and evaluation of performance of antimicrobial susceptibility test devices**  
**Part 1: Reference method for testing the in vitro activity of antimicrobial agents against rapidly growing aerobic bacteria involved in infectious diseases**  
Price Code: Gr. 6  
19 pages

Describes one reference method, broth microdilution for determination of MICs. The MIC reflects the activity of the drug under the described test conditions and can be interpreted for clinical management purposes by taking into account other factors such as pharmacology or bacterial resistance mechanism.

**Part 2: Evaluation of performance of antimicrobial susceptibility test devices**  
Price Code: Gr. 4  
9 pages  
Identical to ISO 20776.2: 2007

Establishes acceptable performance criteria for antimicrobial susceptibility test (AST) device that are used to determine minimum inhibitory concentrations (MIC) and/ or interpretive category determinations of susceptible, intermediate and resistant (SIR) strains of bacteria to antimicrobial agents in medical laboratories.

**ZWS ISO 20766: Part 1:2018**

**Road vehicles - liquefied petroleum gas (LPG) fuel system components. Part 1: general requirements and definitions**

Price Code: Gr. 5

8 pages

27 pages

Identical to ISO 20766-1:2018.

This document specifies general requirements and definitions of liquefied petroleum gas fuel system components, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles, and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 2:2018**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components — Part 2: performance and General test methods**

Price Code: Gr. 5

27 pages

Identical to ISO 20766-2:2018.

This document specifies performance and general test methods of liquefied petroleum gas fuel system components, intended for use on the types of motor vehicles as defined in ISO 3833.

This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using liquefied petroleum gas in accordance with ISO 9162.

**ZWS ISO 20766: Part 3:2018**

**Road vehicles — liquefied Petroleum gas (LPG) fuel system components —part 3: 80% stop valve**

Price Code: Gr. 4

6 pages

Identical to ISO 20766-3:2018.

This document specifies general requirements and definitions of liquefied petroleum gas fuel components, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles, and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 4:2018**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components — Part 4: level indicator**

Price Code: Gr. 4

5 pages

Identical to ISO 20766-4:2018.

This document specifies general requirements and definitions of liquefied petroleum gas fuel components, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles, and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 5:2023**

**Road vehicles – liquefied petroleum gas (LPG) fuel system components. Part 5: fuel selection system and electrical installations**

Price Code: Gr. 4

5 pages

Identical to ISO 20766-5:2023.

This document specifies general requirements and definitions of liquefied petroleum gas fuel components (fuel selection system and electrical installations, intended for use on the types of motor vehicles as

defined in ISO 3833). It also provides general design principles, and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 6:2019/Amd 1:2022**

**Road vehicles – liquefied petroleum gas (LPG) fuel system components. Part 6: pressure relief valves (prv)**

Price Code: Gr. 7

27 pages

Identical to Standard 20766-6:2019, (Amended 2022).

This document specifies general requirements and definitions of liquefied petroleum gas fuel components, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles, and specifies requirements for instructions and marking.

This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 7:2023**

**Road vehicles – liquefied petroleum gas (LPG) fuel system components.**

**Part 7: remotely controlled service valve with excess flow valve**

Price Code: Gr. 5

27 pages

Identical to ISO 20766-7:2023.

This document specifies general requirements and definitions of the liquefied petroleum gas fuel component: remotely controlled service valve with excess flow valve. This component is intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking.

This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) electronic fuel management;
- e) refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests.

All references to pressure in this document are considered gauge pressures unless otherwise specified.

This document applies to device which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane rich at 20 °C), hereinafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20766: Part 8:2023**

**Road vehicles – liquefied petroleum gas (LPG) fuel system components. Part 8: fuel pump**

Price Code: Gr. 4

4 pages

Identical to ISO 20766-8:2023.

This document specifies general requirements for the fuel pump component of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;

- b)stationary gas engines;
- c)container mounting hardware;
- d)electronic fuel management;
- e)refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests.

All references to pressure in this document are considered gauge pressures unless otherwise specified.

This document applies to device which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane rich at 20 °C), hereinafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20766: Part 9:2019**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components — Part 9 : pressure relief Devices (prd)**

Price Code: Gr. 5

8 pages

Identical to ISO 20766:2019.

This document specifies general requirements and definitions of liquefied petroleum gas fuel components, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles, and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following: a)fuel containers; b)stationary gas engines; c)container mounting hardware; d)electronic fuel management; e) refuelling receptacles.

**ZWS ISO 20766: Part 10:2019**

**Road vehicles - liquefied Petroleum gas (LPG) fuel system Components Part 10: gas-tight housing**

Price Code: Gr. 4

4 pages

Identical to ZWS ISO 20766-10: 2019

This document specifies general requirements and definitions of the liquefied petroleum gas fuel component: remotely controlled service valve with excess flow valve. This component is intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) electronic fuel management;
- e) refuelling receptacles.

**ZWS ISO 20766: Part 11:2020**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components Part 11: manual shut-off valve**

Price Code: Gr. 4

4 pages

Identical to 20766-11:2020

This document specifies general information regarding the manual shut off valve component of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It provides general design principles and specifies requirements for instructions and marking. It also specifies test requirements for the manual shut off valve. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162

**ZWS ISO 20766: Part 12:2019**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components**

**Part 12: non-return valve**

Price Code: Gr.4

4 pages

Identical to ISO 20766-12 published(2019).

This document specifies general information regarding the non-return valve component of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It provides general design principles and specifies requirements for instructions and marking. It also specifies test requirements for the non-return valve. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162.

**ZWS ISO 20766: Part 13:2022**

**Road vehicles — liquefied petroleum gas (LPG) fuel system components .**

**Part 13: multivalve**

Price Code: Gr. 4

4 pages

Identical to ISO 20766-13:2022.

This document specifies general requirements for the multivalve component of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a)fuel containers;
- b)stationary gas engines;
- c)container mounting hardware;
- d)electronic fuel management;
- e)refuelling receptacles.

**ZWS ISO 20766: Part 14:2023**

**Road vehicles — Liquefied petroleum gas (LPG) fuel system components**

**Part 14: Vaporizer/pressure regulator**

Price Code: Gr. 4

6 pages

Identical to ISO 20766-14:2023

This document specifies general requirements for the vaporizer/pressure regulator, a component of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) electronic fuel management;
- e) refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests. All references to pressure in this document are considered gauge pressures unless otherwise specified. This document applies to devices which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane at 20 °C), hereinafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20766: Part 15:2023****Road vehicles — Liquefied petroleum gas (LPG) fuel system components****Part 15: Excess flow valve**

Price Code: Gr. 4

4 pages

Identical to ISO 20766-15:2023

This document specifies general requirements of the liquefied petroleum gas fuel component, excess flow valve, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests. All references to pressure in this document are considered gauge pressures unless otherwise specified. This document applies to devices which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane rich at 20 °C), hereinafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20766: Part 16:2023****Road vehicles — Liquefied petroleum gas (LPG) fuel system components:****Part 16: Injectors and gas mixing device/fuel rail**

Price Code: Gr. 4

4 pages

Identical to ISO 20766-16:2023

This document specifies general requirements for the injectors and gas mixing device/fuel rail, components of liquefied petroleum gas fuel, intended for use on the types of motor vehicles as defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) electronic fuel management;
- e) refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests. All references to pressure in this document are considered gauge pressures unless otherwise specified. This document applies to devices which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane at 20 °C), hereinafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20766: Part 17:2022****Road vehicles — Liquefied petroleum gas (LPG) fuel system components:****Part 16: Injectors and gas mixing device/fuel rail**

Price Code: Gr. 4

4 pages

Identical to ISO 20766-17:2022

This document specifies general requirements and definitions for the gas dosage unit when not combined with the gas injection device (a liquefied petroleum gas fuel component), intended for use on the types of motor vehicles defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and marking. This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using gaseous fuels in accordance with ISO 9162. It is not applicable to the following:

- a) fuel containers;
- b) stationary gas engines;
- c) container mounting hardware;
- d) electronic fuel management;
- e) refuelling receptacles.

It is recognized that miscellaneous components not specifically addressed herein can be examined for compliance with the criteria of any applicable part of the ISO 20766 series, including testing to the appropriate functional tests. All references to pressure in this document are considered gauge pressures unless otherwise specified.

This document applies to device which have a service pressure in the range of 110 kPa (butane rich at 20 °C) and 840 kPa (propane rich at 20 °C), hereafter referred to in this document. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio).

**ZWS ISO 20780:2018****Space systems — fibre optic components — Design and verification requirements**

Price Code: Gr. 6

20 pages

Identical to ISO 20780:2018

This document specifies requirements for the design and verification of fibre optic components used in space fibre optic sub-systems. In this document, the requirements are established to assure the reliability and environmental adaptability of fibre optic components in space environmental conditions. These are in a range of applications such as ground systems, unmanned applications and manned systems. This document suggests a set of requirements to be applied to the selection of space fibre optic components.

**ZWS ISO 20914:2019****Medical laboratories — practical guidance for the estimation of measurement uncertainty**

Price Code: Gr. 7

75 pages

Identical to ISO 20780:2018

This document provides practical guidance for the estimation and expression of the measurement uncertainty (MU) of quantitative measurand values produced by medical laboratories. Quantitative measurand values produced near the medical decision threshold by point-of-care testing systems are also included in this scope. This document also applies to the estimation of MU for results produced by qualitative (nominal) methods which include a measurement step. It is not recommended that estimates of MU be routinely reported with patient test results, but should be available on request.



### **ZWS ISO 20916: 2019**

**In vitro diagnostic medical devices — clinical performance studies using specimens from human subjects — good study practice**  
Price Code: Gr. 8

60 pages

Identical to ISO 20916: 2019

This document defines good study practice for the planning, design, conduct, recording and reporting of clinical performance studies carried out to assess the clinical performance and safety of in vitro diagnostic (IVD) medical devices for regulatory purposes. NOTE 1: The purpose of these studies is to assess the ability of an IVD medical device in the hands of the intended user, to yield results pertaining to a particular medical condition or physiological/pathological state, in the intended population.

The document is not intended to describe whether the technical specifications of the IVD medical device in question are adequately addressed by the clinical performance study. This document identifies the principles that underpin clinical performance studies and specifies general requirements.

### **ZWS ISO 21001: 2018**

**Educational organisations – Management systems for educational organisations- Requirements with guidance for use**

Price Code: Gr. 6

60 pages

Identical to ISO 21001: 2018

This standard provides a common management tool for organisations providing educational products and services capable of meeting learners and other beneficiaries requirements.

### **ZWS ISO 21067: Part1:2016**

**Packaging – Vocabulary**

**Part 1: General terms**

Price Code: Gr 4

19 pages

Identical to ISO 21067-1:2016

Outlines the requirements of a safety management system for adventure tourism activity providers

### **ZWS ISO 21101:2014**

**Adventure tourism – safety management systems - Requirements**

Price Code: Gr 6

24 pages

Identical to ISO 21101:2014

Outlines the requirements of a safety management system for adventure tourism activity providers.

### **ZWS ISO 21103:2014**

**Adventure tourism – Information for participation**

Price Code: Gr 5

7 pages

Identical to ISO 21103:2014

Specifies minimum requirements for information to be provided to participation before, during and after adventure tourism activities.

### **ZWS ISO 21151:2020**

**In vitro diagnostic medical devices – measurement of quantities in samples of biological origin – Requirements for international harmonization protocols establishing metrological traceability of values assigned to calibrators and human samples**

PriceCode: Gr. 7

22 pages

Identical to ISO 21151:2020

This document specifies requirements for a protocol implemented by an international body to achieve equivalent results among two or more IVD MDs for the same measurand for cases where there are no reference measurement procedures and no fit-for-purpose certified reference materials or international conventional calibrators. In this case, the harmonisation protocol defines the highest level of metrological traceability for the stated measurand. This document can be applied in cases when certified reference materials or international conventional calibrators exist but are not fit-for-purpose because, for example, they are not commutable with human samples.

### **ZWS ISO 21187:2005**

**Milk – Quantitative determination of bacteriological quality – Guidance for establishing and verifying a conversion relationship between routine method results and anchor method results**

Price Code: Gr 6

13 pages

Identical to ISO 21187:2004

Gives guidelines for the establishment of a conversion relationship between the results of a routine method and an anchor method, and its verification for the quantitative determination of the bacteriological quality of milk.

### **ZWS ISO/TR 21276:2018**

**Clean cookstoves and clean cooking solutions –Vocabulary**

Price Code: Gr 6

15 pages

Identical to ISO/TR 21187:2018

This document defines terms for use in documents prepared by ISO/TC 285. Basic schematic illustrations are also provided to demonstrate relationships among certain concepts defined herein. This document deliberately excludes some information that could be useful in the practice of testing and evaluation. Designation of specific products, even as examples, is avoided so that the document stays up-to-date and inclusive.

### **ZWS ISO 21393:2021**

**Genomics informatics — Omics Markup Language (OML)**

Price Code: Gr 7

44 pages

Identical to ISO 21393:2021

This document is applicable to the data exchange format that is designed to facilitate exchanging omics data around the world without forcing changes of any database schema. This document specifies the characteristics of OML from the following perspectives. From an informatics perspective, OML defines the data exchange format based on XML. This document gives guidelines for the specifications of the data exchange format, but this document excludes the database schema itself. From a molecular side of view, this document is applicable to all kinds of omics data, while this document excludes the details of the molecules (e.g., details of genomic sequence variations or whole genomic sequence). This document is also applicable to the molecular annotations including clinical concerns and relations with other omics concerns. From an application side of view, this document is applicable to the clinical field including clinical practice, preventive medicine, translational research, and clinical research including drug discovery. This document does not apply to basic research and other scientific fields. From a biological species side of view, this document is applicable to the human health-associated species as human, preclinical animals, and cell lines. This document does not apply to the other biological species.

**ZWS ISO 21415: Part 2:2015****Wheat and wheat flour - Gluten content****Part 2:2015: Determination of wet gluten and gluten index by mechanical means**

Price Code: Gr 6

15 pages

Identical to ISO 21415-2:2015

This part of ISO 21415 specifies a method for determining the content of wet gluten and the gluten index for wheat flours (*Triticum aestivum* L. and *Triticum durum* Desf.) by mechanical means. This method is directly applicable to flours. It also applies to common and durum wheat after grinding, if their particular size distribution meets the specification given in Table B.1.

**ZWS ISO 21439:2009****Clinical Dosimetry-Beta Radiation Sources For Brachytherapy**

Price Code: Gr.8

91 pages

Identical to ISO 21439:2009

Specifies methods for the determination of absorbed-dose distributors in water or tissue that are required prior to initiating procedures for the application of beta radiation in ophthalmic tumor and intravascular brachytherapy

**ZWS ISO 21474: Part 1:2020****In vitro diagnostic medical devices – multiplex molecular testing for nucleic acids****Part 1: Terminology and general requirements for nucleic acid quality evaluation**

Price Code: Gr. 6

22 pages

Identical to ISO 201474-1:2020

This document provides the terms and general requirements for the evaluation of the quality of nucleic acids as the analytes for multiplex molecular tests, which simultaneously identify two or more nucleic acid target sequences of interest. This document is applicable to all multiplex molecular methods used for examination using in vitro diagnostic (IVD) medical devices and laboratory developed tests (LDTs). It provides information for both qualitative and quantitative detection of nucleic acid target sequences. This document is intended as guidance for multiplex molecular assays that detect and/or quantify human nucleic acid target sequences or microbial pathogen nucleic acid target sequences from human clinical specimens. This document is applicable to any molecular in vitro diagnostic examination performed by medical laboratories. It is also intended to be used by laboratory customers, in vitro diagnostics developers and manufacturers, biobanks, institutions and commercial organizations performing biomedical research, and regulatory authorities. This document is not applicable to metagenomics.

**ZWS ISO 21482:2007****Ironizing – Radiation warning - Supplementary**

Price Code: Gr 7

28 pages

Identical to ISO 21898:2004

Specifies materials, construction and design requirements, type test, certification and making requirements for flexible intermediate bulk containers (FIBCs) intended to contain non-dangerous solid materials in powder, granular or paste form, and designed to be lifted from above by integral or detachable devices.

**ZWS ISO 21527: Part 1:2008****Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds Part 1:2008: Colony count technique in products with water activity greater than 0,95**

Price Code: Gr 5

8 pages

Identical to ISO 21527-1:2008

Specifies materials, construction and design requirements, type test, certification and making requirements for flexible intermediate bulk containers (FIBCs) intended to contain non-dangerous solid materials in powder, granular or paste form, and designed to be lifted from above by integral or detachable devices.

**Part 2:2008 Colony count technique in products with water activity less than or equal to 0,95**

Price Code: Gr 5

9 pages

Identical to ISO 21527-2:2008

This part of ISO 21527 specifies a horizontal method for the enumeration of viable osmophilic yeasts and xerophilic moulds in products intended for human consumption or feeding of animals that have a water activity less than or equal to 0,95 (dry fruits, cakes, jams, dried meat, salted fish, grains, cereals and cereal products, flours, nuts, spices and condiments, etc. [Annex A]), by means of the colony count technique at 25 °C ± 1 °C (Reference [3]). This part of ISO 21527 does not apply to dehydrated products with water activity less than or equal to 0,60 (dehydrated cereals, oleaginous products, spices, leguminous plants, seeds, powders for instant drinks, dry products for domestic animals, etc.) and does not allow the enumeration of mould spores (Reference [3]). Neither the identification of fungal flora nor the examination of foods for mycotoxins lie within the scope of this part of ISO 21527. The method specified in this part of ISO 21527 is not suitable for enumeration of halophilic.

**WARNING — It is essential that enumeration of moulds is carried out with the greatest care to protect the operator and to prevent contamination of the atmosphere with mould spores.**

**ZWS ISO 21528: Part 2:2017****Microbiology of the food chain- Horizontal method for the detection and enumeration of enterobacteriaceae****Part 2: Colony-count technique**

Price Code: Gr. 6

14 pages

Identical to ISO 21528-2:2017

This document specifies a method for the enumeration of Enterobacteriaceae. It is applicable to products intended for human consumption and the feeding of animals, and environmental samples in the area of primary production, food production and food handling. This technique is intended to be used when the number of colonies sought is expected to be more than 100 per millilitre or per gram of the test sample. The most probable number (MPN) technique, as included in ISO 21528 1, is generally used when the number sought is expected to be below 100 per millilitre or per gram of test sample.

**ZWS ISO 21649: 2009****Needle – Free injectors for medical use – Requirements and test methods**

Price Code: Gr. 7

32 pages

Identical to ISO 21649: 2006

Applies to safety and performance and testing requirements for single-use and multiple-use needle-free injection systems intended

for human use in clinics and other medical settings and for personal use by patients.

**ZWS ISO 21703: 2019**  
**Surface active agents — Microbiology — Microbiological test methods for liquid hand dishwashing**

Price Code: Gr. 6  
19 pages  
Identical to ISO 21703: 2019

This document provides microbiological test methods for enumeration and detection of aerobic mesophilic bacteria, detection of *Escherichia coli* and *Pseudomonas aeruginosa* in liquid hand dishwashing.

**ZWS ISO 21795: Part 1:2021**  
**Mine closure and reclamation planning.**  
**Part 1: requirements**

Price Code: Gr. 10  
16 pages  
Identical to ISO ISO 21795-1:2021.

This document specifies a framework and the processes involved in mine closure and reclamation planning for new and operating mines.

**ZWS ISO 21795: Part 2:2021**  
**Mine closure and reclamation planning.**  
**Part 2: guidance**

Price Code: Gr. 8  
76 pages  
Identical to ISO 21795-2:2021.

This document provides guidance related to the necessary mine closure and reclamation planning activities for new and operating mines

**ZWS ISO 21898:2004**  
**Packaging – Flexible intermediate bulk containers (FIBCs) for non-dangerous goods**

Price Code: Gr 7  
28 pages  
Identical to ISO 21898:2004

Specifies materials, construction and design requirements, type test, certification and making requirements for flexible intermediate bulk containers (FIBCs) intended to contain non-dangerous solid materials in powder, granular or paste form, and designed to be lifted from above by integral or detachable devices

**ZWS ISO 22000:2018**  
**Food safety management systems - Requirements for any organisation in the food chain**

Price Code: Gr. 10  
40 pages  
Supercedes ZWS ISO 22000:2018

This document specifies requirements for a food safety management system (FSMS) to enable an organization that is directly or indirectly involved in their food chain.

**ZWS ISO/TS 22002:2009**  
**Technical Specification – Prerequisite programmes on food safety**  
**Part 1: Food Manufacturing**

Price Code: Gr. 6  
18 pages  
Identical to ISO /TS 22002.1:2009

Specifies requirements for establishing, implementing and maintaining prerequisite programmes (PRP) to assist in controlling food safety hazards.

**ZWS ISO/TS 22002: Part 2:2013**

**Part 2: Catering**  
Price Code: Gr.6  
18 pages  
Identical to ISO/TS 22002.2:2013

Applicable to all organizations which are involved in the processing, preparation, distribution, transport and serving of food and meals and wish to implement PRPs in accordance with the requirements specified in ISO 22000:2005

**ZWS ISO/TS 22002: Part 3:2011**

**Part 3: Farming**  
Price Code: Gr. 7  
24 pages  
Identical to ISO/TS 22002.3:2011

Specifies requirements and guidelines for the design, implementation and documentation of prerequisite programmes (PRPs) that maintain a hygienic environment and assist in controlling food safety hazards in the food chain.

**ZWS ISO/TS 22002: Part 4:2013**

**Part 4: Food packaging manufacturing**  
Price Code: Gr. 7  
24 pages  
Identical to ISO/TS 22002.4:2013

Specifies requirements for establishing, implementing and maintaining prerequisite programmes (PRPs) to assist in controlling food safety hazards in manufacture of packaging.

**ZWS ISO/TS 22002: Part 6:2016**

**Part 6: Feed and animal food production**  
Price Code: Gr. 5  
15 pages  
Identical to ISO/TS 22002.6:2016

Specifies requirements for establishing, implementing and maintaining prerequisite programmes (PRPs) to assist in controlling food safety hazards in feed and animal food and in materials intended for use in the production of feed and animal food. Feed safety in this context relate to attributes that have a potential to affect adversely animal and/or human health

**ZWS ISO/TS 22003: Part 1:2022**

**Food safety**  
**Part 1 – Requirements for bodies providing audit and certification of food safety management systems**

Price Code: Gr 7  
26 pages  
Identical to ISO/TS 22003: Part 1:2022

This document specifies the requirements for the audit and certification of a food safety management system (FSMS) complying with the requirements given in ISO 22000 (or other specified FSMS requirements). It also provides the necessary information and confidence to customers about the way certification of their suppliers has been granted. Certification of FSMS is a third-party conformity assessment activity (as described in ISO/IEC 17000:2020, 4.3), and bodies performing this activity are third-party conformity assessment bodies.

**ZWS ISO/TS 22003: Part 2:2022**

**Food safety**

**Part 2 – Requirements for bodies providing evaluation and certification of products, processes and services, including an audit of the food safety system**

Price Code: Gr 7

26 pages

Identical to ISO/TS 22003: Part 2:2022

This document is supplemental to ISO/IEC 17065. It specifies the rules applicable for the audit of a food safety system (FSS) and certification of products, processes and services complying with requirements of a certification scheme that is based on the internationally accepted principles of food safety (e.g. CODEX General Principles of Food Hygiene[8]) and includes management system elements.

**ZWS ISO 22004:2014**

**Food safety management systems – Guidance on the application of ISO 22000**

Price Code: Gr 7

13 pages

Identical to ISO/TS 22004:2005

Provides generic guidance that can be applied in the use of ISO 22000.

**ZWS ISO 22005:2008**

**Traceability in the feed and food chain – General principles and basic requirements for system design and implementation**

Price Code: Gr 4

8 pages

Identical to ISO 22005:2007

Gives the principles and specifies basic requirements for the design and implementation of a feed and food traceability systems. It can be applied by an organization operating at any step in the feed and food chain.

**ZWS ISO 22006:2009**

**Quality management systems – Guidelines for the application of ISO 9001:2008 to crop production**

Price Code: Gr .8

60 pages

Identical to ISO 22006:2009

Gives guidance to assist crop producers in the adoption of ISO 9001:2008 for crop production processes. The term crop production includes seasonal crops (such as grains, pulses, oilseeds, spices, fruit and vegetables) row planted crops that are cultivated, perennial crops that are managed over a period of time and wild crops that are not formally planted or managed. Horticultural crops provide an even broader range of types from annual to perennial fruits, vegetables and ornamental flowering plants to perennial shrubs and trees and root crops.

**ZWS ISO 22160:2007**

**Milk and milk based drinks – Determination of alkaline phosphatase activity – Enzymatic Photo – activated system (EPAS) method.**

Price Code: Gr 6

16 pages

Identical to ISO 22160:2007

Specifies a method for the determination of the alkaline phosphatase activity in pasteurized whole milk, semi skimmed milk, cream and flavoured milks using chemiluminescent (EPAS) method.

**ZWS ISO/IEC 22237: Part 1:2021**

**Information technology — Data centre facilities and infrastructures**

**Part 1: General concepts**

Price Code: Gr. 7

31 pages

Identical to ISO/IEC 22237-1:2021

This document:

- a) describes the general principles for data centres upon which the requirements of the ISO/IEC 22237 series are based;
- b) defines the common aspects of data centres including terminology, parameters and reference models (functional elements and their accommodation) addressing both the size and complexity of their intended purpose;
- c) describes general aspects of the facilities and infrastructures required to support data centres;
- d) specifies a classification system, based upon the key criteria of “availability”, “security” and “energy-efficiency” over the planned lifetime of the data centre, for the provision of effective facilities and infrastructure;
- e) details the issues to be addressed in a business risk and operating cost analysis enabling application of the classification of the data centre;
- f) provides a reference to the operation and management of data centres.

The following topics are outside of the scope of the ISO/IEC 22237 series:

- 1) the selection of information technology and network telecommunications equipment, software and associated configuration issues are outside the scope of this International Standard;
- 2) quantitative analysis of overall service availability resulting from multi-site data centres;
- 3) safety and electromagnetic compatibility (EMC) requirements (covered by other standards and regulations. However, information given in this document can be of assistance in meeting these standards and regulations).

**ZWS ISO/IEC 22237: Part 2:2018**

**Information technology — data centre facilities and infrastructures**

**Part 2: Building construction**

Price Code: Gr. 6

25 pages

Identical to ISO/IEC 22237-2:2018

This document addresses the construction of buildings and other structures which provide accommodation for data centres based upon the criteria and classification for “physical security” within ISO/IEC TS 22237 1 in support of availability. This document specifies requirements and recommendations for the following:

- a) location and site selection;
- b) building construction;
- c) building configuration;
- d) fire protection;
- e) quality construction measures.

Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document may be of assistance in meeting these standards and regulations.

**ZWS ISO/IEC 22237: Part 3:2021**

**Information technology – Data centre facilities and infrastructures**

**Part 3: Power distribution**

Price Code: Gr. 7

35 pages

Identical to ISO/IEC 22237-3:2021

This document addresses power supplies to, and power distribution within, data centres based upon the criteria and classifications for “availability”, “physical security” and “energy efficiency enablement” within ISO/IEC 22237 1. This document specifies requirements and recommendations for the following:

- a) power supplies to data centres;
- b) power distribution systems to all equipment within data centres;
- c) telecommunications infrastructure bonding;
- d) lightning protection;
- e) devices for the measurement of the power consumption and power quality characteristics at points along the power distribution system and their integration within management tools. Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document can be of assistance in meeting these standards and regulations. Conformance of data centres to the present document is covered in Clause 4. The use of the data centre stored energy or alternate sources to be used by the grid is not in the scope of this document and is for consideration in future specifications.

**ZWS ISO/IEC 22237: Part 4:2021**  
**Information technology – Data centre facilities and infrastructures**

**Part 4:2021: Environmental control**

Price Code: Gr. 6

24 pages

Identical to ISO/IEC 22237-4:2021.

This document addresses environmental control within data centres based upon the criteria and classifications for “availability”, “security” and “energy efficiency enablement” within ISO/IEC 22237-1. This document specifies requirements and recommendations for the following:

- a) temperature control;
- b) fluid movement control;
- c) relative humidity control;
- d) particulate control;
- e) vibration;
- f) physical security of environmental control systems.

**ZWS ISO/IEC 22237: Part 5:2018**  
**Information technology — Data centre facilities and infrastructures**

**Part 5: Telecommunications cabling infrastructure**

Price Code: Gr. 6

32 pages

Identical to ISO/IEC 22237-5:2018

This document addresses the wide range of telecommunications cabling infrastructures within data centres based upon the criteria and classifications for “availability” within ISO/IEC TS 22237 1.

This document specifies requirements and recommendations for the following:

- a) information technology and network telecommunications cabling (e.g. SAN and LAN);
- b) general information technology cabling to support the operation of the data centre;
- c) telecommunications cabling to monitor and control, as appropriate, power distribution, environmental control and physical security of the data centre;
- d) other building automation cabling;
- e) pathways, spaces and enclosures for the telecommunications cabling infrastructures.

Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document may be of assistance in meeting these standards and regulations.

**ZWS ISO/IEC 22237: Part 6:2024**

**Information technology — Data centre facilities and infrastructures**

**Part 6: Security systems**

Price Code: Gr. 7

34 pages

Identical to 22237-6:2024

This document specifies requirements and recommendations concerning the physical security of data centres based on the criteria and classifications for “availability”, “security” and “energy efficiency enablement” within ISO/IEC 22237-1. This document provides designations for the data centre spaces defined in ISO/IEC 22237-1. This document specifies requirements and recommendations for such data centre spaces, and the systems employed within those spaces, in relation to protection against:

- a) unauthorized access addressing organizational and technological solutions;
- b) intrusion;
- c) internal fire events igniting within data centre spaces;
- d) internal environmental events (other than fire) within the data centre spaces which would affect the defined level of protection;
- e) external environmental events outside the data centre spaces which would affect the defined level of protection.

**NOTE:** Constructional requirements and recommendations are provided by reference to ISO/IEC 22237-2.

Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document can be of assistance in meeting these standards and regulations.

Conformance of data centres to the present document is covered in Clause 4.

**ZWS ISO 22300:2021**  
**Security and resilience — vocabulary**

Price Code: Gr. 7

63 pages

Identical to ISO 22300:2021

This document defines terms used in security and resilience standards.

**ZWS ISO 22301:2019**  
**Security and resilience – Business continuity management systems – Requirements**

Price Code: Gr. 7

23 pages

Identical to ISO 22301:2019

This document specifies requirements to implement, maintain and improve a management system to protect against, reduce the likelihood of the occurrence of, prepare for, respond to and recover from disruptions when they arise. The requirements specified in this document are generic and intended to be applicable to all organizations, or parts thereof, regardless of type, size and nature of the organization. The extent of application of these requirements depends on the organization’s operating environment and complexity. This document is applicable to all types and sizes of organizations that:

- a) implement, maintain and improve a BCMS;
- b) seek to ensure conformity with stated business continuity policy;
- c) need to be able to continue to deliver products and services at an acceptable predefined capacity during a disruption;
- d) seek to enhance their resilience through the effective application of the BCMS.

This document can be used to assess an organization’s ability to meet its own business continuity needs and obligations.

**ZWS ISO 22316 :2017**  
**Security and resilience — organizational resilience — principles and attributes**

Price Code: Gr. 6  
11 pages  
Identical to ISO 22316:2017.

This document provides guidance to enhance organizational resilience for any size or type of organization. It is not specific to any industry or sector. This document can be applied throughout the life of an organization.

This document does not promote uniformity in approach across all organizations, as specific objectives and initiatives are tailored to suit an individual organization's needs.

**ZWS ISO/TS 22317 :2021**  
**Security and resilience - business continuity management systems - guidelines for business impact analysis**

Price Code: Gr. 7  
37 pages  
Identical to ISO TS 22317:2021.

This document gives guidelines for an organization to implement and maintain a formal and documented business impact analysis (BIA) process appropriate to its needs. It does not prescribe a uniform process for performing a BIA. This document is applicable to all organizations regardless of type, size and nature, whether in the private, public or not-for-profit sectors. The guidance can be adapted to the needs, objectives, resources and constraints of the organization.

**ZWS ISO/TS 22318:2021**  
**Security and resilience — business continuity management systems - Guidelines for supply chain continuity management**

Price Code: Gr. 6  
21 pages  
Identical to ISO TS 22318:2021.

This document gives guidance on methods for understanding and extending the principles of business continuity embodied in ISO 22301 and ISO 22313 to the management of supplier relationships. It enables an organization to develop and document the strategy to be better prepared to manage supply chain continuity. This document is generic and applicable to all organizations. It is applicable to suppliers of products, services and resources, both upstream and downstream. Supply chain continuity management (SCCM) specifically considers the issues faced by an organization which relies on the continuity of supply of resources as well as the ability to continue delivery of its products and services. The objective of SCCM is to protect the organization's business activities from supply chain disruption.

**ZWS ISO/TS 22319:2017**  
**Security and resilience - Community resilience — Guidelines for planning the involvement of spontaneous volunteers**

Price Code: Gr. 7  
16 pages  
Identical to ISO TS 22319:2017

This document provides guidelines for planning the involvement of spontaneous volunteers (SVs) in incident response and recovery. It is intended to help organizations to establish a plan to consider whether, how and when SVs can provide relief to a coordinated response and recovery for all identified hazards. It helps identify issues to ensure the plan is risk-based and can be shown to prioritize the safety of SVs, the public they seek to assist and incident response staff. This document is intended for use by organizations with responsibility for, or involvement in, part or all of the planning for working with SVs. It is applicable to all types and sizes of organizations that are involved in the planning for, and management of, SVs (e.g. local, regional, and national governments, statutory bodies, international and non-governmental organizations, businesses and public and community groups).

The range of tasks performed by SVs can require only basic planning (e.g. for people who are first on the scene), or a plan that is more complex (e.g. for people who travel to the affected area to volunteer). Coordinating the participation of volunteers who are affiliated to voluntary or professional organizations to provide relief is not within the scope of this document.

**ZWS ISO/TS 22320:2018**  
**Security and resilience – Emergency management – Guidelines for incident management**

Price Code: Gr. 7  
20 pages  
Identical to ISO TS 22320:2018

This document gives guidelines for incident management, including principles that communicate the value and explain the purpose of incident management, basic components of incident management including process and structure, which focus on roles and responsibilities, tasks and management of resources, and working together through joint direction and cooperation. This document is applicable to any organization involved in responding to incidents of any type and scale. This document is applicable to any organization with one organizational structure as well as for two or more organizations that choose to work together while continuing to use their own organizational structure or to use a combined organizational structure.

**ZWS ISO/TS 22330:2018**  
**Security and resilience – Business continuity management systems – Guidelines for people aspects of business continuity**

Price Code: Gr. 7  
39 pages  
Identical to ISO/TS 22330:2018

This document gives guidelines for the planning and development of policies, strategies and procedures for the preparation and management of people affected by an incident.

This includes:  
—preparation through awareness, analysis of needs, and learning and development;  
—coping with the immediate effects of the incident (respond);  
—managing people during the period of disruption (recover);  
—continuing to support the workforce after returning to business as usual (restore). The management of people relating to civil emergencies or other societal disruption is out of the scope of this document.

**ZWS ISO/TS 22331:2018**  
**Business continuity management systems – Guidelines for business continuity strategy**

Price Code: Gr. 7  
25 pages  
Identical to ISO 22331:2022.

This document gives guidance for business continuity strategy determination and selection. It is applicable to all organizations regardless of type, size and nature, whether in the private, public or not-for-profit sectors. It is intended for use by those responsible for, or participating in, strategy determination and selection.

**ZWS ISO 22367:2020**  
**Medical laboratories — Application of risk management to medical laboratories**

Price Code: Gr. 8  
89 pages  
Identical to ISO/TS 22367:2020

This document specifies a process for a medical laboratory to identify and manage the risks to patients, laboratory workers and service providers that are associated with medical laboratory examinations. The process includes identifying, estimating, evaluating,

controlling and monitoring the risks. The requirements of this document are applicable to all aspects of the examinations and services of a medical laboratory, including the pre-examination and post-examination aspects, examinations, accurate transmission of test results into the electronic medical record and other technical and management processes described in ISO 15189.

This document does not specify acceptable levels of risk.

This document does not apply to risks from post-examination clinical decisions made by healthcare providers.

This document does not apply to the management of risks affecting medical laboratory enterprises that are addressed by ISO 31000, such as business, economic, legal, and regulatory risks.

#### **ZWS ISO/TS 22398:2013**

##### **Societal security – Guidelines for exercises**

Price Code: Gr. 7

38 pages

Identical to ISO/TS 22398:2013

This International Standard recommends good practice and guidelines for an organization to plan, conduct, and improve its exercise projects which may be organized within an exercise programme.

It is applicable to all organizations regardless of type, size or nature, whether private or public. The guidance can be adapted to the needs, objectives, resources, and constraints of the organization. It is intended for use by anyone with responsibility for ensuring the competence of the organization's personnel, particularly the leadership of the organization, and those responsible for managing exercise programmes and exercise projects..

#### **ZWS ISO 22662:2009**

##### **Milk and milk products – Determination of lactose content by high-performance liquid chromatograph (Reference method)**

Price Code: Gr. 4

10 pages

Identical to ISO 22662:2007

Specifies the reference method for the determination of lactose content of raw milk, heat-treated milks, dried milk and raw and pasteurized cream.

#### **ZWS ISO/TS 22690:2021**

##### **Genomics informatics - Reliability assessment criteria for high-throughput gene-expression data**

Price Code: Gr. 5

11 pages

Identical to ISO/TS 22690:2021

This document specifies reliability assessment criteria for high-throughput gene-expression data. It is applicable to assessing the accuracy, reproducibility, and comparability of gene-expression data that are generated from microarray, next-generation sequencing, and other forms of high-throughput technologies. This document identifies the quality-related data for the process of the next-generation sequencing of RNA (RNA-seq). The sequencing platform covered by this document is limited to short-read sequencers. The use of RNA-seq for mutation detection and virus identification is outside of the scope of this document. This document is applicable to human health associated species such as human, cell lines, and preclinical animals. Other biological species are outside the scope of this document. From a biological point of view, expression profiles of all genetic sequences including genes, transcripts, isoforms, exons, and junctions are within the scope of this document

#### **ZWS ISO/TS 22692:2020**

##### **Genomics informatics — Quality control metrics for DNA sequencing**

Price Code: Gr. 6

16 pages

Identical to ISO/TS 22692:2020

This document identifies quality metrics for the detection of DNA variants using next generation sequencing (NGS) technology. It also defines the data types, relationships, optionality, cardinalities and terminology bindings of the data. This document provides a basis for sharing and for the application of “high quality” genomic data and contributes to the realization of the precision medicine and the development of relevant industries. This document is intended to serve as a catalogue of sequencing data elements used to address quality metrics for various clinical, industrial and commercial applications. The exchange of these data allows researchers, commercial entities, and regulatory bodies to assess for the purpose of selective utilization of the data by setting application-specific quality criteria. This document is not intended for

—sequencing methods other than NGS, such as the Sanger sequencing,  
—targets other than genome, such as transcriptome or proteome, or  
—specimens of species other than humans.

#### **ZWS ISO/ TS 22693:2021**

##### **Genomics informatics - Structured clinical gene fusion report in electronic health records**

Price Code: Gr. 6

23 pages

Identical to ISO/TS 22693:2021

The document defines the data elements and their necessary metadata to implement a structured clinical gene fusion report whose data are generated by next generation sequencing technologies. This document

—describes the reporting guideline for RNA sequencing approaches focusing on detecting novel and known fusion partners,  
—defines the required data fields and their metadata for a structured clinical gene fusion report,  
—defines the optional data fields and their metadata,  
—covers the fusion gene from human specimen using whole transcriptome sequencing by next generation sequencing technologies for clinical practice and translational research,  
—does not cover the fusion gene detection using DNA sequencing methods,  
—does not cover the basic research and other scientific areas,  
—does not cover the other biological species,  
—does not cover the Sanger sequencing methods, and  
—does not cover the other structural variations.

This document only defines the data elements and their metadata for the structured clinical sequencing report in electronic health records. Therefore, its layout can be designed based on the institutional decision if all elements are included as in this document.

#### **ZWS ISO 22716:2007**

##### **Cosmetics – Good manufacturing practices (GMP) – Guidelines on good manufacturing practices**

Price Code: Gr. 6

21 pages

Identical to ISO 22716:2007

Gives guidelines for the production, control, storage and shipment of cosmetic products.

#### **ZWS ISO 22870:2006**

##### **Point-of-care testing (POCT) – Requirements for quality and competence**

Price Code: Gr. 8

11 pages

Identical to ISO 22870:2006

Gives specific requirements applicable to point-of-care testing and is intended to be used in conjunction with ISO 15189. The requirements of this international standard apply when POCT is carried out in hospital, clinic and by a healthcare organization providing

ambulatory care. It can be applied to transcutaneous measurements the analysis of expired air and *in vivo* monitoring of physiological parameters.

**ZWS ISO 22935:2009**

**Milk and milk products – Sensory analysis**

**Part 1: General guidance for the recruitment, selection, training and monitoring of assessors**

Price Code: Gr. 6

19 pages

Identical to ISO 22935.1:2009

Gives general guidance for the recruitment, selection, training and monitoring of assessors for sensory analysis of milk and milk products. It supplements the information given in ISO 8586.1 and parts of ISO 8586.2 that deal with expert assessors.

**Part 2: Recommendations methods for sensory evaluation**

Price Code: Gr 6

23 pages

Specifies recommended methods for the sensory evaluation of specific milk and milk products. It specifies criteria for the sampling and preparation of samples and the assessment of the samples.

**Part 3: Guidance on a method for evaluation of compliance with products specifications for sensory properties by scoring**

Price Code: Gr 3

7 pages

Identical to ISO 22925.3:2009

Gives guidance on a general method for evaluation of compliance with product specifications for sensory properties based on sensory scoring and the use of a common nomenclature of terms.

**ZWS ISO/IEC 22989:2022**

**Information technology – Artificial intelligence – Artificial intelligence concepts and terminology**

Price Code: Gr. 8

61 pages

Identical to ISO ISO/IEC 22989:2022

This document establishes terminology for AI and describes concepts in the field of AI. This document can be used in the development of other standards and in support of communications among diverse, interested parties or stakeholders. This document is applicable to all types of organizations (e.g. commercial enterprises, government agencies, not-for-profit organizations).

**ZWS ISO 23058:2006**

**Milk and milk products – Ovine and caprine rennets – determination of total milk – Clotting activity**

Price Code: Gr 5

13 pages

Identical to ISO 23058:2006

Specifies a method for the determination of the total milk clotting activity of an ovine or caprine rennet, including rennet paste, containing only chymosin and pepsin as the active coagulating enzymes on a standard milk substrate prepared using a calcium chloride solution of 0,5 per litre (pH 6,5).

**ZWS ISO 23409:2011**

**Male condoms – Requirements and test methods for condoms made from synthetic materials**

Price Code: Gr. 7

44 pages

Identical to ISO 23409:2011

Specifies the minimum requirements and the test methods applicable to male condoms produced from synthetic materials or blends of synthetic materials and natural rubber latex which are used for contraceptive purposes and to aid in the prevention of sexually transmitted infections.

**ZWS ISO 23590:2020**

**Household biogas system requirements: design, installation, operation, maintenance and safety**

Price Code: Gr 6

13 pages

Identical to ISO 23590:2020

This document covers the requirements for the design, installation, operation, maintenance and the safety of Household Biogas Systems (HBSs), producing biogas in an amount equivalent to an installation capacity of less than 100 MWh per year. The document applies to HBSs comprising of pipeline and equipment with pressure levels of less than 5 kPa. Any equipment or appliances connected to an HBS or utilizing the biogas energy of an HBS are not a part of the scope of this document.

**ZWS ISO 23640:2012**

**Invitro diagnostic medical devices – Evaluation of stability of invitro diagnostic reagents**

Price Code: Gr. 4

7 pages

Identical to ISO 23640:2011

Applicable to the stability evaluation of in vitro diagnostic medical devices, including reagents, calibrators, control materials, diluents, buffers and reagent kits hereinafter called IVD reagents. This international standard can also be applied to specimen collection devices that contain substances used to preserve samples or to initiate reactions for further processing of the sample in the collection device.

**ZWS ISO 23907:2012**

**Sharps injury protection – Requirements and test methods – Sharps containers**

Price Code: Gr. 4

10 pages

Identical to ISO 23907:2012

Specifies requirements for single-use sharps containers intended to hold potentially hazardous sharps medical waste with or without sharps protection features e.g. scalpel blades, trocars, hypodermic needles and syringes.

**ZWS ISO 23908:2011**

**Sharps injury protection – Requirements and test methods – Sharps protection features for single-use hypodermic needles, introducers for catheters and needles used for blood sampling**

Price Code: Gr. 4

11 pages

Identical to ISO 23908:2011

Gives requirements and test methods for evaluating the performance parameters of sharps injury protection features, whether active or passive in design for medical devices containing (sharp) hypodermic needles for single use introducers for catheters and lancets and other needles used in blood sampling.

**ZWS ISO TS 24178:2021**

**Human Resources Management – Organisational culture metrics cluster**

Price

Code: Gr

5

17 pages

Identical to ISO 24178:2021



This document describes the elements of organizational culture and provides the formula for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting the organizational culture data, especially when deciding on appropriate interventions internally and when reporting these to external stakeholders (e.g. regulators, investors).

#### **ZWS ISO TS 24179:2020**

##### **Human Resources Management – Occupational health and safety metrics**

Price Code: Gr. 5  
10 pages  
Identical to ISO 24179:2020

This document describes the elements of organizational health, safety and well-being. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting the compliance data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

#### **ZWS ISO 24266:2020**

##### **Footwear - Test methods for whole shoe - Flexing durability**

Price Code: Gr.6  
11 pages  
Identical to ISO 24266:2020

This document specifies two test methods for the determination of the flexing durability of whole shoes. The two methods might not give comparable results.

**NOTE:** The selected test method depends on agreement between relative parties who use this test method or product standards which reference this test method. These methods are not applicable to the whole shoes with heel height more than 50 mm, or the thickness of flexing area of the soles more than 25 mm, or flexing angle less than 45° according to ISO 17707:2005, Clause 6.

#### **ZWS ISO 24267:2020**

##### **Footwear - Determination of coefficient of friction for footwear and sole components**

Price Code: Gr.5  
8 pages  
Identical to ISO 24267:2020

This document provides a method for determining the coefficient of friction between footwear and floorings under conditions simulating those experienced in the phases of a typical walking step when slip is most likely to occur. The method is applicable to all types of footwear and footwear components, outsole units, heel top pieces (top lifts) and sheet soling materials, excepting PPE footwear (Personal Protective Equipment) and special purpose footwear containing spikes, metal studs or similar.

#### **ZWS ISO 24510:2008**

##### **Activities relating to drinking water and waste water services – Guidelines for the assessment and for the improvement of the service to users**

Price Code: Gr 7  
62 pages  
Identical to ISO 24510:2007

Specifies the elements of drinking water and waste water services of relevance and interest to users. It also provides guidance on how to identify users' needs and expectations and how to assess whether they are being met.

#### **ZWS ISO 24511:2008**

##### **Activities relating to drinking water and waste water services – Guidelines for the management of waste water utilities and for the assessment of waste water services**

Price Code: Gr. 7  
59 pages  
Identical to ISO 24511:2007

Provides guidelines for the management of waste water utilities and for the assessment of waste water services.

#### **ZWS ISO 24512:2008**

##### **Activities relating to drinking water and waste water services – Guidelines for the management of drinking water utilities and for the assessment of drinking water services**

Price Code: Gr. 7  
54 pages  
Identical to ISO 24512:2007

Provides guidelines for the management of drinking water utilities and for the assessment of drinking water services. It is applicable to publicly and privately owned and operated water utilities. It does not favour any particular ownership or operating model.

#### **ZWS ISO 24516:2016**

##### **Guidelines for the management of assets of water supply and waste water systems**

**Part 1: Drinking water distribution networks**  
Price Code: Gr. 7  
47 pages  
Identical to ISO 24516.1:2016

The standard specifies guidelines for technical aspects, tools and good practices for the management of assets of drinking water networks to maintain value from existing assets.

#### **ZWS ISO 24518:2016**

##### **Activities relating to drinking water and wastewater services – Crisis management of utilities**

Price Code: Gr. 6  
23 pages  
Identical to ISO 24518:2015

Provides general guidance to water utilities to develop and implement a crisis management system.

#### **ZWS ISO 24521:2016**

##### **Activities relating to drinking water and wastewater services – guidelines for the management of basic on-site domestic wastewater services**

Price Code: Gr. 8  
58 pages  
Identical to ISO 24521:2016

Provides guidance for the management of basic on-site domestic wastewater services, using appropriate technologies in their entirety at any level of development.

#### **ZWS ISO/IEC 24773: Part 1:2019**

##### **Software and systems engineering – Certification of software and systems engineering professionals**

**Part 1:2019: General requirements**  
Price Code: Gr. 6  
11 pages  
Identical to ISO/IEC 24773-1:2019

This document is part one of the ISO/IEC 24773 series. It contains the requirements which will be common to all other parts of the ISO/IEC 24773 series, for certifications (schemes and bodies) in the domain of software and systems engineering.

**ZWS ISO/TR 25108:2006****Non-Destructive testing – Guidelines for NDT personnel training organizations**

Price Code: Gr. 4

9 pages

Identical to ISO /TR 25108:2006

Gives guidelines for non-destructive testing (NDT) training organizations with the intention of harmonizing and maintaining the general standard of training of NDT personnel for industrial needs.

**ZWS ISO 25720:2009****Health informatics - Genomic Sequence Variation Markup Language (GSVML)**

Price Code: Gr. 9

133 pages

Identical to ISO 25720:2009

This International Standard is applicable to the data exchange format that is designed to facilitate the exchange of the genomic sequence variation data around the world, without forcing change of any database schema. From an informatics perspective, GSVML defines the data exchange format based on XML. The scope of this International Standard is the data exchange format, but the database schema itself is outside the scope of this International Standard. From a biological point of view, all genetic sequence variations are taken into consideration and are within the scope of this International Standard, while polymorphisms, especially SNPs, are the main focus of this International Standard. In other words, the annotations of variation as clinical concerns and -omics concerns are within the scope of this International Standard. Though SNPs exist in various biological species, the scope of this International Standard covers the human health associated species as human, cell line, and preclinical animals. The other biological species are outside the scope of this International Standard. The clinical field is within the scope of this International Standard, but the basic research fields and other scientific fields are outside the scope of this International Standard. Here, clinical research, including drug discovery, is within the scope of this International Standard. As for supposed application fields, the main focus is in human health, including clinical practice, preventive medicine, translational research and clinical researches.

**ZWS ISO 25841:2011****Female condoms – Requirements and test methods**

Price Code: Gr. 7

40 pages

Identical to ISO 25841:2011

Specifies the minimum requirements and test methods for female condoms which are supplied to consumers for contraceptive purposes assisting in the prevention of sexually transmitted infections.

**ZWS ISO 26000:2010****Guidance on Social Responsibility**

Price Code: Gr.10

106 pages

Identical to ISO 26000:2010

Provides guidance to all types of organizations, regardless of their size or location.

**ZWS ISO 26462:2011****Milk – Determination of lactose content – enzymatic method using difference in pH**

Price Code: Gr. 5

11 pages

Identical to ISO 26462:2010

Specifies an enzymatic method for the determination of the lactose content of milk and reconstituted milk by measurement of the difference in pH (differential pH measurement).

**ZWS ISO/IEC 27000:2016****Information technology – Security techniques – Information security management systems – Overview and vocabulary**

Price Code: Gr. 7

35 pages

Identical to ISO/IEC 27000:2016

Provides the overview of information security management systems and terms and definitions commonly used in the ISMS family of standards. This standard is applicable to all types and sizes of organizations.

**ZWS ISO/IEC 27001:2022****Information Security, cybersecurity and privacy protection – Information security management system – Requirements**

Price Code: Gr 10

18 pages

Identical to ISO/IEC 27001:2022

Replaces ZWS ISO/IEC 27001:2013

Specifies the requirements for establishing, implementing, maintaining and continually improving an information security management system within the context of the organization. This document also includes requirements for the assessment and treatment of information security risks tailored to the needs of the organization. The requirements set out in this document are generic and are intended to be applicable to all organisations, regardless of type, size or nature. Excluding any of the requirements specified in Clauses 4 to 10 is not acceptable when an organization claims conformity to this document.

**ZWS ISO/IEC 27002:2022****Information security, cybersecurity and privacy protection – Information security controls**

Price Code: Gr. 10

154 pages

Identical to ISO/IEC 27002:2022

This document provides a reference set of generic information security controls including implementation guidance. This document is designed to be used by organizations:

- within the context of an information security management system (ISMS) based on ISO/IEC 27001;
- for implementing information security controls based on internationally recognized best practices;
- for developing organization-specific information security management guidelines.

**ZWS ISO/IEC 27003:2017****Information technology – Security techniques – Information security management systems – Guidance**

Price Code: Gr. 10

46 pages

Identical to ISO/IEC 27003:2017

This document provides explanation and guidance on ISO/IEC 27001:2013.

**ZWS ISO/IEC 27004:2016****Information technology - Security techniques - Information security management systems - Monitoring, measurement, analysis and evaluation**

Price Code: Gr. 10

57 pages

Identical to ISO/IEC 27004:2016

This document provides guidelines intended to assist organizations in evaluating the information security performance and the effectiveness of an information security management system in order to fulfil the requirements of ISO/IEC 27001:2013, 9.1. It establishes:

- a) the monitoring and measurement of information security performance;
- b) the monitoring and measurement of the effectiveness of an information security management system (ISMS) including its processes and controls;
- c) the analysis and evaluation of the results of monitoring and measurement.

This document is applicable to all types and sizes of organizations.

#### **ZWS ISO/IEC 27005:2022**

##### **Information security, cybersecurity and privacy protection — Guidance on managing information security risks**

Price Code: Gr. 10

71 pages

Identical to ISO/IEC 27005:2022

Replaces ZWS ISO/IEC 27005:2011

This document provides guidance to assist organizations to: fulfil the requirements of ISO/IEC 27001 concerning actions to address information security risks; perform information security risk management activities, specifically information security risk assessment and treatment. This document is applicable to all organizations, regardless of type, size or sector.

#### **ZWS ISO/IEC 27006:2011**

##### **Information technology – Security techniques – Requirements for bodies providing audit and certification of information security management systems**

Price Code:Gr. 7

37 pages

Identical to ISO/IEC 27006:2011

Specifies requirements and provides guidance for bodies providing audit and certification of an information security managementsystem (ISMS) in addition to the requirements contained within ISO/IEC 27001. It is primarily intended to support the accreditation of certification bodies providing ISMS certification.

#### **ZWS ISO/IEC 27007:2020**

##### **Information security, cybersecurity and privacy protection — guidelines for information security management systems auditing**

Price Code:Gr. 7

53 pages

Identical to ISO/IEC 27007:2020

This document provides guidance on managing an information security management system (ISMS) audit programme, on conducting audits, and on the competence of ISMS auditors, in addition to the guidance contained in ISO 19011. This document is applicable to those needing to understand or conduct internal or external audits of an ISMS or to manage an ISMS audit programme.

#### **ZWS ISO/IEC 27010:2015**

##### **Information technology - Security techniques -Information security management for inter-sector and inter-organizational communications**

Price Code:Gr. 7

32 pages

Identical to ISO/IEC 27010:2015

This International Standard provides guidelines in addition to the guidance given in the ISO/IEC 27000 family of standards for implementing information security management within information sharing communities. This International Standard provides controls and guidance specifically relating to initiating, implementing, maintaining, and improving information security in inter-organizational and inter-

sector communications. It provides guidelines and general principles on how the specified requirements can be met using established messaging and other technical methods. This International Standard is applicable to all forms of exchange and sharing of sensitive information, both public and private, nationally and internationally, within the same industry or market sector or between sectors. In particular, it may be applicable to information exchanges and sharing relating to the provision, maintenance and protection of an organization's or nation state's critical infrastructure. It is designed to support the creation of trust when exchanging and sharing sensitive information, thereby encouraging the international growth of information sharing communities.

#### **ZWS ISO/IEC 27013:2012**

##### **Information technology – Security techniques – Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000.1**

Price Code:Gr. 7

42 pages

Identical to ISO/IEC 27013:2012

Provides guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000.1 for those organizations.

#### **ZWS ISO/IEC 27014:2020**

##### **Information security, cybersecurity and privacy protection - governance of information security**

Price Code: Gr. 6

16 pages

Identical to ISO/IEC 27014:2020

This document provides guidance on concepts, objectives and processes for the governance of information security, by which organizations can evaluate, direct, monitor and communicate the information security-related processes within the organization. The intended audience for this document is: governing body and top management; those who are responsible for evaluating, directing and monitoring an information security management system (ISMS) based on ISO/IEC 27001; those responsible for information security management that takes place outside the scope of an ISMS based on ISO/IEC 27001, but within the scope of governance. This document is applicable to all types and sizes of organizations. All references to an ISMS in this document apply to an ISMS based on ISO/IEC 27001. This document focuses on the three types of ISMS organizations given in Annex B. However, this document can also be used by other types of organizations.

#### **ZWS ISO/IEC 27032:2023**

##### **Cybersecurity - Guidelines for internet security**

Price Code: Gr. 7

29 pages

Identical to ISO/IEC 27032:2023

Provides guidance on concepts and principles for the governance of information security by which organizations can evaluate, direct, monitor and communicate the information security related activities within the organizations.

#### **ZWS ISO/IEC 27033.6:2016**

##### **Information technology – Security techniques – Network security**

###### **Part 6: Securing wireless IP network access**

Price code: Gr 7

29 pages

Identical to ISO/IEC 27033.6

Describes the threats, security requirements, security control and design techniques associated with wireless networks. It provides guidelines for the selection, implementation and monitoring of the

technical controls necessary to provide secure communication using wireless networks.

**ZWS ISO/IEC 27040:2022**

**Information technology – Security techniques – Storage security**

Pricecode: Gr. 9

109 pages

Identical to 27040:2022

This document provides detailed technical requirements and guidance on how organizations can achieve an appropriate level of risk mitigation by employing a well-proven and consistent approach to the planning, design, documentation, and implementation of data storage security. Storage security applies to the protection of data both while stored in information and communications technology (ICT) systems and while in transit across the communication links associated with storage. Storage security includes the security of devices and media, management activities related to the devices and media, applications and services, and controlling or monitoring user activities during the lifetime of devices and media and after end of use or end of life. Storage security is relevant to anyone involved in owning, operating, or using data storage devices, media, and networks. This includes senior managers, acquirers of storage product and services, and other non-technical managers or users, in addition to managers and administrators who have specific responsibilities for information or storage security, storage operation, or who are responsible for an organization's overall security program and security policy development. It is also relevant to anyone involved in the planning, design, and implementation of the architectural aspects of storage network security. This document provides an overview of storage security concepts and related definitions. It includes requirements and guidance on the threats, design, and control aspects associated with typical storage scenarios and storage technology areas. In addition, it provides references to other International Standards and technical reports that address existing practices and techniques that can be applied to storage security.

**ZWS ISO 27105:2016**

**Milk and cheese – Determination of hen's egg white lysozyme content by high performance liquid chromatography**

Price Code: Gr.4

11 pages

Identical to ISO 27105/IDF216:2016,IDT

Specifies a method for the qualitative determination of hen's egg white lysozyme content in milk and cheese.

**ZWS ISO/IEC TS 27110:2021**

**Information technology, cybersecurity and privacy protection – Cybersecurity framework development guidelines**

Price Code: Gr.7

25 pages

Identical to ISO IEC TS 27110:2021

This document specifies guidelines for developing a cybersecurity framework. It is applicable to cybersecurity framework creators regardless of their organizations' type, size or nature.

**ZWS ISO 27205:2010**

**Fermented milk products – Bacterial starter cultures – Standard of identity**

Price Code: Gr.4

11 pages

Identical to ISO 27205:2010

Specifies characteristics of industrial bacterial starter cultures, which are principally lactic acid bacteria (LAB) but which also include bifidobacteria and propionibacteria used for the manufacture of fermented milk products such as yoghurt, sour cream, cultured butter cheese.

**ZWS ISO/IEC 27400:2022**

**Cybersecurity – IoT security and privacy – Guidelines**

Price Code: Gr.7

42 pages

Identical to ISO 27400:2022

This document provides guidelines on risks, principles and controls for security and privacy of Internet of Things (IoT) solutions.

**ZWS ISO/IEC 27402:2023**

**Cybersecurity – IoT security and privacy – Device baseline requirements**

Price Code: Gr.6

16 pages

Identical to ISO 27402:2023

This document provides baseline ICT requirements for IoT devices to support security and privacy controls.

**ZWS ISO/IEC TS 27570:2021**

**Privacy protection - Privacy guidelines for smart cities**

Price Code: Gr.7

40 pages

Identical to ISO/IEC TS 27570:2021

The document takes a multiple agency as well as a citizen-centric viewpoint.

It provides guidance on:

- smart city ecosystem privacy protection;
- how standards can be used at a global level and at an organizational level for the benefit of citizens; and
- processes for smart city ecosystem privacy protection.

This document is applicable to all types and sizes of organizations, including public and private companies, government entities, and not-for-profit organizations that provide services in smart city environments.

**ZWS ISO 27871:2011**

**Cheese and processed cheese – Determination of the nitrogenous fractions**

Price Code: Gr.

10 pages

Identical to ISO 27871:2011

Specifies a method for determining the nitrogenous fractions in cheese and processed cheese from cow milk.

**ZWS ISO 28001:2007**

**Security management systems for the supply chain – Best practices for implementing supply chain security, assessments and plans – Requirements and guidance**

Price Code: Gr. 7

27 pages

Identical to ISO 28001:2007

This International Standard provides requirements and guidance for organizations in international supply chains to;

- develop and implement supply chain security processes;
- establish and document a minimum level of security within a supply chain(s) or segment of a supply chain;
- assist in meeting the applicable authorized economic operator (AEO) criteria set forth in the World Customs Organization Framework of Standards and conforming national supply chain security programmes.

**NOTE:** Only a participating National Customs Agency can designate organizations as AEOs in accordance with its supply chain security programme and its attendant certification and validation requirements. In addition, this International Standard establishes certain documentation requirements that would permit verification. Users of this International Standard will;

- define the portion of an international supply chain within which they have established security (see 4.1);
- conduct security assessments on that portion of the supply chain and develop adequate countermeasures;
- develop and implement a supply chain security plan;
- train security personnel in their security related duties.

**ZWS ISO TS 29001:2020**

**Petroleum, petrochemical and natural gas industries - Sector-specific quality management systems - Requirements for product and service supply organizations**

Price Code: Gr. 8  
53 pages  
Identical to ISO TS 29001:2020

This International Standard specifies requirements for a quality management system when an organization: (a) needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and (b) aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All the requirements of this International Standard are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides.

**ZWS ISO 29942:2011**

**Prophylactic dams – Requirements and test methods**

Price Code:Gr. 7  
29 pages  
Identical to ISO 29942:2011

Specifies the minimum requirements and test methods for prophylactic dams used to assist in the prevention of sexually transmitted infections.

**ZWS ISO 29991:2014**

**Language learning services outside formal education -requirements**

Price Code: Gr. 6  
13 pages  
Identical to ISO 29991:2014

This document specifies requirements for language learning services outside formal education.

**ZWS ISO 29992:2018**

**Assessment of outcomes of learning services -Guidelines**

Price Code: Gr. 6  
14 pages  
Identical to ISO 29992:2018

This document provides guidance on the planning, development, implementation and review of assessments of the outcomes of learning services

**ZWS ISO 29993:2017**

**Learning services outside formal education -requirements**

Price Code: Gr. 6  
13 pages  
Identical to ISO 29993:2017

This document specifies requirements for language learning services outside formal education.

**ZWS ISO 29994:2021**

**Education and learning services - Requirements for distance learning**

Price Code: Gr. 5  
8 pages  
Identical to ISO 29994:2021

This document specifies requirements for distance learning services not specified in ISO 29993. It is applicable to any distance learning services that are addressed to learners themselves as well as to sponsors who are acquiring the services on behalf of learners.

**ZWS ISO/IEC 30162:2022**

**Internet of Things (IoT) – Compatibility requirements and model for devices within industrial IoT systems**

Price Code: Gr. 7  
48 pages  
Identical to ISO/IEC 30162:2022

This document specifies network models for IoT connectivity and general compatibility requirements for devices and networks within IoT systems in terms of:

- a) data transmission protocols interaction;
- b) distributed data interoperability and management;
- c) connectivity framework;
- d) connectivity transport;
- e) connectivity network;
- f) best practices and guidance to use in IoT area.

**ZWS ISO 30400:2016**

**Human Resource Management – Vocabulary**

Price Code: Gr. 5  
29 pages  
Identical to ISO 30400:2016

This document defines terms used in human resource management standards.

**ZWS ISO 30401:2018**

**Knowledge management systems – Requirements**

Price Code: Gr. 10  
23 pages  
Identical to ISO 30401:2018

This document sets requirements and provides guidelines for establishing, implementing, maintaining, reviewing and improving an effective management system for knowledge management in organizations. All the requirements of this document are applicable to any organization, regardless of its type or size, or the products and services it provides.

**ZWS ISO 30405:2016**

**Human Resources Management-Guidelines on Recruitment**

Price Code: Gr. 5  
23 pages  
Identical to ISO 30405:2016

Provides guidance on how to attract, source, assess and recruit people. It focuses on key processes and practices, including recruitment policy development, the flow from the sourcing of potential applicants to the boarding of new recruits as well as evaluation and measurement.

**ZWS ISO TR 30406:2017**

**Human Resources Management - Sustainable Employability Management for Organizations**

Price Code: Gr. 6  
12 pages  
Identical to ISO 30406:2017

This document provides guiding principles for developing and implementing sustainable employability policies. Sustainable employability is relevant on different levels: government, organizational and individual. This document focuses exclusively on the organizational level.

**ZWS ISO 30407:2017**  
**Human Resources Management-Cost Per Hire**  
Price Code: Gr.6  
14 pages  
Identical to ISO 30407:2017

The purpose of this standard is to measure the economic value of the effort taken to fill an open position in an organization. It describes actions to be taken when calculating CPH to maintain quality and transparency.

**ZWS ISO 30408:2016**  
**Human Resource Management – Guidelines On Human Governance**  
Price Code: Gr. 5  
29 pages  
Identical to ISO 30408:2016

This document provides guidelines on tools, processes and practices to be put in place in order to establish, maintain and continually improve effective human governance within organizations. This document is applicable to organizations of all sizes and sectors, whether public or private, for profit or not for profit. This document does not address relations with trade unions or other representative bodies.

**ZWS ISO 30409:2016**  
**Human Resource Management – Workforce Planning**  
Price Code: Gr. 7  
29 pages  
Identical to ISO 30409:2016

This document provides guidelines and a framework for workforce planning that are scalable to the needs of any organization regardless of size, industry or sector.

**ZWS ISO TS 30410:2018**  
**Human Resources Management – Impact of Hire Metric**  
Price Code: Gr. 5  
8 pages  
Identical to ISO 30410:2018

This document identifies principles for determining critical positions by using workforce segmentation approaches. It also identifies measures to determine the impact of critical positions, and the performance of people hired into these positions, on organizational value creation and performance.

**ZWS ISO TS 30414:2018**  
**Human Resources Management – Diversity and Inclusion** Price Code: Gr 7  
38 pages  
Identical to ISO 30414:2018

This document provides guidelines for internal and external human capital reporting (HCR). The objective is to consider and to make transparent the human capital contribution to the organization in order to support sustainability of the workforce. This document is applicable to all organizations, regardless of the type, size, nature or complexity of the business, whether in the public, private or voluntary sector, or a not-for-profit organization.

**ZWS ISO TS 30415:2021**  
**Human Resources Management – Diversity and Inclusion**  
Price Code: Gr 7  
47 pages  
Identical to ISO 30415:2021

This document provides guidance on D&I for organizations, including their governance body, leaders, workforce and recognized representatives, and other stakeholders. It is intended to be scalable to the needs of all types of organizations in different sectors, whether in public, private, government or non-governmental organizations (NGO), regardless of size, type, activity, industry or sector, growth phase, external influences and country-specific requirements.

**ZWS ISO TS 30423:2021**  
**Human Resources Management – Compliance and ethics metrics cluster**  
Price Code: Gr 5  
15 pages  
Identical to ISO 30423:2021

This document describes the elements of compliance and ethics. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting the compliance data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30425:2021**  
**Human Resource Management – Workforce availability metrics cluster**  
Price Code: Gr 5  
15 pages  
Identical to ISO 30425:2021

This document describes the measurement elements of workforce availability for organizations. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting compliance data, especially when deciding on appropriate interventions internally and when reporting these to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30427:2021**  
**Human Resources Management – Costs metrics cluster**  
Price Code: Gr 5  
11 pages  
Identical to ISO 30427:2021

This document describes the elements of organizational workforce costs. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues for consideration when interpreting the cost data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30428:2021**  
**Human Resources Management – skills and capabilities metrics cluster**  
Price Code: Gr 6  
22 pages  
Identical to ISO 30428:2021

This document describes and defines the five metrics of skills and capabilities. This document also provides the formula for each metric and describes the common metrics which employ the five

metrics. This document also highlights issues that need to be considered when interpreting the skills and capabilities data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30430:2021**

**Human Resources Management – recruitment metrics cluster**

Price Code: Gr 5

9 pages

Identical to ISO 30430:2021

This document describes the elements of recruitment in the recruitment, mobility and turnover cluster. This document provides the formulae for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting the recruitment data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders, such as regulators and investors.

**ZWS ISO TS 30431:2021**

**Human Resources Management – leadership metrics cluster**

Price Code: Gr 5

9 pages

Identical to ISO 30431:2021

This document describes the elements of the leadership metrics cluster. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues that need to be considered when interpreting the leadership data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30432:2021**

**Human Resources Management – workforce productivity metrics cluster**

Price Code: Gr 5

9 pages

Identical to ISO 30432:2021

This document describes the elements of workforce productivity metrics cluster. This document provides the formula for comparable measures for internal and external reporting. This document also highlights issues to be considered when interpreting the productivity data, especially when deciding on the appropriate intervention internally and when reporting this to external stakeholders (e.g. regulators, investors).

**ZWS ISO TS 30433:2021**

**Human Resources Management – Succession planning metrics cluster**

Price Code: Gr 6

18 pages

Identical to ISO 30433:2021

This document specifies the elements of succession planning metrics and provides comparable measures for internal and external reporting. The document also highlights issues that need to be considered when interpreting the succession planning data, especially when deciding on the appropriate intervention internally and when reporting this to external stakeholders such as regulators or investors.

**ZWS ISO 30435:2023**

**Human resource management — Workforce data quality**

Price Code: Gr. 6

13 pages

Identical to ISO 30435:2023

This document provides the basis for organizational improvement underpinned by quality workforce data that supports analysis and evidenced-based decision-making. Workforce data quality, for the purpose of this document, is the process of:

- a) workforce data determination;
- b) data capture;
- c) data maintenance;
- d) data review processes.

The focus of this document is on the quality of data itself rather than on other critical aspects relating to the overall management of data, such as privacy and security of personal data, the analysis and reporting of data and the use of technology. This document does not cover the analysis of data and reporting structure or the definition of any metric other than quality of workforce data. Technology platforms in the form of human resource information systems, databases, spreadsheets, and the like, can improve the process of the capture and management of data. The focus of this document is the data itself. While data security and data privacy are also critical to the overall management of data, they are not dealt with in this document. This document is applicable to all types and sizes of organization across all industry sectors and regions.

**ZWS ISO TS 30437:2023**

**Human resource management — Learning and development metrics**

Price Code: Gr. 7

42 pages

Identical to ISO 30437:2023

This document provides recommendations on how to measure learning. Since the selection of metrics depends on the reason to measure and the user of the metrics, and since a balanced set of metrics is important to avoid unintended consequences, the document begins with a framework for organizational learning and development (L&D), including five categories of users, four broad reasons to measure and three types of metrics. This framework is then used to recommend 50 metrics organized by user, type of metric and size of organization, and provide a description of each. The document concludes with guidance on reporting metrics, including a description of the different types of reports and guidance on their selection based on the user's reasons for measuring. Metrics for both formal and informal learning are included. The guidance is intended for all types of organizations, including commercial and nonprofit, as well as for all sizes. No previous knowledge of L&D metrics is required, although those new to L&D measurement can consult the suggested references on matters of frameworks, metrics and programme evaluation to learn more.

**ZWS ISO 30500:2018**

**Non- sewered sanitation systems – Prefabricated integrated treatment units – General safety and performance requirements for design and testing**

Price Code: Gr 8

90 pages

Identical to ISO 30500:2018

This document specifies general safety and performance requirements for design and testing as well as sustainability considerations for non-sewered sanitation systems (NSSS).

**ZWS ISO 31000:2018**

**Risk Management - Guidelines**

Price Code: Gr. 10

16 pages

Supersedes ZWS ISO 31000:2010

This document provides guidelines on managing risk faced by organisations. The application of these guidelines can be customized

to any organization and its context. It provides a common approach to managing any type of risk and is not industry or sector specific.

#### **ZWS ISO/IEC 31010:2019**

##### **Risk management – Risk assessment techniques**

Price Code: Gr. 10

114 pages

Identical to ISO/IEC 31010:2019

This International Standard provides guidance on the selection and application of techniques for assessing risk in a wide range of situations. The techniques are used to assist in making decisions where there is uncertainty, to provide information about particular risks and as part of a process for managing risk. The document provides summaries of a range of techniques, with references to other documents where the techniques are described in more detail.

#### **ZWS ISO 31022:2020**

##### **Risk management – Guidelines for the management of legal risk**

Price Code: Gr. 7

32 pages

Identical to ISO 31022:2020

This document gives guidelines for managing the specific challenges of legal risk faced by organizations, as a complementary document to ISO 31000. The application of these guidelines can be customized to any organization and its context. This document provides a common approach to the management of legal risk and is not industry or sector specific.

#### **ZWS ISO 31030:2021**

##### **Travel risk management – Guidance for organisations**

Price Code: Gr. 8

52 pages

Identical to ISO 31030:2021

This document gives guidance to organizations on how to manage the risk(s), to the organization and its travellers, as a result of undertaking travel. This document provides a structured approach to the development, implementation, evaluation and review of: policy; programme development; threat and hazard identification; opportunities and strengths; risk assessment; prevention and mitigation strategies. This document is applicable to any type of organization, irrespective of sector or size, including but not limited to: commercial organizations; charitable and not-for-profit organizations; governmental organizations; non-governmental organizations; educational organizations. This document does not apply to tourism and leisure-related travel, except in relation to travellers travelling on behalf of the organization.

#### **ZWS ISO 31073:2020**

##### **Risk management – Vocabulary**

Price Code: Gr. 6

13 pages

Identical to ISO 31073:2020

This document defines generic terms related to the management of risks faced by organizations.

#### **ZWS ISO TS 34700:2016**

##### **Animal welfare management – General requirements and guidelines for organizations in the food supply chain**

Price Code: Gr. 6

16 pages

Identical to ISO TS 34700:2016

Provides requirements and guidance for the implementation of the animal welfare principles as described in the introduction to the recommendations for animal welfare of the OIE TAHC.

#### **ZWS ISO 37000:2021**

##### **Governance of organisations — Guidance**

Price Code: Gr. 7

41 pages

Identical to ISO TS 37000:2021

This document gives guidance on the governance of organizations. It provides principles and key aspects of practices to guide governing bodies and governing groups on how to meet their responsibilities so that the organizations they govern can fulfil their purpose. It is also intended for stakeholders involved in, or impacted by, the organization and its governance. It is applicable to all organizations regardless of type, size, location, structure or purpose.

#### **ZWS ISO 37001:2016/Amd. 1:2024**

##### **Anti-bribery management systems — Requirements with guidance for use**

Price Code: Gr. 7

48 pages

Identical to ISO 37001 2016 as amended by Amd 1:2024.

This document specifies requirements and provides guidance for establishing, implementing, maintaining, reviewing and improving an anti-bribery management system. The system can be stand-alone or can be integrated into an overall management system. This document addresses the following in relation to the organization's activities:

- bribery in the public, private and not-for-profit sectors;
- bribery by the organization;
- bribery by the organization's personnel acting on the organization's behalf or for its benefit;
- bribery by the organization's business associates acting on the organization's behalf or for its benefit;
- bribery of the organization;
- bribery of the organization's personnel in relation to the organization's activities;
- bribery of the organization's business associates in relation to the organization's activities;
- direct and indirect bribery (e.g. a bribe offered or accepted through or by a third party).

This document is applicable only to bribery. It sets out requirements and provides guidance for a management system designed to help an organization to prevent, detect and respond to bribery and comply with anti-bribery laws and voluntary commitments applicable to its activities. This document does not specifically address fraud, cartels and other anti-trust/competition offences, money-laundering or other activities related to corrupt practices, although an organization can choose to extend the scope of the management system to include such activities. The requirements of this document are generic and are intended to be applicable to all organizations (or parts of an organization), regardless of type, size and nature of activity, and whether in the public, private or not-for-profit sectors. The extent of application of these requirements depends on the factors

#### **ZWS ISO 37301:2021**

##### **Compliance management systems — Requirements with guidance for use**

Price Code: Gr. 10

41 pages

Identical to ISO TS 37301:2021

This document specifies requirements and provides guidelines for establishing, developing, implementing, evaluating, maintaining and improving an effective compliance management system within an organization. This document is applicable to all types of organizations regardless of the type, size and nature of the activity, as well as whether the organization is from the public, private or non-profit sector. All requirements specified in this document that refer to a governing body apply to top management in cases where an



organization does not have a governing body as a separate function.

**ZWS ISO 38500:2024**

**Information technology — Governance of IT for the organization**

Price Code: Gr. 6

12 pages

Identical to ISO 38500:2015

This International Standard provides guiding principles for members of governing bodies of organizations (which can comprise owners, directors, partners, executive managers, or similar) on the effective, efficient, and acceptable use of information technology (IT) within their organizations. It also provides guidance to those advising, informing, or assisting governing bodies. They include the following:

- executive managers;
- members of groups monitoring the resources within the organization;
- external business or technical specialists, such as legal or accounting specialists, retail or industrial associations, or professional bodies;
- internal and external service providers (including consultants); — auditors. This International Standard applies to the governance of the organization's current and future use of IT including management processes and decisions related to the current and future use of IT. These processes can be controlled by IT specialists within the organization, external service providers, or business units within the organization. This International Standard defines the governance of IT as a subset or domain of organizational governance, or in the case of a corporation, corporate governance. This International Standard is applicable to all organizations, including public and private companies, government entities, and not-for-profit organizations. This International Standard is applicable to organizations of all sizes from the smallest to the largest, regardless of the extent of their use of IT. The purpose of this International Standard is to promote effective, efficient, and acceptable use of IT in all organizations by
  - assuring stakeholders that, if the principles and practices proposed by the standard are followed, they can have confidence in the organization's governance of IT,
  - informing and guiding governing bodies in governing the use of IT in their organization, and — establishing a vocabulary for the governance of IT.

**ZWS ISO IEC/TR 38502:2014**

**Information technology – Governance of IT – Framework and model**

Price Code: Gr. 6

16 pages

Identical to ISO/IEC 38502:2014

This Technical Report provides guidance on the nature and mechanisms of governance and management together with the relationships between them, in the context of IT within an organization. The purpose of this Technical Report is to provide information on a framework and model that can be used to establish the boundaries and relationships between governance and management of an organization's current and future use of IT. This Technical Report provides guidance for: governing bodies; managers who have to work within the authority and accountability established by governance; advisors or those assisting in the governance of organizations of all sizes and types; and developers of standards in the areas of governance of IT and management of IT. Provides guidance on the nature and mechanisms of governance and management together with the relationships between them in the context of IT within an organization.

**ZWS ISO 39001:2012**

**Road traffic safety (RTS) Management systems – Requirements with guidance for use**

Price Code: Gr. 10

36 pages

Identical to ISO 39001:2012

Specifies requirements for a road traffic safety (RTS) management system to enable an organization that interacts with the road traffic system to reduce death and serious injuries related to road traffic crashes which it can influence.

**ZWS ISO 42001:2023**

**Information technology — Artificial intelligence — Management system**

Price Code: Gr. 10

52 pages

Identical to ISO 42001:2023

This document specifies the requirements and provides guidance for establishing, implementing, maintaining and continually improving an AI (artificial intelligence) management system within the context of an organization. This document is intended for use by an organization providing or using products or services that utilize AI systems. This document is intended to help the organization develop, provide or use AI systems responsibly in pursuing its objectives and meet applicable requirements, obligations related to interested parties and expectations from them. This document is applicable to any organization, regardless of size, type and nature, that provides or uses products or services that utilize AI systems.

**ZWS ISO 45001:2018**

**Occupational health and safety management systems – requirements with guidance for use**

Price Code: Gr. 10

39 pages

Identical to ISO 45001:2018

Specifies requirements for an occupational health and safety (OH&S) management system and gives guidance for its use to enable organisations to provide safe and healthy workplaces by preventing work-related injury and ill health as well as by proactively improving its OH&S performance. This document is applicable to any organization that wishes to establish, implement and maintain an OH&S management system to improve occupational health and safety.

**ZWS ISO 45002:2023**

**Occupational health and safety management systems – General guidelines for the implementation of ISO 45001:2018**

Price Code: Gr. 10

78 pages

Identical to ISO 45002:2023

This document gives guidance on the establishment, implementation, maintenance and continual improvement of an occupational health and safety (OH&S) management system that can help organizations conform to ISO 45001:2018.

**NOTE 1:** While the guidance in this document is consistent with the ISO 45001:2018 OH&S management system model, it is not intended to provide interpretations of the requirements in ISO 45001.

**NOTE 2:** The use of the term “should” in this document does not weaken any of the requirements in ISO 45001:2018 or add new requirements.

**NOTE 3:** For most of the clauses in this document, there are real-life cases on how different types of organizations have implemented the requirements. These are not intended to suggest the only or best way to do this, but to describe one way this was done by an organization.

**ZWS ISO 45003:2021****Occupational health and safety management – Psychological health and safety at work – Guidelines for managing psychosocial risks**

Price Code: Gr. 7

26 pages

Identical to ISO 45003:2021

This document gives guidelines for managing psychosocial risk within an occupational health and safety (OH&S) management system based on ISO 45001. It enables organizations to prevent work-related injury and ill health of their workers and other interested parties, and to promote well-being at work. It is applicable to organizations of all sizes and in all sectors, for the development, implementation, maintenance and continual improvement of healthy and safe workplaces.

**ZWS ISO 45004:2024****Occupational health and safety management — Guidelines on performance evaluation**

Price Code: Gr. 7

30 pages

Identical to ISO 45004:2024

This document gives guidance regarding how organizations can establish monitoring, measurement, analysis and evaluation processes, including the development of relevant indicators for the assessment of occupational health and safety (OH&S) performance. It enables organizations to determine if intended results are being achieved, including continual improvement of OH&S performance. This document is applicable to all organizations regardless of type, industry sector, level of risk, size or location. It can be used independently or as part of OH&S management systems, including those based on ISO 45001:2018, or other standards or guidelines.

**ZWS ISO PAS 45005:2020****Occupational health and safety management – General guidelines for safe working during the COVID 19 pandemic**

Price Code: Gr. 7

39 pages

Identical to ISO/PAS 45005

This document gives guidelines for organizations on how to manage the risks arising from COVID-19 to protect work-related health, safety and well-being. This document is applicable to organizations of all sizes and sectors, including those that:

a) have been operating throughout the pandemic; b) are resuming or planning to resume operations following full or partial closure; c) are re-occupying workplaces that have been fully or partially closed; d) are new and planning to operate for the first time. This document also provides guidance relating to the protection of workers of all types (e.g. workers employed by the organization, workers of external providers, contractors, self-employed individuals, agency workers, older workers, workers with a disability and first responders), and other relevant interested parties (e.g. visitors to a workplace, including members of the public). This document is not intended to provide guidance on how to implement specific infection control protocols in clinical, healthcare and other settings. NOTE: Applicable legislation and guidance is provided by government, regulators and health authorities for workers in these settings or in related roles.

**ZWS ISO 45006:2023****Occupational health and safety management — Guidelines for organizations on preventing, controlling and managing infectious diseases**

Price Code: Gr. 8

36 pages

Identical to ISO 45006:2023

This document gives guidelines for organizations on how to prevent or control exposure to infectious agents at the workplace and manage the risks associated with infectious diseases that:

—present a risk of severe ill health or death and can impact the health, safety and well-being of workers and other relevant interested parties;

—present a lower risk to health yet have a significant impact on the organization, its workers and other relevant interested parties.

This document is applicable to organizations of all sizes and sectors.

**NOTE:** This document does not provide comprehensive guidance to those parts of an organization that implement mandated infection controls such as hospitals and medical or biological laboratories because there is an inherent potential for exposure to infectious diseases. Applicable legislation and guidance are provided by government, regulators and health authorities for specific infection controls for the protection of workers in such settings and for work activities on or with pathogenic microorganisms.

**ZWS ISO 50001:2018****Energy Management Systems – Requirements with guidance for use**

Price Code: Gr.10

34 pages

Identical to ISO 50001:2018

Specifies requirements for establishing, implementing, maintaining and improving an energy management system whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance including energy efficiency energy use and consumption.

**ZWS ISO 50002:2014****Energy audits – Requirements with guidance for use**

Price Code: Gr.10

26 pages

Identical to ISO 50002:2014

Specifies requirements for carrying out an energy audit in relation to energy performance. Applicable to all types of establishments and organizations and all forms of energy and energy use.

**ZWS ISO 50003:2014****Energy management systems – Requirements for bodies providing audit and certification of energy management systems**

Price Code: Gr.6

20 pages

Identical to ISO 50003:2014

Specifies requirements for competency, consistency and impartiality in the auditing and certification of EMS for bodies providing these services. It addresses the auditing process, competence requirements for personnel involved in the certification process for EMS the duration of audits and multi-site sampling

**ZWS ISO 50004:2014****Energy management systems – Guidance for the implementation, maintenance and improvement**

Price Code: Gr.7

44 pages

Identical to ISO 50004:2014

The standard provides practical guidance and examples for establishing, implementing, maintaining and improving EMS in accordance with the systematic approach of ISO 50001

**ZWS ISO 50006:2014****Energy management systems – Measuring performance using energy baselines**

Price Code: Gr.7

34 pages

Identical to ISO 50006:2014

The standard provides guidelines to organisations on how to establish, use and maintain energy performance indicators (EnPIs) and energy baselines (EnBs) as part of the process of measuring energy performance.

**ZWS ISO 50007:2017****Energy Services– Guidelines For The Assessment And Improvement Of The Energy Service To Users**

Price Code: Gr.7

46 pages

Identical to ISO 50007:2017

The standard addresses the relevant elements of energy service provided by energy suppliers to users. It envisages energy service as including two broad categories. 1) Energy supply 2) Advice on and improvement to energy efficiency.

**ZWS ISO/TS 50008:2018****Energy management and energy savings – Building energy data management for energy performance – Guidance for a systemic data exchange approach**

Price Code:

Gr.6

14 pages

Identical to ISO/TS 50008:2018

It gives guidelines for how the energy management team (EnMT) in an organization can define, request and regularly access the data needed to implement an energy management (EnMS) designed to continually improve energy performance in buildings.

**ZWS ISO 50015:2014****Energy management systems – Measurement and verification of energy performance of organisations**

Price Code: Gr.6

22 pages

Identical to ISO 50015:2014

The standard establishes general principles and guidelines for the process of measurement and verification (M&V) of energy performance of an organisation or its components.

**ZWS ISO 50021:2014****Energy management and energy savings — General guidelines for selecting energy savings evaluators**

Price Code: Gr.6

22 pages

Identical to ISO 50021:2019

This document gives guidelines for selecting energy savings evaluators to determine ex-post (realized) energy savings for projects, organizations and regions. It gives general principles and identifies the key factors to consider. It also defines roles and responsibilities, recommends the required competence and provides key elements for assessing the knowledge and skills of energy savings evaluators.

**ZWS ISO 50044:2019****Energy saving projects (EnSPs) – Guidelines for economic and financial evaluation**

Price Code: Gr.7

43 pages

Identical to ISO 50044:2019

The standard gives guidelines for how to compare and prioritize energy saving projects (EnSPs) before implementation, using economic and financial evaluation. It includes a common set of principles.

**ZWS ISO TS 50045:2019****Technical guidelines for the evaluation of energy savings of thermal power plants**

Price Code: Gr.7

23 pages

Identical to ISO 50045:2019

This document gives general technical guidelines for evaluating energy savings of thermal power plants before and/or after implementing energy performance improvement action(s) (EPIAs). It includes evaluation, unit component efficiency, indexes calculation, analyses and reporting.

**ZWS ISO 50046:2019****General methods for predicting energy savings**

Price Code: Gr.

8

56 pages

Identical to ISO 50046:2019

This document specifies general methods for the calculation of predicted energy savings (PrES). It provides a process that should result in PrES satisfactory for the relevant stakeholders.

**ZWS ISO 50049:2020****Calculation methods for energy efficiency and energy consumption variations at country, region and city levels: Relation to energy savings and other factors**

Price Code:

Gr.8

56 pages

Identical to ISO 50049:2020

Concerned with the evaluation of energy consumption and energy intensity changes through explanatory factors, as well as the calculation of energy efficiency index at national and regional levels.

**ZWS ISO 53800:2024****Guidelines for the promotion and implementation of gender equality and women's empowerment**

Price Code:

Gr.8

59 pages

Identical to ISO 53800:2024

This document gives guidance on how to promote and implement gender equality and women's empowerment. It provides guidelines for organizations to develop the capabilities to achieve a culture of gender equality and women's empowerment. The guidelines include the framework, resources, policies, tools and good practices for contextualizing, promoting and implementing gender equality. This document focuses on the inequality resulting from the gender specific roles assigned to women, girls, men and boys and is applicable to all types of organizations (public or private), regardless of their size, location or field of activity. This document does not address the specific aspects of relations with labour unions or work councils, nor the country-specific regulations and compliance relating to gender diversity.

**ZWS ISO 55000:2024****Asset management – Overview, principles and terminology**

Price Code:

Gr.10

16 pages

Supersedes ISO 55000:2014

Identical to ISO 55000:2024

This document defines terms and establishes principles and outcomes for asset management. It describes:

—the benefits of asset management and an asset management system;  
—the relationship between asset management, the asset management system and asset portfolio;  
—asset management improvement and maturity.

This document is applicable to all types of assets and all types and sizes of organizations. This document does not provide financial, accounting, human resources nor technical guidance for managing specific asset types.

**NOTE:** For the purposes of this document, ISO 55001 and ISO 55002, the term “asset management system” is used to refer to a management system for asset management.

#### **ZWS ISO 55001:2024**

##### **Asset management – Management systems - Requirements**

Price Code: Gr.10

19 pages

Supersedes ISO 55001:2014

Identical to ISO 55001:2024

This document specifies requirements for an asset management system. This document is applicable to all types of assets and all types and sizes of organizations. Consistent with the organization’s asset management policy, the intended results of an asset management system include:

—realized value from assets throughout their life for the organization and its stakeholders;  
—achievement of asset management objectives and fulfilment of applicable requirements;  
—continual improvement of asset management, the asset management system and the performance of assets. This document does not specify financial, accounting nor technical requirements for managing specific asset types.

**NOTE:** For the purposes of ISO 55000, this document and ISO 55002, the term “asset management system” is used to refer to a management system for asset management.

#### **ZWS ISO 55002:2018**

##### **Asset management – Management systems – Guidelines for the application of ISO 55001**

Price Code: Gr.10

75 pages

Identical to ISO 55002:2018

This document gives guidelines for the application of an asset management system, in accordance with the requirements of ISO 55001. This document can be applied to all types of assets and by all types and sizes of organizations.

#### **ZWS ISO/TS 55010:2019**

##### **Asset management – Guidance on the alignment of financial and non-financial functions in asset management**

Price Code: Gr.10

43 pages

Identical to ISO/TS 55010:2019

It gives guidelines for the alignment between financial and non-financial asset management functions, in order to improve internal control as part of an organisation’s management systems.

#### **ZWS IWA 42:2023**

##### **Net zero guidelines**

Price Code: Gr. 7

38 Pages

Identical to IWA 42:2023

This document provides guiding principles and recommendations to enable a common, global approach to achieving net zero greenhouse gas emissions through alignment of voluntary initiatives and adoption of standards, policies and national and international regulation. This document provides guidance on what governance organizations and

other organizations can do to effectively contribute to global efforts to limit warming to 1,5 °C by achieving net zero no later than 2050. It provides guidance on a common and equitable contribution and recognizes the capability of individual organizations in contributing to achieving global net zero. This document, when used in combination with applicable science-based pathways, provides guidance for organizations seeking to set robust climate strategies.

# ARSO ADOPTIONS

## **ARSO ZW HS 72:2016**

### **Fertilizers – Sampling from a conveyor by stopping the belt**

Price Code: Gr. 3

2 pages

Identical to ARS 72:1986

Specifies a reference method for sampling all solid fertilizers transported on a conveyor belt from the place of manufacture or storage to some other location.

## **ARSO ZW HS 73:2016**

### **Fertilizers – Determination of nitrate nitrogen content**

Price Code: Gr. 3

4 pages

Identical to ARS 73:1986

Specifies the nitron gravimetric method for the determination of nitrate nitrogen content of fertilizer. It is suitable for use as a reference method and is applicable to all fertilizers.

## **ARSO ZW HS 74:2016**

### **Fertilizers – Determination of bulk density (Loose)**

Price Code: Gr. 3

3 pages

Identical to ARS 74:1986

Specifies a method for the determination of the bulk density (loose) of solid fertilizers, except powder fertilizers. The method is applicable to dry fertilizers only.

## **ARSO ZW HS 212:2016**

### **Fertilizers – Marking – Presentation and Declaration**

Price Code: Gr. 3

2 pages

Identical to ARS 212:1988

Specifies the procedure for marking containers or labels for fertilizers, where national legislation permits.

## **ARSO ZW HS 213:2016**

### **Fertilizers and solid conditioners – Final samples – Practical arrangements**

Price Code: Gr. 3

2 pages

Identical to ARS 213:1990

Establishes practical arrangements relating to final samples of solid fertilizers and soil conditioners.

## **ARSO ZW HS 461:2022**

### **Maize Grains (corn)**

Price Code: Gr. 5

8 pages

Identical to ARS 461:2022

This African Standard specifies the requirements and methods of sampling and test for maize grains (corn) of varieties grown from common maize grains, *Zea mays indentata* L., and/or *Zea mays indurata* L., or their hybrids intended for human consumption. It does not apply to processed maize (corn).

## **ARSO ZW HS 462:2023**

### **Sorghum Grains**

Price Code: Gr. 5

10 pages

Replacing ARS 462:2022.

This African Standard specifies requirements, methods of sampling and test for sorghum grains (whole or decorticated) of varieties (cultivars) grown from *Sorghum bicolor* (L.) Moench intended for human food. This standard does not apply to processed sorghum.

## **ARSO ZW HS 463:2023**

### **Pearl Millet Grains**

Price Code: Gr. 5

10 pages

Replacing ARS 463:2022.

This African Standard specifies the requirements, methods of sampling and test for whole and decorticated pearl millet of the species *Pennisetum glaucum* (L.) R.Br. intended for food consumption. This standard also specifies grading requirements for pearl millet grains. It does not apply to processed pearl millet.

## **ARSO ZW HS 464:2023**

### **Milled rice**

Price Code: Gr. 5

10 pages

Replacing ARSO ZW HS 464:2022

This African Standard specifies the requirements and methods of sampling and test for milled rice of the varieties grown from *Oryza* spp. intended for human consumption.

## **ARS ZW HS 465:2024**

### **Wheat grains – Specification**

Price	Code:	Gr.	5
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15 pages

Adoption of African Standard ARS 465:2023

Superseding ARS ZW HS 465:2018

This African Standard specifies the requirements and methods of sampling and test for wheat grains of varieties (cultivars) grown from common wheat (*Triticum aestivum* L.), club wheat (*T. compactum* Host.) and *Triticum tauschii* (soft wheat) intended for human consumption. Durum wheat (*Triticum durum*) is excluded from this standard.

## **ARSO ZW HS 466:2023**

### **Milled maize (corn) products**

Price Code: Gr 5

7 pages

Replacing ARSO ZW HS 466:2022

This African Standard specifies requirements, sampling and test methods for whole maize meal, granulated maize meal, sifted maize meal, maize grits and maize flour from the grains of common maize (*Zea mays* L.) intended for human consumption. This standard does not apply to fortified milled maize (corn) products and maize grits intended for brewing, manufacturing of starch and any other industrial use.

## **ZWS ARS HS 467:2018**

### **Degermed maize and maize grits -Specification**

Price Code: Gr. 5

5 pages

Adoption of African Standard ARS 467:2016

This standard specifies the requirements, methods of sampling and test for degermed maize (corn) meal and degermed maize (corn) grits for human consumption milled from kernels of common maize, *Zea mays* L.

**ZWS ARS 468:2024****Sorghum flour**

Price Code: Gr. 5

6 pages

Identical to ARS 468:2023

Supersedes Comesa ZW HS 716

Supersedes ARS 468:2018

This African Standard specifies requirements, methods of sampling and test for sorghum flour obtained from whole or decorticated sorghum grain of varieties Sorghum bicolor (L) Moench. for human consumption. It does not apply to grits or meal obtained from sorghum.

**ARSO ZW HS 469:2019****Millet flour**

Price Code: Gr. 5

6 pages

Identical to ARS 469:2016

This African Standard specifies requirements, methods of sampling and test for millet flour obtained from whole or decorticated pearl millet from varieties Penicum maliaceum) and finger millet grown from Eleusine coracana (L.) Gaertner. for human consumption.

**ARSO ZW HS 500:2016****Solid fertilizers – Sampling**

Price Code: Gr. 4

7 pages

Identical to ARS 500:1991

Describes a method for sampling solid fertilizers which are packed for delivery to customers.

**ARSO ZW HS 501:2016****Compound fertilizers – Methods of test**

Price Code: Gr. 4

5 pages

Identical to ARS 501:1991

Specifies methods for the determination of moisture content, pH and magnesium for compound fertilizers.

**ARSO ZW HS 504:2016****Fertilizers – Ammonium sulphate – Methods of test**

Price Code: Gr. 4

2 pages

Identical to ARS 504:1991

Specifies the methods of test for ammonium sulphate fertilizer for the following characteristics: free acidity, moisture content and arsenic.

**ARSO ZW HS 505:2016****Fertilizers – Ammonium sulphate**

Price Code: Gr. 4

2 pages

Identical to ARS 505:1991

Specifies requirements for ammonium sulphate fertilizer.

**ZWS ARS HS 825:2018****Yams**

Price Code: Gr. 7

5 pages

Adoption of African Standard ARS 825:2016

This standard applies to yarms of varieties grown from Dioscorea spp. To be marketed or supplied fresh to the consumer, yams for industrial processing being excluded. The purpose of this standard is to specify the minimum grade requirements of the tubers at the dispatching stage.

**ARSO ZW HS 827:2020****Sweet Potato Flour**

Price Code: Gr. 5

11 pages

Identical to ARS HS 827:2017

Specifies the requirements and methods of sampling and test for dried sweet potato chips intended for human consumption

**ARSO ZW HS 828:2020****Dried Sweet Potato Chips**

Price Code: Gr. 5

11 pages

Identical to ARS HS 828:2017

Specifies the requirements and methods of sampling and test for dried sweet potato chips intended for human consumption.

**ARSO ZW HS 829:2020****Sweet Potato Crisps**

Price Code: Gr. 5

11 pages

Identical to ARS HS 829:2017

Specifies the requirements and methods of sampling and test for crisps made from storage of sweet potato

**ARSO ZW HS 831:2020****Fresh Bananas -Specification**

Price Code: Gr. 5

11 pages

Identical to ARS HS 831:2017

Applies to commercial varieties of bananas grown from Musa spp. Of the Musaceae family, in the green state to be supplied fresh to the consumer, after preparation and packaging.

**ARSO ZW HS 833:2020****Fried Banana Chips**

Price Code: Gr. 5

11 pages

Identical to ARS HS 833:2017

Specifies the requirements and methods of sampling and test for fried banana chips

**ARSO ZW HS 834:2020****Dried Bananas**

Price Code: Gr. 5

11 pages

Identical to ARS HS 834:2017

Prescribes requirements and methods of sampling and tests for dried banana from Musa spp of the family Musaceae intended for direct human consumption or for other use in the food industry

**ARSO ZW HS 852:2020****Fried Potato Chips**

Price Code: Gr. 5

11 pages

Identical to ARS HS 852:2017

Specifies the requirements and methods of sampling and test for deep fried potato chips ready for consumption.

**ARSO ZW HS 855:2020****Fresh Tannia**

Price Code: Gr. 4

11 pages

Identical to ARS HS 855:2017

Applies to the tubercles of commercial varieties of lilac grown from *Xanthosoma violaceum* Schott and white tannia grown *Xanthosoma sagittifolium*.

**ARSO ZW HS 857:2024****Finger Millet Grains**

Price Code: Gr. 6

10 pages

Identical to ARS HS 857:2023

Supersedes ARS HS 857:2016

This African Standard specifies the requirements, methods of sampling and test for finger millet grains of varieties (cultivars) grown from *Eleusine coracana* (L.) Gaertner intended for human consumption.

**ARSO ZW HS 858:2024****Rough (Paddy) rice - specification**

Price Code: Gr. 6

8 pages

Identical to ARS 858:2022

Supersedes ARS 858:2017

This African Standard specifies the requirements and methods of sampling and test for rough (paddy) rice of the varieties grown from *Oryza* spp intended for human consumption.

**ARS ZWS HS 859:2024****Brown rice**

Price Code: Gr. 6

10 pages

Identical to ARS 859:2023

Supersedes ARS 859:2015

This African Standard specifies the requirements and methods of sampling and test for brown rice of the varieties grown from *Oryza* spp., intended for human consumption or for further processing. This standard does not apply to parboiled rice

**ARSO ZWS HS 864:2024****Dry beans**

Price Code: Gr. 5

7 pages

Identical to ARS 864:2023

Supersedes ARS 864:2015

This African Standard specifies requirements and methods of sampling and test for dry beans (*Phaseolus vulgaris*) intended for human consumption. It does not apply to processed beans.

**ARSO ZW HS 865:2015****Dry green grams**

Price Code: Gr. 5

7 pages

Identical to ARSO 865:2014

Specifies the requirements and methods of sampling and test for dry chickpeas of varieties (cultivars) grown from *Cicer arietinum* (L) intended for human consumption.

**ARSO ZW HS 866:2015****Dry chickpeas**

Price Code: Gr. 5

7 pages

Identical to ARSO 866:2014

Specifies the requirements and methods of sampling and test for dry chickpeas of varieties (cultivars) grown from *Cicer arietinum* (L) intended for human consumption.

**ARS ZWS HS 867:2024****Dry cowpeas**

Price Code: Gr. 5

7 pages

Identical to ARS 867:2023

Supersedes ARSO 867:2015

This African Standard specifies the requirements and methods of sampling and test for dry cowpeas of the varieties (cultivars) grown from *Vigna unguiculata* (L.) Sync. *Vigna sinensis* (L.) intended for human consumption. It does not apply to processed cowpeas.

**ARS ZWS HS 868:2024****Dry Pigeon Peas**

Price Code: Gr. 5

7 pages

Identical to ARSO 868:2023

Supersedes ARSO 868:2015

This African Standard specifies the requirements, methods of sampling and test for dry pigeon peas of the varieties (cultivars) grown from *Cajanus cajan* (L.) intended for human consumption. It does not apply to processed pigeon peas.

**ARSO ZW HS 869:2024****Dry whole Peas**

Price Code: Gr. 5

6 pages

Identical to ARSO 869:2023

Supersedes ARSO 869:2015

This African Standard specifies the requirements and methods of sampling and test for dry whole peas of varieties (cultivars) grown from *Pisum sativum* (L.) and *Pisum sativum* var. *arvense* (L.) intended for human consumption. It does not apply to processed whole peas.

**ARSO ZW HS 870:2024****Lentils**

Price Code: Gr. 5

6 pages

Identical to ARSO 870:2023

Supersedes ARSO 870:2015

This African Standard specifies the requirements and methods of sampling and test for shelled whole lentils of varieties (cultivars) grown from *Lens culinaris* Medic. Syn. *Lens esculenta* Moench. intended for human consumption.

**ARS ZWS HS 871:2024****Dry split peas**

Price Code: Gr. 5

6 pages

Identical to ARSO 871:2023

This African Standard specifies the requirements and methods of sampling and test for dry split peas of varieties (cultivars) grown from *Pisum sativum* L. and *Pisum sativum* var. *arvense* L. intended for human consumption.

**ARSO ZW HS 873:2015**  
**Faba beans - specification**  
Price Code: Gr. 5  
6 pages  
Identical to ARSO 873:2014

Specifies the requirements and methods of sampling and test for faba beans of cultivated varieties (cultivars) grown from *Vicia faba* L. intended for human consumption.

**ARSO ZW HS 874:2015**  
**Dry lima beans - specification**  
Price Code: Gr. 5  
7 pages  
Identical to ARSO 874:2014

Specifies the requirements and methods of sampling and test for lima beans of cultivated varieties (cultivars) grown from *Phaseolus lunatus* L. intended for human consumption.

**ARSO ZW HS 935:2015**  
**Edible full fat soya flour**  
Price Code: Gr. 5  
7 pages  
Identical to ARSO 935:2014

Specifies the requirements and methods of sampling and test for edible full fat soya flour intended for human consumption.

**ARSO ZW HS 936:2015**  
**Soy milk**  
Price Code: Gr. 4  
6 pages  
Identical to ARSO 936:2014

Specifies the requirements and methods of sampling and test for soy milk intended for human consumption.

**ARSO ZW HS 937:2015**  
**Soy protein products**  
Price Code: Gr. 5  
8 pages  
Identical to ARSO 937:2014

Specifies the requirements and methods of sampling and for test for soy protein products intended for human consumption.

**ARSO ZW HS 938:2015**  
**Textured soy protein products**  
Price Code: Gr. 5  
8 pages  
Identical to ARSO 938:2014

Specifies the requirements and methods of sampling and test for textured soy protein products for human consumption.

**ARSO ZW HS 950:2017**  
**African Traditional Medicine – Terms and Terminology**  
Price Code: Gr. 6  
17 pages  
Identical to ARSO 950:2017

Standard provides the various terms and terminology used in the field of African Traditional Medicine

**ARSO ZW HS 951:2017**  
**African Traditional Medicine – Good Manufacturing Practises (GMP) For Herbal Medicines**  
Price Code: Gr. 7  
30 pages

Identical to ARSO 951:2017

Standard provides guidelines on good manufacturing practices aimed at ensuring the safety, efficacy and quality of herbal medicinal products for human consumption.

**ARSO ZW HS 952:2017**  
**African Traditional Medicine – Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants**  
Price Code: Gr. 7  
38 pages  
Identical to ARSO 952:2017

Standard provides aimed at advising plant procedures and collectors on how to improve the safety, efficacy and quality standards of raw materials used in the production and preparation of herbal medicines.

**ARSO ZW HS 953:2017**  
**African Traditional Medicine – Certification Scheme For Medicinal Plant Produce**  
Price Code: Gr. 7  
40 pages  
Identical to ARSO 953:2017

Standard covers certification of medicinal plants produce both from cultivated and wild collected sources

**ARSO ZW HS 954:2017**  
**Minimum requirements for registration of plant based traditional medicinal products**  
Price Code: Gr. 6  
22 pages  
Identical to ARSO 954:2017

Specifies minimum criteria for plant based traditional medicinal products on safety of use, quality and therapeutic efficacy to facilitate theregistration, marketing and distribution of standardized traditional medicines.

**ARSO ZW HS 955:2017**  
**African Traditional Medicine – Technical Guidelines For Safety, Efficacy and quality of raw materials and herbal medicines**  
Price Code: Gr. 7  
33 pages  
Identical to ARSO 955:2017

The standard provides technical guidelines to assure the safety, efficacy and quality of herbal raw materials and herbal medicines

**ARSO ZW HS 956: Part 1:2017**  
**African Traditional Medicine – Medicinal plant Standards Part 1: Aloe Vera**  
Price Code: Gr. 7  
43 pages  
Identical to ARSO 956-1:2017

Standard provides requirements and related methods for Aloe Vera raw material to be used in customer products including health, cosmetics, health food, medical, veterinary and industrial products.

**ARS ZWS HT 956: Part 2:2024**  
**African Traditional Medicine – Medicinal plant standards Part 2: Ambrosia maritima**  
Price Code: Gr. 7  
24 pages  
Identical to ARSO 956-2:2024



This ARSO Standard specifies requirements and related tests methods for *Ambrosia maritima* raw material intended for use in manufacturing of consumer, medicinal and industrial products.

**ARS ZWS HT 956: Part 3:2024**  
**African Traditional Medicine - Medicinal plant standards**

**Part 3: *Urtica dioica* and *Urtica urens***

Price Code: Gr. 7

30 pages

Identical to ARSO 956-3:2024

This ARSO Standard specifies requirements and related tests methods for *Urtica dioica* L. *Urticaceae* and *Urtica urens* L. *Urticaceae* raw material for use in manufacturing of consumer products including health, medicinal and cosmetic products.

**ARS ZWS HT 956: Part 4:2024**  
**African traditional medicine - Medicinal plant standards:**

**Part 4: *Calotropis procera***

Price Code: Gr. 7

28 pages

Identical to ARSO 956-4:2024

This African standard specifies requirements and related tests methods for *Calotropis procera* raw material to be used in consumer products including health, medicinal, veterinary and industrial products.

**ARS ZWS HT 956: Part 5-1:2024**  
**African traditional medicine- Medicinal plant standards - *Anacardium occidentale***

**Part 5-1: Seed-nut**

Price Code: Gr. 7

21 pages

Identical to ARSO 956-5.1:2024

This African Standard specifies requirements and related tests methods for seeds or nuts of *Anacardium occidentale* raw material to be used in consumer products including health, food, medicinal and industrial products.

**ARS ZWS HT 956: Part 5-3:2024**  
**African Traditional Medicine- Medicinal plant standards- *Anacardium occidentale***

**Part: 5-3: 2024: Cashew apple**

Price Code: Gr. 7

24 pages

Identical to ARSO 956-5.3:2024

This African Standard specifies requirements and tests methods for cashew apple from the Cashew Tree [*Anacardium occidentale* L.] intended for use in consumer products including healthy food, medicinal and industrial products.

**ARS ZWS HT 956: Part 6:2024**  
**African Traditional Medicine- Medicinal plant standards**

**Part 6: *Moringa oleifera***

Price Code: Gr. 7

26 pages

Identical to ARSO 956-6:2024

This African Standard specifies requirements and related tests methods for *Moringa oleifera* raw material to be used in consumer products including food, health and health-food, medicinal and industrial products.

**ARS ZWS HT 956: Part 7:2024**  
**African Traditional Medicine - Medicinal Plant**

**Part 7: *Prunus africana***

Price Code: Gr. 7

17 pages

Identical to ARSO 956-7:2024

This African Standard specifies requirements and related test methods for *Prunus africana* raw material intended for in consumer products including health, health foods, medicinal and industrial products.

**ARS ZWS HT 956: Part 8:2024**  
**African Traditional Medicine - Medicinal Plant**

**Part 8: *Vernonia Amygdalina***

Price Code: Gr. 6

22 pages

Identical to ARS 956-8:2023

This African Standard specifies requirements and related tests methods for *Adansonia digitata* seed be used in consumer products including health, health food, medicinal and industrial products.

**ARS ZWS HT 956: Part 10:2024**  
**African traditional medicine- Medicinal plant standards**

**Part 10: *Adansonia digitata* seed oil**

Price Code: Gr. 7

21 pages

Identical to ARS 956-10:2023

This African Standard specifies requirements and related tests methods for *Adansonia digitata* seed be used in consumer products including health, health food, medicinal and industrial products.

**ARS ZWS HT 956: Part 11:2024**  
**African traditional medicine — Medicinal plant standards**

**Part 11: *Garcinia kola***

Price Code: Gr. 7

31 pages

Identical to ARS 956-11:2023

This African Standard specifies minimum requirements and related tests methods for *Garcinia kola* raw material to be used in consumer products including health, health food, medicinal and industrial products.

**ARS ZWS HT 956: Part 12:2024**  
**African traditional medicine - Medicinal plant standards**  
**Part 12: *Hibiscus sabdariffa* Linn variety Rahad and other species *Hibiscus***

Price Code: Gr. 7

28 pages

Identical to ARS 956-12:2023

This African Standard specifies minimum requirements and related tests methods for *Hibiscus sabdariffa* Linn variety Rahad and other species raw material to be used in consumer products including health, medicinal and cosmetic products.

**ARS ZWS HT 956: Part 14:2024**  
**African traditional medicine - Medicinal plant standards**  
**Part 14: Scent leaf (*Ocimum gratissimum*)**

Price Code: Gr. 6

16 pages

Identical to ARS 956-14:2023

This African Standard specifies requirements and related tests methods for *Ocimum. gratissimum* raw material to be used in consumer products including health, medicinal and cosmetic products.

**ARSO ZW HS 988:2023****Plastic crates**

Price Code: Gr. 4

5 pages

Identical to ARSO 988:2023

This African Standard specifies the requirements and test methods for rigid plastic crates for holding and transportation of beverages, fruits, vegetables, bread and milk among others.

**ARSO ZW HS 1000: Part 1:2021****Sustainable cocoa****Part 1: Requirements for cocoa farmer as an entity/farmer group/farmer cooperative — management Systems and performance**

Price Code: Gr. 7

37 pages

Identical to ARSO 1000-1:2021

This African Standard specifies the requirements for Cocoa Farmer as an Entity/Farmer Group/ Farmer Cooperative also called Recognized Entity to comply with Management Systems and for performance relating to structuring their management to enhance performance and meet the economic, social and environmental pillars for sustainable cocoa bean (*Theobroma cacao* Linnaeus) production

**Part 2: Requirements for cocoa quality and traceability**

Price Code: Gr. 7

25 pages

Identical to ARSO 1000-2:2021

This African Standard specifies the requirements for quality including classification, sampling, test methods, packaging and marking of cocoa beans (*Theobroma cacao* Linnaeus). It also specifies the basic requirements for the design and implementation of one or more traceability systems within the cocoa supply chain for sustainably produced cocoa beans from farm to the point of export (Free On Board), as well as to the factory gate at the local level for grinders

**Part 3: Requirements for cocoa certification schemes**

Price Code: Gr. 6

24 pages

Identical to ARSO 1000-3:2021

This draft African Standard specifies requirements for the Cocoa Certification Scheme for sustainable cocoa, in relation to cocoa supply chain actors and for the certification of Farmer as an Entity/Farmer Group/Cooperative. It is to be used jointly with ARS 1000-1 and ARS 1000-2. Only Certification Bodies that fulfil the requirements in this Standard shall audit Farmer as an Entity/Farmer Group/Cooperative, which produce sustainable cocoa beans. Only Farmer as an Entity/Farmer Group/Cooperative that fulfil the requirements in this Standard can make claims of sustainably produced cocoa beans.

**ARS ZWS 1106:2024****Tilapia production aquaculture farms - Good aquaculture practices**

Price Code: Gr. 7

34 pages

Identical to ARS 1106:2024

This African Standard applies to good aquacultural practices (GAP) for Tilapia in pond, tanks and cage farming including harvesting and post-harvest handling in order to produce tilapia of good quality and safe for consumption with minimal effects to the environment. This standard does not cover hatchery and nursery.

**ARS ZWS 1107:2024****Freshwater Aquatic Animal Production Farms - Good aquacultural Practices**

Price Code: Gr. 6

18 pages

Identical to ARS 1107:2024

This African standard applies to good aquacultural practices (GAP) at all stages in freshwater aquatic animal culture for shellfish, finfish, amphibians and reptiles in order to produce products of good quality and safe for human consumption. This standard, however, does not cover hatching and nursing.

**ARSO ZW HS 1109:2020****Good Agricultural Practices For Food Crops**

Price Code: Gr. 7

37 pages

Identical to ARS HS 1109:2018

Specifies the requirements for compliance, the responsible procurement of inputs, safe production, handling and marketing of fresh fruits and vegetables excluding herbs and spices.

**ARS ZWS HT 1110: Part 1:2024****Dried small sardine and sardine-type pelagic fish****Part 1:2024: Freshwater**

Price Code: Gr. 4

6 pages

Identical to ARS HT 1110-1:2024

This African Standard specifies the requirements and methods of test for dried small freshwater sardine and sardine-type pelagic fish.

**ARS ZWS HT 1110: Part 2:2024****Dried small sardine and sardine-type pelagic fish****Part 2: 2024: Dried anchovies**

Price Code: Gr. 4

6 pages

Identical to ARS HT 1110-2:2024

This African standard shall apply to all commercial species of anchovies belonging to the family Engraulidae that have been soaked in brine, and dried. This product is intended for consumption after cooking and for further processing. This Standard shall not cover products that have undergone heat treatment prior to drying.

**NOTE:** The product shall be prepared from fresh or frozen split or whole fish of the family Engraulidae with some of the species listed, but not limited in Annex A.

**ARS ZWS HT 1110: Part 3:2024****Dried small sardine and sardine-type pelagic fish****Part 3: 2024: Boiled, salted, and dried anchovies**

Price Code: Gr. 4

11 pages

Identical to ARS HT 1110-3:2024

This African standard shall apply to all commercial species of anchovies belonging to the family Engraulidae that have been boiled in brine, and dried. This product is intended for consumption after cooking and for further processing. It does not cover products which have undergone an enzymatic maturation in brine.

**NOTE:** The product shall be prepared from fresh and/or frozen split or whole fish of the family Engraulidae with some

**ARSO ZW HS 1199:2023****Edible hen eggs-in-shell**

Price Code: Gr. 5

19 pages

Identical to ARS HS 1199:2023

Replaces ZWS 885:2003

This African Standard specifies safety and quality requirements, method of sampling and test methods for edible hen eggs in shell intended for human consumption. This standard applies to hen eggs-in-shell fit for direct human consumption and for use in the food and/or non-food industries. All eggs must originate from laying hens or laying hens of breeding stock kept on farms regularly operated under the applicable regulations pertaining to food safety and inspection.

**ARSO ZW HS 1200:2023**  
**Eggs-in-shell for processing – Specification**  
Price Code: Gr. 4  
6 pages  
Identical to ARS 1200:2023

This African Standard specifies safety and quality requirements and test methods for chicken hen eggs -in-shell for processing.

**ARSO ZW HS 1203:2023**  
**Hens egg products — Specification**  
Price Code: Gr. 4  
31 pages  
Identical to ARS 1203:2023

This African Standard specifies quality and safety requirements, sampling and test methods for products made from eggs obtained from hens of the species Gallus gallus intended for use in the manufacture of food for human consumption.

**ARSO ZW HS 1205:2023**  
**Egg powder**  
Price Code: Gr. 7  
13 pages  
Identical to ARS 1205:2023

This African Standard specifies the safety and quality requirements, sampling and test methods for egg powder.

**ARSO ZW HS 1216:2023**  
**Chicken essence**  
Price Code: Gr. 5  
10 pages  
Identical to ARS HS 1216:2023

This African Standard specifies the quality and safety requirements, referenced test methods and sampling for chicken essence.

**ARSO ZW HS 1217:2023**  
**Ante-mortem and post-mortem inspection of poultry**  
Price Code: Gr. 5  
12 pages  
Identical to ARS HS 1217:2023

This African Standard specifies the procedure for the ante-mortem and post-mortem inspection of poultry.

**ARSO ZW HS 1218:2023**  
**Handling, processing, quality evaluation, storage, and transportation of poultry and poultry products**  
Price Code: Gr. 5  
6 pages  
Identical to ARS HS 1218:2023

This code lays down guidelines for efficient handling, processing, quality evaluation, cold storage and transportation of poultry and poultry products.

**ARSO ZW HS 1219:2024**  
**Poultry — Glossary of terms**  
Price Code: Gr. 5  
5 pages  
Identical to ARS HS 1219:2023

This African Standard covers definitions of terms relating to poultry and poultry meat products.

**ARSO ZW HS 1224:2023**  
**Chicken meat – Carcasses and cuts**  
Price Code: Gr. 4  
6 pages  
Identical to ARS HS 1224:2023  
Replaces CAS No. S39: 1972

This African standard specifies the quality and safety requirements, methods of sampling and test for raw chicken meat, carcasses and parts intended for human consumption. This excludes products with added ingredients or “chicken preparations”.

**ARSO ZW HS 1226:2023**  
**Duck meat – Carcasses and cuts**  
Price Code: Gr. 4  
6 pages  
Identical to ARS HS 1226:2023

This African standard specifies the quality and safety requirements, sampling and test methods for raw Duck meat carcass and parts intended for human consumption. This excludes Products with added ingredients or “duck preparations”.

**ARSO ZW HS 1242:2023**  
**Goose meat – Carcasses and cuts**  
Price Code: Gr. 5  
6 pages  
Identical to ARS HS 1242:2023

This African standard specifies the quality and safety requirements, method of sampling and test methods for raw Goose meat carcasses and parts intended for human consumption. This excludes Products with added ingredients or “goose preparations”.

**ARSO ZW HS 1245:2023**  
**Bovine (beef) meat – Carcasses and cuts**  
Price Code: Gr. 5  
10 pages  
Identical to ARS HS 1245:2023

This African Standard specifies methods of grading and grades of beef, quality and safety requirements and methods of test of carcasses thereof, intended for human consumption. This standard also defines major portions of meat cuts from the carcasses for sale.

**ARSO ZW HS 1246:2023**  
**Bovine (veal) meat – Carcasses and cuts**  
Price Code: Gr. 6  
9 pages  
Identical to ARS HS 1246:2023

This African Standard specifies grading of Veal, quality and safety requirements, sampling and referenced test methods of carcasses thereof, intended for human consumption. This standard also defines major portions of meat cuts from the carcasses for sale.

**ARSO ZW HS 1247:2023**  
**Caprine (goat) meat – Carcasses and cuts**  
Price Code: Gr. 5  
9 pages  
Identical to ARS HS 1247:2023

This African Standard defines the requirements, methods of sampling and test for goat carcasses and meat cuts intended for human consumption.

**ARSO ZW HS 1250:2023**

**Rabbit meat – Carcasses and cuts**

Price Code: Gr. 4

5 pages

Identical to ARS HS 1250:2023

This African Standard specifies the quality and safety requirements, sampling and test methods for raw rabbit meat (carcasses and cuts) intended for human consumption.

**ARSO ZW HS 1357:2022**

**Vehicle testing station evaluation**

Price Code: Gr. 7

14 pages

Adoption of ARS 1357:2021

This African Standard covers general provisions for the evaluation of the technical competence of a vehicle testing station. It also serves as a basis for determining the grading and registration of the vehicle testing station on the grounds of its adherence to the provisions of this standard, the suitability of the equipment and the competence of registered examiners of vehicles employed.

**ARSO ZW HS 1362:2022**

**Automotive fuels – unleaded petrol – requirements and test methods**

Price Code: Gr. 6

13 pages

Adoption of ARS 1362:2021

Supersedes ZWS 753:2012

This African Standard specifies requirements and test methods for marketed and delivered unleaded petrol. It is applicable to unleaded petrol for use in petrol engine vehicles designed to run on unleaded petrol.

**ARSO ZW HS 1363:2022**

**Automotive fuels – diesel – requirements and test methods**

Price Code: Gr. 5

10 pages

Adoption of ARS 1363:2021

This African Standard specifies requirements and test methods for marketed and delivered automotive diesel fuel. It is applicable to automotive diesel fuel for use in diesel engine vehicles designed to run on automotive diesel fuel containing up to 7.0 % (v/v) Fatty Acid Methyl Ester.

**ARSO ZW HS 1379:2022**

**Definitions and classifications of power-driven vehicles and trailers**

Price Code: Gr. 6

12 pages

Adoption of ARS 1379:2021

This African Standard provides the general definitions and the classifications which apply to all wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles.

**ARS ZW HS 1465 :2023**

**Liquid detergents – hand dishwashing and light duty**

Price Code: Gr. 5

11 pages

Identical to ARS 1465:2020

This African Standard specifies the requirements for hand dishwashing and light duty liquid detergents used for cleaning of dishes, hard

surfaces such as painted surfaces, floors, ceilings, ceramic and plastics tiles, and the surfaces of equipment. This standard does not cover products with speckles.

**ARS ZW HS 1468:2024**

**Anti-bacterial liquid toilet soap**

Price Code: Gr. 6

17 pages

Identical to ARS 1464:2021

This Zimbabwean Standard specifies the requirements, sampling and methods of test for antibacterial liquid toilet soap. It includes antibacterial (bacteriostatic) and antifungal (fungal static). The standard does not cover synthetic hand wash liquid detergents, shampoo and products for specific purposes such as those for industrial and surgical uses.

**ARS ZW HS 1470 :2020**

**Hand sanitizers (Alcohol based)**

Price Code: Gr. 5

10 pages

Adoption of FDARS HS 1470:2019

This standard prescribes the requirements and methods of test for alcohol based instant hand sanitizers. The standard does not cover non- alcohol- based sanitizers.

**ZWS ARS HS 1474:2024**

**Anti-bacterial bathing bars**

Price Code: Gr. 7

27 pages

Adoption of ARS HS 1470:2018

This African Standard specifies the requirements and methods of sampling and test for solid antibacterial bathing bars used for personal care. This Standard applies to antibacterial bathing bars supplied in the form of bars and produced from vegetable or animal oils or fats, fatty acids, or from a blend of all or part of these materials, with or without the addition of rosins or non-soapy/synthetic surfactants.

**ARS ZW HS 1551:2019**

**Textiles and Textile Merchandise – Terms And definitions**

Price Code: Gr. 9

6 pages

Identical to ARS 1551:2017

Standard provides a comprehensive list of general terms ,each followed by an applicable definition ,for use in the textile industry

**ARS ZW HS 1553 :2019**

**Leather- Men’s and women’s belts-specification**

Price Code: Gr. 5

6 pages

Identical to ARS 1553:2017

Standard covers the requirements for the materials, basic design, size and construction of lined ,unlimited and reversible men’s and women leather belts

**ARS ZW HS 1554 :2019**

**Leather- ladies fashion handbags-specification**

Price Code: Gr. 5

16 pages

Identical to ARS 1554:2017

Standard specifies the requirements for the materials and construction of three basic types of handbag with a leather or coated outer fabric.

**ARS ZW HS 1555:2023****Leather - gloves**

Price Code: Gr. 6

18 pages

Identical to ARS 1555:2022

Replaces CAS Z19

This African Standard covers requirements for the materials, construction for five types of men's and ladies' lined or unlined gloves made from leather.

**NOTE:** The standard excludes industrial and safety gloves.

**ARS ZW HS 1556:2023****Leather – Chrome tanned bend outer sole**

Price Code: Gr. 4

3 pages

Identical to ARS 1556:2022

This African Standard specifies requirements for chrome-tanned, wax impregnated, bend outer sole leather.

**ARS ZW HS 1557:2023****Leather – Vegetable tanned bend outer sole**

Price Code: Gr. 4

4 pages

Identical to ARS 1557:2022

Replaces ZWS Z19

This African Standard specifies requirements for vegetable-tanned bend outer sole leather.

**ARS ZW HS 1558:2023****Footwear – Children's school shoes with direct injection**

Price Code: Gr. 6

23 pages

Identical to ARS 1558:2022

Replaces ZWS Z10

**ARS ZW HS 1559:2023****Footwear – Men's open shoes**

Price Code: Gr. 6

17 pages

Identical to ARS 1559:2022

This African Standard specifies the requirements for men's open shoes made of all types of materials.

**ARS ZW HS 1561:2019****Footwear –women open shoes specification**

Price Code: Gr. 5

42 pages

This African Standard specifies the requirements for ladies' open shoes made of all types of materials

**ARS ZW HS 1562:2019****Footwear –women closed shoes specification**

Price Code: Gr. 5

42 pages

Standard specifies requirements and related test methods for Calotrophis procera raw material to be used in consumer products including health, medicinal, veterinary and industrial products.

**ARS ZW HS 1563:2023****Footwear – Children's shoes (2 years and below)**

Price Code: Gr. 6

17 pages

Identical to ARS 1563:2022

This African Standard specifies the requirements for children's shoes (2 years and below). This standard applies to children's shoes of all constructions and all types of materials and designs.

**ARS ZW HS 1564:2023****Footwear – Children's shoes (Above 2 years to 6 years)**

Price Code: Gr. 6

15 pages

Identical to ARS 1564:2022

This African Standard specifies the requirements for children's shoes (above 2 to 6 years). This standard applies to children's shoes (above 2 to 6 years) of all constructions and all types of materials and designs.

**ARS ZW HS 1565:2019****Footwear –sports shoes specification**

Price Code: Gr. 5

13pages

Identical to ARS 1565:2019

The African Standard specifies the requirements for sports shoes used for light physical training activities, casual use and other non-professional activities.

**ARS ZW HS 1567:2019****Part 1****School Wear Fabrics- basic requirements**

Price Code: Gr. 5

42 pages

Identical to ARS 1567-1:2019

This part of ARS 1567 covers the definitions, basic requirements, requirements for packing, labelling, marking, and the inspection and testing of fabrics that are suitable for use in the manufacture of school clothing. Specific requirements are covered by the relevant individual parts of ARS 1567.

**ARS ZW HS 1567:2019****Part 2****School Wear Fabrics-blazer fabrics**

Price Code: Gr. 5

42 pages

Identical to ARS 1567-2:2019

This part of ARS 1567 covers the specific requirements for six types of plain dyed fabric and one type of striped fabric suitable for use in the manufacture of school-wear blazers.

**ARS ZW HS 1567:2019****Part 3****Polester and Wool Blend Fabrics**

Price Code: Gr. 5

42 pages

Identical to ARS 1567-3:2019

Standard specifies requirements and related test methods for Calotrophis procera raw material to be used in consumer products including health, medicinal, veterinary and industrial products

**ARS ZW HS 1567:2019**  
**Part 4**  
**Polyester and Viscose Fabrics**  
Price Code: Gr. 5  
42 pages  
Identical to ARS 1567-4:2019

Standard specifies requirements and related test methods for Calotrophis procera raw material to be used in consumer products including health, medicinal, veterinary and industrial products

**ARS ZW HS 1567 :2019**  
**Part 6**  
**School wear fabrics-shirting and blouse fabrics**  
Price Code: Gr. 3  
7 pages  
Identical to ARS 1567-6:2019

Standard covers the requirements for suitable for use in the manufacture of school wear shirts and blouses.

**ARS ZW HS 1567 :2019**  
**Part 7**  
**School wear fabrics-shirting and blouse fabrics**  
Price Code: Gr. 3  
7 pages  
Identical to ARS 1567-7:2017

Standard covers the requirements for fabrics, of two weave structures, containing textured yarns and suitable for use in the manufacture of school clothing.

**ARS ZW HS 1568 :2019**  
**Part 1**  
**School clothing-general requirements**  
Price Code: Gr. 4  
9 pages  
Identical to ARS 1568:2019

Standard specifies requirements for the materials, workmanship, packing, care labelling, marking and inspection of school clothing.

**ARS ZW HS 1568 :2019**  
**Part 2**  
**School clothing-blazers**  
Price Code: Gr. 4  
4 pages

Standard specifies requirements for the materials for and the sizes, make, packaging, sampling care and labelling for school blazers for boys and girls

**ARS ZW HS 1568 :2019**  
**Part 3**  
**School clothing - Trousers and shorts**  
Price Code: Gr. 4  
4 pages

Standard covers the requirements for the materials for and the sizes, make, packing, packaging, sampling care and labelling for boys trousers and shorts

**ARS ZW HS 1568 :2019**  
**Part 4**  
**School clothing-Shirts**  
Price Code: Gr. 3  
5 pages

Standard covers the requirements for materials for and sizes, make, packaging, sampling, care and labelling for school shirts for boys and girls.

**ARS ZW HS 1568 :2019**  
**Part 6**  
**School clothing -Dresses ,Tunics and Gyms**  
Price Code: Gr. 5  
9 pages

Standard covers the requirements for the materials for, and the sizes, make, packing, packaging, sampling, care and labeling for girls dresses, tunics and gyms.

**ARS ZW HS 1568 :2019**  
**Part 7**  
**School clothing-slacks and skirts**  
Price Code: Gr. 4  
5 pages

Standard specifies the materials, cut, make, trim of girls slacks and skirts.

**ARS ZW HS 1568 :2019**  
**Part 8**  
**School clothing-Wrap knitted fabrics**  
Price Code: Gr. 4  
5 pages

Standard covers the specific requirements for one type of wrap knitted fabric suitable for use in the manufacture of school clothing.

**ARS ZW HS 1568 :2019**  
**Part 9**  
**School clothing-Knee highs**  
Price Code: Gr. 4  
9 pages  
Standard specifies requirements for the materials, workmanship, packing, care labelling, marking and inspection of school clothing

**ARS ZW HS 1568 :2019**  
**Part 10**  
**School clothing-Jersey and Cardigans**  
Price Code: Gr. 4  
11 pages

Standard covers the requirements for the materials, size and make of school jersey and cardigans.

**ARS ZW HS 1568 :2019**  
**Part 12**  
**School clothing-Tracksuits**  
Price Code: Gr. 4  
5 pages  
Identical to ARS 1568-12:2017

Standard covers the requirements for the materials size and make of tracksuits

**ARS ZW HS 1568 :2019**  
**Part 13**  
**School clothing-Athletic Wear**  
Price Code: Gr. 4  
5 pages  
Identical to ARS 1568-13:2017

Standard covers the requirements for the materials, size and make of athletic wear made from woven or knitted fabrics.

**ZWS ARS 1573: Part 1:2024**

**Textiles woven cotton and similar household fabrics and articles  
Part 1:2024: Basic requirements for piece-goods and made-up articles**

Price Code: Gr. 5  
8 pages  
Adoption of ARS 1573-1:2019

This part of African Standard covers the requirements for household fabric piece-goods and made-up articles.

**Part 2: 2024: Winter sheeting, sheets and pillowcases**

Price Code: Gr. 5  
8 pages  
Adoption of ARS 1573-2:2019

This part of African Standard covers the specific requirements of three types of raised sheeting fabric, and articles in the form of winter sheets and pillowcases.

**Part 3: Cotton sheeting, sheets and pillowcases**

Price Code: Gr. 5  
8 pages  
Adoption of ARS 1573-3:2019

This part of African Standard covers the specific requirements of four types of cotton sheeting fabric and articles in the form of sheets and pillowcases.

**Part 4: 2024: Polyester /cotton blend sheeting, sheets and pillowcases**

Price Code: Gr. 5  
8 pages  
Adoption of ARS 1573-4:2019

This part of African Standard covers the specific requirements of six types of polyester-and cotton sheeting fabric, and articles in the form of sheets and pillowcases.

**Part 5: 2024: Terry towelling, towels, and other terry weave articles, sheets and pillowcases**

Price Code: Gr. 5  
7 pages  
Adoption of ARS 1573-5:2019

This part of African Standard covers the specific requirements of five types of cotton terry towelling fabric, and articles in the form of bibs, face cloths, napkins, towels and bathmats.

**Part 6: Cotton curtain fabrics, sheets and pillowcases**

Price Code: Gr. 5  
6 pages  
Adoption of ARS 1573-6:2019

This part of African Standard covers the specific requirements of two types of cotton fabric suitable for curtaining.

**Part 7: Cotton curtain lining**

Price Code: Gr. 5  
6 pages  
Adoption of ARS 1573-7:2019

This part of African Standard covers the specific requirements of two types of cotton fabric suitable for curtain linings.

**ARS ZW HS 1595 :2022**

**Vehicle homologation**

Price Code: Gr. 7  
42 pages  
Adoption of ARS 1595:2021

This African Standard covers the homologation requirements for motor vehicles categories not previously registered or licensed in any country.

**ARS ZW 1698:2024**

**Disinfectants / sanitizers**

Price Code: Gr. 6  
16 pages  
Adoption of ARS 1698:2021

This African Standard specifies requirements, sampling and test methods for disinfectants/sanitizers intended for general use on inanimate surfaces including food contact and non-food contact surfaces. It is applicable to disinfectants/sanitizers represented for use on non-critical medical devices, environmental surfaces and other inanimate objects. This standard does not apply to disinfectants/sanitizers containing iodophor(s) and aldehydes as active ingredients.

**NOTE 1:** Using this standard, it is not possible to determine the bactericidal activity of the undiluted product. Some dilution is always produced by the addition of inoculum, standard hard water and sterile skimmed milk.

**NOTE 2:** If a product complies with the test requirements, it can be considered to be bactericidal, but it should not necessarily be inferred that the product is a suitable disinfectant/sanitizer for a defined purpose.

**ARS ZW 1699:2024**

**Disinfectants/sanitizers based on iodophors – Specification**

Price Code: Gr. 5  
12 pages  
Adoption of ARS 1699:2021

This African Standard specifies requirements, requirements, sampling and test methods for disinfectants/sanitizers that contain iodophor(s) as active ingredients and are intended for use on inanimate surfaces. This standard is applicable to all disinfectants/sanitizers where iodophors are present. An example of an iodophor is povidone- iodine.

**ZWS ARS HS 1700:2024**

**Disinfectants/sanitizers based on glutaraldehyde for general use – Specification**

Price Code: Gr. 5  
13 pages  
Adoption of ARS 1700:2021

This African Standard specifies requirements, requirements, sampling and test methods for disinfectants/sanitizers that contain iodophor(s) as active ingredients and are intended for use on inanimate surfaces. This standard

**ARS ZW HS 1702:2023**

**Disinfectants – Glossary of terms**

Price Code: Gr. 3  
3 pages  
Adoption of ARS 1702:2021

This African Standard defines the terms used in disinfectants industry. This will help eliminate confusing terms in related specifications.

**ARS ZW HS 1709:2023**

**Corrugated fibre boards**

Price Code: Gr. 6  
15 pages  
Adoption of ARS 1709:2022

This African Standard specifies requirements, sampling and test methods for corrugated fibreboard boxes for general packaging.

This standard does not include special treatment measures of the boxes in case of expected contamination of the contents.

**ARS ZW HS 1710:2023**

**Natural and extensible sack Kraft paper**

Price Code: Gr. 4

4 pages

Adoption of ARS 1710:2022

This African Standard specifies requirements, sampling and test methods for natural and extensible sack Kraft paper for packaging.

**ARS ZW HS 1711:2023**

**Paper and board food contact packaging material**

Price Code: Gr. 5

6 pages

Adoption of ARS 1711:2022

This African Standard specifies requirements, sampling and test methods for paper and board food contact packaging material.

**ARS ZW HS 1712:2023**

**Paper plates and cups for food packaging**

Price Code: Gr. 5

8 pages

Adoption of ARS 1712:2022

This African Standard specifies requirements, sampling and test methods for paper plates and cups, with or without lids, used for food packaging.

**ARS ZW HS 1713:2023**

**Nutritional labelling – Requirements**

Price Code: Gr. 5

9 pages

Adoption of ARS 1713:2022

This African Standard specifies requirements, for the nutrition labelling of foods. The standard applies to the nutrition labelling of all foods except for foods for special dietary uses.

**ARS ZW HS 1714:2023**

**Claims on food - General requirements**

Price Code: Gr. 4

3 pages

Adoption of ARS 1714:2022

This African standard prescribes the requirements for claims made on a food irrespective of whether or not the food is covered by an individual African Standard.

**ARS ZW HS 1715:2023**

**Use of nutrition and health claims – Requirements**

Price Code: Gr. 5

8 pages

Adoption of ARS 1715:2023

This African Standard prescribes the requirements for the use of nutrition and health claims in food labelling and in advertising. This African Standard applies to all foods for which nutrition and health claims are made without prejudice to specific provisions under other standards or guidelines relating to foods for special dietary uses and foods for special medical purposes.

**ARS ZW HS 1716:2023**

**Migration of constituents of plastic materials and articles intended to come into contact with foodstuffs**

Price Code: Gr. 6

13 pages

Adoption of ARS 1716:2022

This African standard specifies the basic rules for the determination of overall migration of plastic constituents intended to come into contact with foodstuff. It therefore specifies the list of simulants to be used, the standard test conditions likely to reproduce the phenomena being to result from the contact object-food. It also gives the overall migration limit to be respected for articles intended for food contact.

**ARS ZW HS 1718:2023**

**Aluminium cans for beverages**

Price Code: Gr. 5

13 pages

Adoption of ARS 1718:2022

This African Standard specifies requirements and test methods for aluminium cans used as primary pack for packaging of beverages.

**ARS ZW HS 1719:2023**

**Packaging – Code of practice – Glass containers**

Price Code: Gr. 5

12 pages

Adoption of ARS 1719:2022

This African Standard specifies requirements and test methods for aluminium cans used as primary pack for packaging of beverages.

**ARS ZW HS 1748: Part 1:2023**

**Glass containers**

**Part 1: Bottles for carbonated and non-carbonated drinks**

Price Code: Gr. 4

4 pages

Adoption of ARS 1748-1:2022

This African Standard specifies the requirements, methods of sampling and test for glass bottles used for packaging of carbonated and non-carbonated drinks. This standard does not cover glass containers used in pharmaceutical industry.

**ZWS ARS AES 01:2017**

**Agriculture – Sustainability And Eco-Labeling –Requirements**

Price Code: Gr. 7

13 pages

Identical to ARS 01:2017

Provides requirements for the sustainable production, processing and trading of agricultural products including food, beverages and non-food products; and agricultural fibre products the standard applies to all production, processing and trading within the operator's sphere of influence.

**ZWS ARS AES 02:2017**

**Fisheries – Sustainability and ecolabelling Requirements**

Price Code: Gr. 6

13 pages

Identical to ARS 02:2014

Provides requirements for the sustainable harvesting of fish up to the point at which the fish are landed. It applies to marine and inland capture fisheries only

**ZWS ARS AES 03:2018**

**Forestry – Sustainability and ecolabelling Requirements**

Price Code: Gr. 7

13 pages

Identical to ARS 03:2018

Provides requirements for the sustainable production, harvesting and processing of forest products. The standard can be applied to



any defined forest area irrespective of scale or type of ownership, or whether natural forests or plantation.

**ZWS ARS AES 04:2018**

**Tourism – Sustainability And Ecolabelling – Requirements**

Price Code: Gr. 7

21 pages

Adoption of African Standard ARS AES 04:2014

This standard specifies the requirements principles, minimum requirements (criteria) and indicators for an operator applying for eco-label in the tourism sector

## **ZWS AFSEC**

**ZWS AFSEC 1041:1049**

**Guide for application of Standards for rural Electrification In Africa**

Price Code: Gr. 5

18 pages

Standard provides an overview of standards for technologies suitable for application in electrification of rural areas in Africa. The guide takes into account the small to large scale systems



# ZWS COMESA ADOPTIONS

**NOTE:** Some COMESA endorsed standards appear under the IEC and ISO sections.

## **COMESA ZWS HS 353:2004**

### **Sweetened condensed milks**

Price Code: Gr 3

4 pages

Identical to Codex – Stan A-4, CHS 003:2004

Replaces ZWS 799:2003

Applies to sweetened condensed milks, intended for direct consumption or further processing, in conformity with the description in section 2 of this standard.

## **COMESA ZWS HS 358:2004**

### **Certain pulses**

Price Code: Gr 3

4 pages

Identical to Codex – Stan 171-1989 (Rev 1-1995), CHS 005:2001

Applies to the whole, shelled or split pulses intended for direct human consumption. It does not apply to pulses intended for factory grading and packaging, industrial processing, or to those pulses intended for use in the feeding of animals. It does not apply to fragmented pulses when sold as such, or to other legumes for which separate standards may be elaborated.

## **COMESA ZWS HS 364:2004**

### **Peanuts**

Price Code: Gr 3

5 pages

Identical to Codex – Stan 200-1995, CHS 016:2004

Amended by MD583:1999

Replaces ZWS 389:1995

Applies to peanuts intended for processing for direct human consumption.

## **COMESA ZWS HS 402:2004**

### **Sorghum grains**

Price Code: Gr 3

5 pages

Identical to Codex – Stan 172-1989 (Rev1-1995), CHS013:2004

Applies to sorghum grains as defined in section 2, for human consumption ie. Ready for its intended use as human food, presented in packaged form or sold loose from the package directly to the consumer. It does not apply to other products derived from sorghum grains.

## **COMESA ZWS HS 403:2004**

### **Whole and decorticated pearl millet grains**

Price Code: Gr 3

4 pages

Identical to Codex – Stan 169-1989 (Rev 1-1995), CHS 012:2004

Applies to whole and decorticated pearl millet grains destined for human consumption which is obtained from *Pennisetum americanum L.*, senegalese varieties “souna” and “sanio”.

## **COMESA ZWS HS 404:2004**

### **Rice**

Price Code: Gr 3

8 pages

Identical to Codex – Stan 153-1985 (Rev1-1995), CHS 011:2004

Replaces ZWS 393 1995

Applies to husked rice, milled rice and parboiled rice, all for direct human consumption i.e. Ready for its intended use as human food, presented in packaged form or sold loose from the package directly to the consumer. It does not apply to other products derived from rice or to glutinous rice.

## **COMESA ZWS HS 412:2004**

### **Quick frozen fish fillets**

Price Code: Gr 3

7 pages

Identical to Codex – Stan 190-1995, CHS 009:2004

Applies to quick frozen fillets of fish as defined below and offered for direct consumption without further processing. It does not apply to products indicated as intended for further processing or for other industrial purposes.

## **COMESA ZWS HS 413:2004**

### **Quick frozen fish sticks (fish fingers) fish portions and fish fillets – Breaded or in batter.**

Price Code: Gr 3

9 pages

Identical to Codex – Stan 166-1989 (Rev1-1995), CHS 008:2004

Applies to quick frozen fish sticks (fish fingers ) and fish portions cut from quick frozen fish flesh blocks, or formed from fish flesh, and to natural fish fillets, breaded or batter coatings, singly or in combination, raw or partially cooked offered for direct human consumption without further industrial processing.

## **COMESA ZWS HS 415:2004**

### **Quick frozen blocks of fish fillets, minced fish flesh and mixtures of fillets and minced fish flesh.**

Price Code: Gr 4

9 pages

Identical to Codex – Stan 165-1989 (Rev 1-1995), CHS 007:2004

Applies quick frozen blocks of cohering fish flesh, prepared from fillets or minced fish flesh or mixture of fillets and minced fish which are intended for further processing.

## **COMESA ZWS HS 416:2004**

### **Quick frozen shrimps and prawns**

Price Code: Gr 3

8 pages

Identical to Codex – Stan 093-1981 (Rev 1-1995), CHS 004:2004

Applies to quick frozen raw or partially or fully cooked shrimps or prawns, peeled or unpeeled.

## **COMESA ZWS HS 419:2004**

### **Canned tuna and bonito**

Price Code: Gr 3

10 pages

Identical to Codex – Stan 70-1981 (Rev 1-1995), CHS 001:2004

Applies to canned tuna and bonito. It does not apply to speciality products where the fish content constitutes less than 50%/m of the contents.

**COMESA ZWS HS 427:2005****Babycorn**

Price Code: Gr 4

7 pages

Identical to Codex – Stan 188:1993, CHS 037:2004

Applies to the cobs of commercial varieties of baby corn to be supplied fresh to the consumer after preparation and packaging.

**COMESA ZWS HS 450:2005****Milkfat products**

Price Code: Gr 3

3 pages

Identical to Codex – Stan A-1971 (Rev 1-1999), CHS 084:2005

Applies to milkfat products which are intended for further processing or culinary use, in conformity with the description in Section 2 of this standard.

**COMESA ISO HS 452:2005****Packaging and transportation of fresh fruit and vegetables**

Price Code: Gr 3

13 pages

Identical to Codex – Stan CAC/RCP 44 1995, CHS 103:2005

Recommends proper packaging and transport of fresh fruit and vegetables in order to maintain produce quality during transportation and marketing.

**COMESA ZWS HS 453:2005****Avocado**

Price code: Gr 3

6 pages

Identical to Codex – Stan 197-1995 (Rev1-1995), CHS 068:2005

Applies to commercial varieties (cultivars) of avocados grown from *Persea Americana* Mill of the Lauraceae family, to be supplied fresh to the consumer, after preparation and packaging.

**COMESA ZWS HS 454:2005****Fresh mangoes**

Price Code: Gr 3

6 pages

Identical to Codex – Stan 184-1993, CHS 072:2005

Applies to commercial varieties of mangoes grown from *Mangifera indica L*, of the *Anacardiaceae* family, to be supplied fresh to the consumer, after preparation and packaging.

**COMESA ZWS HS 455:2005****Fresh papaya**

Price Code: Gr 3

4 pages

Identical to Codex – Stan 183-1993 (Rev 1-2001), CHS 070:2005

Applies to fruits of commercial varieties of papayas to be supplied fresh to the consumer, after preparation and packaging.

**COMESA ZWS HS 456:2005****Dried apricots**

Price Code: Gr 3

6 pages

Identical to Codex – Stan 130-1981, CHS 033:2005

Applies to dried fruits of *Ameniaca vulgarea Lam*, which have been suitably treated or processed and which are offered for direct consumption. Also covers dried apricots which are packaged in bulk containers and which are intended for repackaging into consumer size containers or for direct sale to consumers.

**COMESA ZWS HS 460:2005****Dehydrated fruits and vegetables including edible fungi**

Price Code: Gr 4

8 pages

Identical to Codex – Stan CAC/RCP 5-1971, CHS 039:2005

Applies to fruits and vegetables which are artificially dehydrated (including freeze-dried), either from the succulent stage or in combination with sun-drying, and covers the products commonly associated with the phrase “dehydrated food”.

**COMESA ZWS HS 476:2005****Desiccated coconut**

Price Code: Gr 3

8 pages

Identical to Codex – Stan CAC/RCP 4-1971, CHS 047:2005

Applies to desiccated coconut, the dried product prepared for human consumption without requiring further processing which is obtained by shredding or otherwise comminuting the pared kernel of coconut, the fruits of the palm.

**COMESA ZWS HS 501:2005****Canned mangoes**

Price Code: Gr 4

11 pages

Identical to Codex – Stan 159-1987, CHS 022:2005

Partially replaces ZWS 747-2003

Applies to canned mango prepared from stemmed, peeled, fresh, sound, clean and mature fruit of commercial varieties conforming to the characteristics of the fruits of *Mangifera Indica L*, which may be packed with a suitable liquid packing medium, nutritive sweeteners and other seasoning or flavouring ingredients appropriate to the product.

**COMESA ZWS HS 516:2005****Canned strawberries**

Price Code: Gr 4

6 pages

Identical to Codex – Stan 62-1981, CHS 050:2005

Partially replaces ZWS 747:2003

Applies to canned strawberries prepared from strawberries of varieties packed with water or other suitable liquid packing medium, processed by heat in an appropriate manner before or after being sealed in a container to prevent spoilage.

**COMESA ZWS HS 539:2005****Canned Mandarin oranges**

Price Code: Gr 4

9 pages

Identical to Codex – Stan 68-1981, CHS 054:2005

Applies to canned mandarin oranges offered for direct consumption.

**COMESA ZWS HS 552:2005****Canned apricots**

Price Code: Gr 4

9 pages

Identical to Codex – Stan 129-1970, CHS 059:2005

Partially replaces ZWS 747-2003

Applies to canned apricots processed by heat, in an appropriate manner before or after being sealed in a container, so as to prevent spoilage.

**COMESA ZWS HS 563:2005****Quick frozen peas**

Price Code: Gr 3

5 pages

Identical to Codex – Stan 41-1981, CHS 048:2004

Applies to quick frozen peas for direct consumption without further processing, except for size grading or repacking if required. Does not apply to product intended for further processing or industrial purposes.

**COMESA ZWS HS 565:2003****Canned pineapple**

Price Code: Gr 4

9 pages

Identical to Codex – Stan 42-1981, CHS 071:2005

Partially replaces ZWS 747-2003

Applies to canned pineapples intended for human consumption.

**COMESA ZWS HS 566:2005****Quick frozen broccoli**

Price Code: Gr 4

8 pages

Identical to Codex – Stan 110-1981, CHS 031:2005

Applies to quick frozen broccoli for direct consumption without further processing, except for repacking if required.

**COMESA ZWS HS 570:2005****Quick frozen French fried potatoes**

Price Code: Gr 4

8 pages

Identical to Codex – Stan 114-1981, CHS 043:2004

Applies to quick frozen French fried potatoes which have been prepared from tubers and meant for direct consumption without further processing except for repacking if required.

**COMESA ZWS HS 607:2005****Quick frozen cauliflower**

Price Code: Gr 4

8 pages

Identical to Codex Stan 111-1984, CHS 055:2005

Applies to quick frozen French cauliflower offered for direct consumption without further processing, except for repacking if required.

**COMESA ZWS HS 621:2005****Quick frozen carrots**

Price Code: Gr 4

11 pages

Identical to Codex – Stan 140-1983, CHS 060:2005

Applies to quick frozen carrots offered for direct consumption without further processing, except for repacking if required.

**COMESA ZWS HS 635:2005****Canned sweet corn**

Price Code: Gr 3

6 pages

Identical to Codex – Stan 18-1981, CHS 045:2005

For further purposes of this standard, canned sweet corn does not include corn-on-the-cob.

**COMESA ZWS HS 638:2005****Canned carrots**

Price Code: Gr 4

9 pages

Identical to Codex – Stan 129-1970, CHS 057:2005

Partially replaces ZWS 65-1970

Applies to canned carrots meant for direct consumption, processed by heat in an appropriate manner before or after being sealed in a container.

**COMESA ZWS HS 640:2005****Processed meat and poultry products**

Price Code: Gr 7

30 pages

Technically equivalent to CAC/RCP 13 -1978(Rev 1-1985), CHS 024:2005

Specifies the minimum requirements of hygienic in the productions, handling, packaging, storing and transportation of processed meat products to assure a healthful and wholesome supply of products.

**COMESA ZWS HS 644:2005****Canned tomatoes**

Price Code: Gr 3

6 pages

Identical to Codex – Stan 13-1981, CHS 079:2005

Partially replaces ZWS S5-1970

Applies to processed canned tomatoes meant for human consumption.

**COMESA ZWS HS 713:2005****Processed cereal – based foods for infants and children.**

Price Code: Gr 3

7 pages

Amended by MD 668:2007

Identical to Codex – Stan 74-1981, CHS 078:2004

Applies to processed cereal-based foods for infants and children which are intended to supplement the diet of infants and children.

**COMESA ZWS HS 714:2006****Use of Dairy Terms**

Price Code: Gr 3

3 pages

Technically equivalent to Codex – Stan 206-1999, CHS 090:2005

Specifies the use of dairy terms in relation to foods to be offered to the consumer or for further processing.

**COMESA ZWS HS 716:2006****Sorghum flour**

Price Code: Gr 3

5 pages

Technically equivalent to Codex – Stan 173-1989(Rev1-1995), CHS 064:2005

Specifies the requirements of sorghum flour destined for direct human consumption. It does not apply to grits or meals obtained from sorghum bicolor (L) Moench.

**COMESA ZWS HS 876:2005****Margarine**

Price Code: Gr 3

5 pages

Identical to Codex – Stan 32 1981 (Rev 1-1989), CHS 017:2004  
This standard will not apply to any product which contains less than 80% fat and is not labeled in any manner which implies, either directly or indirectly that the product is margarine.

# COMESA ZWS ISO ADOPTIONS

**NOTE: Some COMESA endorsed standards appear under the IEC and ISO sections**

## COMESA ZWS HS ISO 137:2009

### Wool – Determination of fibre diameter projection microscope method

Price Code: Gr 4

7 pages

Identical to CHS 249:2006

Specifies the procedure and the conditions of measurement for determination of wool fibre diameter by means of the projection microscope.

## COMESA ZWS HS ISO 404:2006

### Steel and other steel products – General technical delivery requirements.

Price Code: Gr 5

13 pages

Identical to ISO 404:1992, CHS 062:2005

Specifies the general technical delivery requirements for all steel products covered by ISO 6929, with the exception of steel castings and powder metallurgical products.

## COMESA ZWS HS ISO 445:2007

### Pallets for materials handling – Vocabulary

Price Code: Gr 7

39 pages

Identical to ISO 445:1996, CHS 215:2006

Defines terms relating to pallets for unit load methods of materials handling.

## COMESA ZWS HS ISO 559:2006

### Steel tubes for water and sewage

Price Code: Gr 5

14 pages

Identical to ISO 559:1991, CHS 101:2005

Specifies technical conditions for delivery of seamless and welded steel tubes for the conveyance of water and sewage at temperatures between 10°C and 120°C.

## COMESA ZWS HS ISO 607:2007

### Surface active agents and detergents – Methods of sample division.

Price Code: Gr 3

7 pages

Identical to ISO 607:1980, CHS 238:2005

Specifies methods for obtaining a reduced sample of surface active agent or detergent suitable for use with single or mixed products in the form of powders, pastes or liquids.

## COMESA ZWS HS ISO 1035:2006

### Hot – rolled steel bars.

#### Part 1: Dimensions of round bars

Price Code: Gr 2

4 pages

Identical to ISO 1035-1:1980, CHS 085.1:2005

Specifies dimensions of metric series hot-rolled steel round bars.

#### Part 2: Dimensions of square bars

Price Code: Gr 2

4 pages

Identical to ISO 1035:1989, CHS 085.2:2005

Specifies dimensions of metric series hot-rolled steel square bars.

#### Part 3: Dimensions of flat bars

Price Code: Gr 2

4 pages

Identical to ISO 1035-3:1980, CHS 085.3:2005

Specifies dimensions of metric series hot-rolled steel flat bars.

#### Part 4: Tolerances

Price Code: Gr 2

6 pages

Identical to ISO 1035-4:1980, CHS 085.4:2005

Specifies metric dimensional tolerances applicable to hot-rolled steel bars supplied straight length.

## COMESA ZWS HS ISO 1127:2006

### Stainless steel tubes – Dimensions Tolerances and conventional masses per unit length.

Price Code: Gr 4

8 pages

Identical to ISO 1127:1992, CHS 119:2005

Specifies the diameters, thicknesses, tolerances and conventional masses per unit length of stainless steel tubes.

## COMESA ZWS HS ISO 1130:2008

### Textile fibres – Some methods of sampling for testing

Price Code: Gr 4

9 pages

Identical to ISO 1130:1975, CHS 266:2006

Specifies several methods for preparing laboratory samples of fibres and presents a limited treatment of the problem of drawing specimens for testing.

## COMESA ZWS HS ISO 1136:2009

### Wool – Determination of mean diameter of fibres – Air permeability method

Price Code: Gr 4

8 pages

Identical to ISO 1136:1976, CHS 250:2006

Specifies a method for the determination of the mean diameter of wool fibres using an apparatus which passes a current of air through a bundle of fibres

## COMESA ZWS HS ISO 1833:2008

### Textiles – Binary fibre mixtures – quantitative chemical analysis

Price Code: Gr 5

15 pages

Identical to ISO 1833:1977, CHS 119:2005

Contains methods for the quantitative chemical analysis of various binary mixtures of fibres. The methods given are applicable in general to fibres in any textile form. Where certain textile forms are excepted these are listed in the “field of application” clause of the individual.

## COMESA ZWS HS ISO 1973:2008

### Textiles fibres – Determination of linear density gravimetric methods and vibroscope method

Price Code: Gr 4

8 pages

Identical to ISO 1973:1995, CHS 268:2006

Specifies a gravimetric method and a vibroscope method for the determination of the linear density of textile fibres applicable respectively.

**COMESA ZWS HS ISO 2299:2008**  
**Sawn timber of broadleaved species – Defects – Measurement**  
Price Code: Gr 4  
6 pages  
Identical to ISO 2299:1973, CHS 210:2006

Specifies the international classification of defects of sawn timber of broadleaved species growing in the temperate zone of the globe.

**COMESA ZWS HS ISO 2300:2008**  
**Sawn timber of broadleaved species – Defects – Terms and definitions**  
Price Code: Gr 7  
32 pages  
Identical to ISO 2300:1973, CHS 211:2006

Establishes international terms and definitions for defects of sawn timber of broadleaved species, classified in ISO 2299.

**COMESA ZWS HS ISO 2301:2008**  
**Sawn timber of broadleaved species – Defects – Measurement**  
Price Code: Gr 4  
10 pages  
Identical to ISO 2301:1973, CHS 212:2006

Specifies international methods of measuring defects of sawn timber of broadleaved species, classified in ISO 2299.

**COMESA ZWS HS ISO 2370:2008**  
**Textiles – Determination of fineness of flax fibres – Permeametric methods**  
Price Code: Gr 4  
11 pages  
Identical to ISO 2370:1980, CHS 269:2006

Specifies two permeametric methods for the determination of the fineness of flax fibres.

**COMESA ZWS HS ISO 2408:2006**  
**Steel wire ropes for general purposes – Minimum requirements.**  
Price Code: Gr 7  
15 pages  
Identical to ISO 1035-1:1980, CHS 121:2005

Specifies minimum requirements for the manufacture and testing of standard steel wire ropes for general purposes, including lifting equipment such as cranes and hoists.

**COMESA ZWS HS ISO 2418:2007**  
**Leather – Chemical, physical and mechanical and fastness tests – Sampling location.**  
Price Code: Gr 4  
6 pages  
Identical to ISO 2418:2002, CHS 230:2005

Specifies the location of a laboratory sample within a piece of leather and the method of labeling and marking the laboratory samples for future identification.

**COMESA ZWS HS ISO 2419:2007**  
**Leather – Physical and mechanical tests – sample preparation and conditioning.**  
Price Code: Gr 3  
2 pages  
Identical to ISO 2419:2002, CHS 231:2006

Specifies the preparation of leather test pieces for physical and mechanical testing together with two standard atmospheres for conditioning and testing.

**COMESA ZWS HS ISO 2588:2007**  
**Leather – Sampling – Number of items for a gross sample.**  
Price Code: Gr 2  
1 page  
Identical to ISO 2588:1985, CHS 233:2005

Specifies a method for the drawing, from a lot, of whole pieces of leather to form a gross sample.

**COMESA ZWS HS ISO 2646: 2008**  
**Wool – Measurement of the length of the fibres processed on the worsted system, using a fibre diagram machine**  
Price Code: Gr. 3  
5 pages  
Identical to ISO 2646:1974, CHS 253:2006

Specifies a method for the measurement of the length of wool fibres using a fibre diagram machine. The method is applicable to combed silvers processed on the worsted systems.

**COMESA ZWS HS ISO 2647:2009**  
**Wool – Determination of percentage of modulated fibres by the projection microscope**  
Price Code: Gr. 2  
2 pages  
Identical to ISO 2647:1973, CHS 270:2006

Utilizes the same apparatus and technique as that described in ISO/TR 137.

**COMESA ZWS HS ISO 2701:2006**  
**Drawn wire for general purpose – Non – Alloy steel wire ropes – Terms of acceptance.**  
Price Code: Gr 2  
4 pages  
Identical to ISO 12701:1999, CHS 122:2005

Specifies the terms of acceptance for drawn wire intended for the manufacture of general purpose non-alloy steel-wire ropes, as specified in ISO 2232.

**COMESA ZWS HS ISO 2821:2007**  
**Leather – Raw hides of cattle and horses – Preservation by stack salting.**  
Price Code: Gr 2  
2 pages  
Identical to ISO 2821:1974, CHS 232:2005

Analyses the various preserving process defects likely to affect the raw hides of cattle and horses and defines the nites for the preservation of these hides by stack salting.

**COMESA ZWS HS ISO 3060:2009**  
**Cotton fibres – Determination of breaking tenacity of flat bundles**  
Price Code: Gr 3  
6 pages  
Identical to ISO 3060:1974, CHS 271:2006

Specifies a method of test for the determination of the breaking tenacity of cotton fibres arranged in a parallel manner in a flat bundle. The method applies to fibres from raw cotton or to raw cotton or to fibres from various stages in the manufacturing process or to fibres separated or extracted from manufactured cotton products.

**COMESA ZWS HS ISO 3129:2008**  
**Wood – Sampling method and general requirements for physical and mechanical tests**  
Price Code: Gr 3  
4 pages  
Identical to ISO 3129:1975, CHS 203:2006

Specifies methods for the selective and mechanical sampling of wood, for the conditioning of selected material and for the preparation of test pieces.

**COMESA ZWS HS ISO 3133:2008**  
**Wood – Determination of ultimate strength in static bending**  
Price Code: Gr 2  
2 pages  
Identical to ISO 3133:1975, CHS 204:2006

Specifies a method for determining the ultimate strength of wood in static bending.

**COMESA ZWS HS ISO 3376:2007**  
**Leather – Physical and mechanical tests – Determination of tensile strength and percentage extension.**  
Price Code: Gr 4  
4 pages  
Identical to ISO 3376:2002, CHS 234:2006

Specifies a method for determining the tensile strength, elongation and a specified load and elongation and break of leather. It is applicable to all types of leather.

**COMESA ZWS HS ISO 3377:2007**  
**Leather – Physical and mechanical tests – determination of tear load.**  
**Part 1: Single edge tear.**  
Price Code: Gr 3  
3 pages  
Identical to ISO 3377-1:2002, CHS 235.1:2006

Specifies a method for determining the tear strength of leather. Using a single edged tear.

**Part 2: Double edge tear**  
Price code: Gr 3  
3 pages  
Identical to ISO 3377-2:2002, CHS 235.2:2006

Specifies a method for determining the tear strength of leather using a double edged tear.

**COMESA ZWS HS ISO 3574:2007**  
**Cold reduced carbon steel sheet of commercial and drawing qualities.**  
Price Code: Gr 5  
14 pages  
Identical to ISO 3574:1999, CHS 142:2005

Applies to cold reduced carbon steel sheet of commercial and drawing qualities. It is suitable for applications where surface is of prime importance.

**COMESA ZWS HS ISO 3755:2006**  
**Cast carbon steels for general engineering purposes.**  
Price Code: Gr 2  
5 pages  
Identical to ISO 13755:1991, CHS 058:2005

Specifies requirements for eight grades of heat-treated cast carbon steels for general engineering purposes. Four grades have a restricted chemical composition to ensure uniform weldability.

**COMESA ZWS HS ISO 4019:2006**  
**Structural steels – Cold – Formed, Welded, Structural Hollow sections – Dimensions and sectiona properties**  
Price Code: Gr 6  
25 pages  
Identical to ISO 4019:2001, CHS 126:2005

Specifies the tolerances for cold-formed welded structural hollow steel sections that are circular, square or rectangular and gives the dimensions and sectional properties for a range of standard sizes.

**COMESA ZWS HS ISO 4198:2007**  
**Surface Active agents – Detergents for hand dishwashing. Guide for comparative testing of performance.**  
Price Code: Gr 4  
7 pages  
Identical to ISO 4198:1984, CHS 240:2005

Establishes guidelines for carrying out comparative tests for determining the principal performance characteristics of detergents, solid or liquid, for domestic hand washing which are of interest to the consumer.

**COMESA ZWS HS ISO 4319:2007**  
**Surface active agents – detergents for washing fabrics – Guide for comparative testing of performance.**  
Price Code: Gr 5  
6 pages  
Identical to ISO 4319:1977, CHS 239:2006

Constitute a guide for carrying out comparative tests of fabric washing products in such a way as to realistically reflect the performance of the products likely to be used by consumers.

**COMESA ZWS HS ISO 4325:2007**  
**Soaps and detergents – determination of chelating agent content – Titrimetric method.**  
Price Code: Gr 2  
2 pages  
Identical to ISO 4325:1990, CHS 243:2006

Specifies a method of analysis for the determination of the chelating agent content of detergent compositions and soaps containing not more than 2% (m/m) of chelating agent.

**COMESA ZWS HS ISO 4344:2006**  
**Steel wire ropes for lifts – Minimum requirements**  
Price Code: Gr 7  
28 pages  
Identical to ISO 4344:2004, CHS 127:2005

Specifies the minimum requirements for the manufacture and testing of stranded carbon steel wire ropes for suspension duty on traction drive and roped hydraulic lifts and for compensation and governor duties on passenger and freight lifts, dump-waiters, personnel hoists and man lifts moving between guides.

**COMESA ZWS HS ISO 4858:2008**  
**Wood – Determination of volumetric shrinkage**  
Price Code: Gr. 3  
3 pages  
Identical to ISO 4858:1982, CHS 206:2006,

Specifies two methods for the determination of the volumetric shrinkage of wood.

**COMESA ZWS HS ISO 4860:2008**  
**Wood – Determination of volumetric swelling**  
Price Code: Gr 3  
3 pages  
Identical to ISO 4860:1982, CHS 207:2006

Specifies two methods for the determination of the volumetric swelling of wood. The stereometric method used for test pieces made in accordance with ISO 4859. The mercury volumenometer method used for test pieces of any shape.

**COMESA ZWS HS ISO 4911:2008**  
**Textiles – Cotton fibres – Equipment and artificial lighting for cotton classing rooms**  
Price Code: Gr 3  
7 pages  
Identical to ISO 4911:1980, CHS 257:2006

Specifies requirements for artificial illumination used for judging accurately and uniformly the colour of cotton. It also describes a method of test for appraising the colour quality of lamps procured for this purpose.

**COMESA ZWS HS ISO 4912:2008**  
**Textiles – Cotton fibres – Evaluation of maturity – Microscopic method**  
Price Code: Gr 4  
8 pages  
Identical to ISO 4912:1981, CHS 272:2006

Specifies a method for the evaluation of the maturity of raw cotton fibres, or fibres taken from cotton articles which have not been chemically processed

**COMESA ZWS HS ISO 4913:2008**  
**Textiles – Cotton fibres – Determination of length (span length) and uniformity index**  
Price Code: Gr 3  
3 pages  
Identical to ISO 4913:1981, CHS 258:2006

Specifies a method of test for the determination of the length and uniformity index of cotton fibres by scanning a test beard in an optical device.

**COMESA ZWS HS ISO 4995:2006**  
**Hot-rolled steel sheet of structural quality**  
Price Code: Gr 4  
12 pages  
Identical to ISO 4995:2001, CHS 123:2005

Applied to hot-rolled steel sheet of structural quality in grades and classes without the use of micro-alloying elements. It is intended for structural purposes where particular mechanical properties are required.

**COMESA ZWS HS ISO 4997:2006**  
**Cold-reduced steel sheet of structural quality**  
Price Code: Gr 5  
12 pages  
Identical to ISO 4997:1999, CHS 124:2005

Applies to cold-reduced steel sheet of structural quality of various grades, usually without the use of microalloying elements.

**COMESA ZWS HS ISO 4998:2006**  
**Continuous hot- dip zinc- coated carbon steel sheet of structural quality**  
Price Code: Gr 4  
10 pages

Identical to ISO 4998:1996, CHS 125:2005  
Applies to continuous hot-dip zinc-coated carbon steel sheet of structural quality in various grades.

**COMESA ZWS HS ISO 5079:2008**  
**Textile fibres – Determination of breaking force and elongation at break of individual fibres**  
Price Code: Gr 3  
6 pages  
Identical to ISO 5079:1995, CHS 273:2006

Specifies the method and conditions of test for the determination of the breaking force and elongation at break of individual fibres in the conditioned or wet state.

**COMESA ZWS HS ISO 5088:2008**  
**Textiles – Ternary fibre mixtures – Quantitative analysis**  
Price Code: Gr 5  
13 pages  
Identical to ISO 5088:1976, CHS 259:2006

Specifies methods of quantitative analysis of various ternary mixtures of fibres.

**COMESA ZWS HS ISO/TR 5090:2008**  
**Textiles – Methods for the removal of non-fibrous matter prior to quantitative analysis of fibre mixtures**  
Price Code: Gr 3  
7 pages  
Identical to ISO/TR 5090:1977, CHS 267:2006

Describes procedures for the removal of certain commonly found types of non-fibrous substances from fibres. Fibres to which the procedures are applicable and those to which they are not applicable are listed in the table, in relation to the non-fibrous substances to be removed. The names of these fibres are defined in ISO 2076.

**COMESA ZWS ISO HS 5403:2007**  
**Leather – Physical and mechanical tests – determination of H<sub>2</sub>O resistance of flexible leather.**  
Price Code: Gr 4  
7 pages  
Identical to ISO 5403:2002, CHS 236:2006

Specifies a method for determining the dynamic H<sub>2</sub>O resistance of leather. It is applicable to all flexible leathers but is particularly suitable for leathers intended for footwear uppers.

**COMESA ZWS HS ISO 5431:2007**  
**Leather – Wet blue goat skins – Specification.**  
Price code: Gr 4  
7 pages  
Identical to ISO 5431:1999, CHS 245:2006

Specifies requirements methods of sampling and methods of test for wet blue leather produced from goat skins tanned without hair and with the use of basic chromium sulfate as the primary tanning agent.

**COMESA ZWS HS ISO 5432:2007**  
**Leather – Wet blue sheep skins – Specification**  
Price Code: Gr 4  
7 pages  
Identical to ISO 5432:1999, CHS 246:2006

Specifies requirements, of sampling and test for wet blue leather produced from sheep skins tanned without wool and with the use of basic chrome sulphate as the primary tanning agent.



**COMESA ZWS HS ISO 5433:2007**  
**Leather – Bovine wet blue – Specification**  
Price Code: Gr 4  
8 pages  
Identical to ISO 5433:1999, CHS 247:2006

Specifies requirements, methods of sampling and methods of test for wet blue leather produced from bovine hides and parts of bovine hides tanned without hair and with the use of basic chromium sulfate as the primary tanning agent.

**COMESA ZWS HS ISO 5954:2006**  
**Cold-reduced steel sheet and corresponding hardness requirements**  
Price Code: Gr 5  
11 pages  
Identical to ISO 1035-1:1980, CHS 128:2005

Applies to cold-reduced steel sheet and corresponding hardness requirements. It is suitable for applications where surface is of prime importance.

**COMESA ZWS HS ISO / TR 6306:2006**  
**Chemical analysis of steel – Order of listing elements.**  
Price Code: Gr 2  
2 pages  
Identical to ISO/TR 6306:1989, CHS 129:2005

Sets out recommended order for listing elements determined in steels and most other iron-based alloys, excluding foundry irons, where priorities are different.

**COMESA ZWS HS ISO 6316:2006**  
**Hot-rolled steel strip of structural quality**  
Price Code: Gr 4  
9 pages  
Identical to ISO 6316:2000, CHS 130:2005

Applies to hot-rolled steel strip or structural quality in various grades and classes.

**COMESA ZWS HS ISO 6741:2008**  
**Textiles – Fibres and yarns – Determination of commercial mass of consignments**  
**Part 1: Mass determination and calculations**  
Price Code: Gr 4 CHS 268:2006  
10 pages  
Identical to ISO 6741.1:1989, CHS 260.1:2006

Specifies methods for the determination of the commercial mass of homogeneous consignments of those textile fibres and yarns composed of a single generic species listed in part 4.

**Part 2: Methods for obtaining laboratory samples**  
Price Code: Gr 3  
5 pages  
Identical to ISO 6741.2:1987, CHS 260.2:2006

Specifies methods for obtaining laboratory samples for mass determination by one of the methods given in ISO 6741.1. The method appropriate for particular fibres is indicated in ISO 6741.4.

**Part 3: Specimen cleaning procedures**  
Price Code: Gr 3  
4 pages  
Identical to ISO 6741.3:1987, CHS 260.3:2006

Specifies specimen cleaning procedures to be used when the commercial mass is to be determined in accordance with ISO 6741.1 on a clean and dry basis.

**Part 4: Values used for the commercial allowances and the commercial moisture regains**  
Price Code: Gr 3  
6 pages  
Identical to ISO/TR 6741.4:1987, CHS 260.4:2006

Gives values for the commercial allowances and commercial moisture regains commonly used in the calculation of the commercial mass of consignments of textile fibres and yarns composed of a single generic type in their morphological state.

**COMESA ZWS HS ISO 6934:2006**  
**Steel for the prestressing of concrete**  
**Part 1: General requirements**  
Price Code: Gr. 3  
7 pages  
Identical to ISO 76934-1:1991, CHS 088.1:2005

Specifies requirements for high tensile strength steel to be used in prestressed concrete. Applies only to material in the condition as supplied by manufactures.

**Part 2: Cold-drawn wire**  
Price Code: Gr. 3  
6 pages  
Identical to ISO 6934-2:1991, CHS 088.2:2006

Specifies requirements for round, cold-drawn, high-tensile steel wire, either plain, indented, ribbed or crimped.

**Part 3: Quenched and tempered wire**  
Price Code: Gr 3  
6 pages  
Identical to ISO 6934-3:1991, CHS 088.3:2006

Specifies requirements for round wire made of quenched and tempered high tensile steel, with a surface with either plain, ribbed grooved or indented. Product is delivered in coils.

**Part 4: Strand**  
Price Code: Gr. 3  
5 pages  
Identical to ISO 6934-4:1991 CHS 088.4:2006,

Specifies requirements for high – tensile steel strand which has been given a stress relieving heat treatment according to the general requirements specified in Part 1.

**Part 5: Hot-rolled steel bars with or without subsequent processing.**  
Price Code: Gr.3  
6 pages  
Identical to ISO 6934-5:1991 CHS 088.5:2006,  
Specifies requirements for round high tensile steel bars. Bars may be supplied either hot-rolled or in a hot-rolled and processed condition, according to the general requirements specified in Part 1.

**COMESA ZWS HS ISO 6935:2006**  
**Steel for reinforcement of concrete**  
**Part 1: Plain bars**  
Price Code: Gr. 3  
6 pages  
Identical to ISO 6934-1:1999, CHS 089.1:2008

Specifies technical requirements for plain bars designated for reinforcement in ordinary concrete structures and for non-prestressed reinforcement in prestressed concrete structures.

**Part 2: Ribbed bars**

Price Code: Gr. 4

11 pages

Identical to ISO6934-2:1994, CHS 089.2:2006

Specifies technical requirements for ribbed bars designed for reinforcement in ordinary concrete, structures and for non-prestressed reinforcement in prestressed concrete structures.

**COMESA ZWS HS ISO 6938:2008****Textiles – Natural fibres – Generic names and definitions**

Price Code: Gr. 3

6 pages

Identical to ISO 6938:1984, CHS 261:2006

Gives the generic names and the definitions of the most important natural fibres according to their specific constitution or origin.

**COMESA ZWS HS ISO 6984:2007****Rounded Non – Alloy Steel wires for stranded wire ropes for mine hoisting – Specifications.**

Price Code: Gr. 4

9 pages

Identical to ISO 6984:1990, CHS 139:2005

Specifies round non-alloy steel drawn wires to be used in the manufacture of stranded wire ropes for mine hoisting as defined in ISO3154. It specifies the dimensional tolerances; mechanical exteristics; conditions with which coatings, if any shall comply and the conditions of sampling and control.

**COMESA ZWS HS ISO 6989:2008****Textile fibres – Determination of length distribution of staple fibres (by measurement of single fibres)**

Price Code: Gr. 3

6 pages

Identical to ISO 6989:1981, CHS 274:2006

Specifies three methods for determination of the length of staple fibres by measuring individual fibres. Different methods of expressing the length distribution from values obtained by measurement of individual fibres.

**COMESA ZWS HS ISO 7535:2007****Surface active agents – detergents for domestic machine dishwashing – guide for comparative testing of performance.**

Price Code: Gr. 4

11 pages

Identical to ISO 7535:1984, CHS 242:2006

Establishes guidelines for carrying out comparative tests on machine dishwashing products solid or liquid, in an attempt to reflect realistically the performance of products likely to be used by consumers.

**COMESA ZWS HS ISO 7900:2007****Zinc – Coated steel wire for fencing.**

Price Code: Gr. 2

3 pages

Amended by MD 660:2007

Identical to ISO 7900:1988, CHS 140:2005

Specifies requirements for drawn steel wire zinc – coated by the hot dip process and intended for use in general – purpose wire fencing, barbed – wire fencing, barbed – wire fencing, field fencing and chain link fencing.

**COMESA ZWS HS ISO 7535:2009****Cotton bales – Dimensions and density**

Price Code: Gr. 3

2 pages

Identical to ISO 8115-1:1986, CHS 262.1:2006

Lays down the nominal overall dimensions and the bale density of banded cotton bales density of banded cotton bales. It applies to the shaping and forming the transport and the opening of the bales. It does not apply to wrapping, banding, and the marking of bales.

**Part 2: Bales of man-made staple fibres – Dimensions**

Price Code: Gr. 3

3 pages

Identical to ISO 8115-2:1994, CHS 262.2:2006

Specifies the overall dimensions of banded bales of man-made staple fibres. The specified dimensions allow for an optimum utilization of the loading space of freight containers and trucks.

**Part 3: Bales of cotton – Packaging and labeling**

Price Code: Gr. 3

2 pages

Identical to ISO 8115-3:1995, CHS 262.3:2006

Specifies details for packaging and labelling of cotton bales.

**COMESA ZWS HS ISO 8159:2009****Textiles – Morphology of fibres and yarns – Vocabulary**

Price Code: Gr. 3

3 pages

Identical to ISO 8159:1987, CHS 263:2006

Defines the principal terms used to describe the various forms into which textile fibres can be assembled, up to and including cabled yarns.

**COMESA ZWS HS ISO 8375:2008****Solid timber in structural sizes – Determination of some physical and mechanical properties**

Price Code: Gr. 3

10 pages

Identical to ISO 8375:1985, CHS 199:2006

Specifies laboratory methods for determining the following properties of solid timber in structural sizes. Modulus of elasticity in static bending, shear modulus, bending strength, modulus of elasticity in tension, tension strength parallel to the grain, modulus of elasticity in compression, compression strength parallel to the grain.

**COMESA ZWS HS ISO 8528:2013****Reciprocating internal combustion engine driven alternating current generating sets****Part 2: Engines**

Price Code: Gr.5

12 pages.

Identical to ISO 8528.2:2005, CHS 287.2:2007

Specifies the principal characteristics of a reciprocating internal combustion (RIC) engine when used for alternating current (a.c.) generating set applications.

**Part 3: Alternating current generators for generating sets**

Price

Code:

Gr.5

15 pages

Identical to ISO 8528.3:2005, CHS 287.3:2007

Specifies the principal characteristics of alternating current (a.c.) generators under the control of their voltage regulators when used in generating set applications. It supplements the requirements of IEC 60034.1.

**Part 4: Alternating current generators for generating sets**

Price Code: Gr. 5

18 pages

Identical to ISO 8528.4:2005 CHS 287.4:2007,

Specifies the criteria for control gear and switchgear for generating sets with reciprocating internal combustion engines.

**Part 7: Technical declarations for specifications and design**

Price Code: Gr. 5

14 pages

Identical to ISO 8528.7:1994, CHS 287.7:2007

Specifies the requirements and parameters for the specification and design of a reciprocating internal combustion (RIC) engine driven generating set.

**Part 8: Requirements and tests for low-power generating sets**

Price code: Gr 5

9 pages

Identical to ISO 8528.8:2016,

Defines design requirements, minimum performances and type tests for low-power generating sets driven by reciprocating internal combustion engines for land and marine use excluding generating sets used on aircraft

**Part 9: Measurement and evaluation of mechanical vibrations**

Price Code: Gr. 5

15 pages

Identical to ISO 8528.9:1995, CHS 287.9:2007

Describes procedures for measuring and evaluating the external mechanical vibration behaviour of generating sets at the measuring points stated in that international standard.

**Part 10: Measurement of airborne noise by the enveloping surface method**

Price Code: Gr. 6

17 pages

Identical to ISO 8528.10:1998, CHS 287.10:2007

Defines measurement methods for the determination of airborne noise emitted by reciprocating internal combustion engine driven generating sets in such a way that the total of relevant noise emissions e.g. exhaust and cooling system noise, together with all other sources of engines noise are evaluated on a similar basis to yield comparable results.

**Part 12: Emergency power supplies to safety services**

Price Code: Gr. 5

12 pages

Identical to ISO 8528.12:1997, CHS 287.12:2007

Applies to generating sets driven by reciprocating internal-combustion (RIC) engine for emergency power supply to safety services.

**COMESA ZWS HS ISO 8611:2007**

**Pallets for materials handling – flat pallets.**

**Part 1: Test methods.**

Price Code: Gr. 7

Identical to CHS 216:2006

27 pages

Specifies test methods of existing and prototype flat pallets for materials handling (for all types of use).

**Part 2: Performance requirements and selection of tests.**

Price Code: Gr. 4

11 pages

Identical to ISO 8611-2:2005, CHS 217:2006

Specifies the performance requirements and the selection of tests for flat pallets of all materials being subjected to the tests defined in ISO 8611-1. It is not intended to apply to pallets with a fixed superstructure or a rigid, self-supporting container and maybe mechanically attached to the pallet and which contributes to the strength of pallet.

**Part 3: Maximum working loads.**

Price Code: Gr. 4

10 pages

Identical to ISO 8611-3:2005, CHS 218:2006

Proposes relevant test methods to determine a range of maximum working loads for different payloads and loading and support conditions, which depend on the nature of the load being carried.

**COMESA ZWS HS ISO 8903:2008**

**Broadleaved sawn timber – Nominal sizes**

Price Code: Gr. 2

1 page

Identical to ISO 8903:1994, CHS 200:2006

Specifies nominal sizes of unplanned, square-edged and unedged, broadleaved sawn timber.

**COMESA ZWS HS ISO 8904:2008**

**Broadleaved sawn timber – Sizes – Methods of measurement**

Price Code: Gr. 2

1 page

Identical to ISO 8904:1990, CHS 201:2006

Specifies the methods of measurement of the length, width, thickness and volume of broadleaved sawn timber. It is applicable to unplanned, square-edged and unedged broadleaved sawn timber.

**COMESA ZWS HS ISO 8905:2008**

**Sawn timber – Test methods – Determination of ultimate strength in shearing parallel to grain**

Price Code: Gr. 2

2 pages

Identical to ISO 8905:1988, CHS 202:2006

Specifies a method of testing sawn timber of coniferous and broadleaved species in shearing parallel to the grain to determine the ultimate strength.

**COMESA ZWS HS ISO 9086:2008**

**Wood – Methods of physical and mechanical testing – Vocabulary**

**Part 1: General concepts and macrostructure**

Price Code: Gr. 3

6 pages

Identical to ISO 9086.1:1987, CHS 208:2006

Gives terms and definitions relating to general concepts and wood macrostructure.

**COMESA ZWS HS ISO 9444:2007**

**Continuously hot-rolled stainless steel strip, plate/sheet and cut lengths tolerances on dimensions and form**

Price Code: Gr. 4

10 pages

Identical to ISO 9444:2007, CHS 146:2005

Specifies the tolerances on dimensions and form for continuously hot-rolled stainless steel narrow strip in actual width of less than 600mm. It applies to cut lengths taken from such strip.

**COMESA ZWS HS ISO 9477:2007**  
**High strength cast steels for general engineering and structural purposes.**

Price Code: Gr. 3  
3 pages

Identical to ISO 9477:1992, CHS 144:2005

Specifies requirements for four grades of heat – treated cast carbon and alloy steels for general engineering and structural purposes.

**COMESA ZWS HS ISO 9709:2008**  
**Structural timber – Visual strength grading – Basic principles**

Price Code: Gr. 6 25  
pages

Identical to ISO 9709:2005, CHS 213:2006

Establishes the basic principles for rules and procedures governing the visual sorting of timber for use in structural applications.

**COMESA ZWS HS ISO 10144:2007**  
**Certification scheme for steel bars and wires for the reinforcement of concrete structures.**

Price Code: Gr. 3  
5 pages

Identical to ISO 10144:1991, CHS 143:2005

Specifies rules for a certification scheme for continuous production of steel bars and wires for ordinary reinforcement of concrete structures in order to verify the conformity with the requirements specified in product Standards such as ISO 6935-1 and ISO 6935-2.

**COMESA ZWS HS ISO 10306:2008**  
**Textiles – Cotton fibres – Evaluation of maturity by the air flow method**

Price Code: Gr. 3  
5 pages

Identical to ISO 10306:1993, CHS 264:2006

Specifies a method for the evaluation of the maturity of loose randomized cotton fibres by measuring the resistance to air flow of a plug of cotton fibres under two prescribed conditions. The method is applicable to cotton taken at random from bales. Laps and slivers or other sources of lint cotton may be tested, however results may differ if fibres are taken from bales.

**COMESA ZWS HS ISO 10474:2007**  
**Steel and steel products – Inspection documents.**

Price Code: Gr. 3  
6 pages

Identical to ISO 10474:1991, CHS 141:2005

Defines the different types of inspection documents supplied to the purchaser, in accordance with the requirements of the order, for the delivery of iron and steel products.

**COMESA ZWS HS ISO 12952:2008**  
**Textiles – Burning behavior of bedding items**  
**Part 1: General test methods for the ignitability by a smouldering cigarette**

Price Code: Gr 4  
9 pages

Identical to ISO 12952-1:1998, CHS 265.1:2006

Specifies a general test method common to all bedding items, for assessment of their ignitability when subjected to a smouldering cigarette.

**Part 2: Specific test methods for the ignitability by a smoldering cigarette**

Price Code: Gr 3  
5 pages

Identical to ISO 12952-2:1998 CHS 265.2:2006,

Specifies product specific details concerning specimens size, wash procedures, set up of specimens and positions of cigarettes for testing bedding items according to the method described in EN ISO 12952-1.

**Part 3: General test methods for the ignitability by a small open flame**

Price Code: Gr 4  
9 pages

Identical to ISO 12952-3:1998, CHS 265.3:2006

Specifies a general test method common to all bedding items, for assessment of their ignitability when subjected to a smoldering cigarette.

**Part 4: Specific test methods for the ignitability by a small open flame**

Price Code: Gr 3  
4 pages

Identical to ISO 12952-4:1998, CHS 265.4:2006

Specifies product-specific details concerning specimen size, wash procedures, set-up of specimens and positions of the ignition source for testing bedding items according to the method described in EN ISO 12952.3.

**COMESA ZWS HS ISO 13912:2008**  
**Structural timber – Machine strength grading – Basic principles**

Price Code: Gr 4  
22 pages

Identical to ISO 13912:2008, CHS 214:2006

Establishes the basic principles for rules and principles governing the machine sorting of timber for use in structural applications.

**COMESA ZWS HS ISO 14284:2007**  
**Steel and Iron – Sampling and preparation of samples for the determination of chemical composition.**

Price Code: Gr 7  
30 pages

Identical to ISO 14284:1996, CHS145:2005

Specifies methods for sampling and sample preparation for the determination of the chemical composition of pig iron, cast-iron and steel. Methods are specified for use with both liquid and solid metal.

**COMESA ZWS ISO14931:2007**  
**Leather – Guide to the selection of leather for apparel (excluding furs)**

Price Code: Gr 3  
4 pages

Identical to ISO14931:2004, CHS 237:2006

Gives recommended values and related test method for apparel leather excluding furs. This document also specifies the sampling and conditioning procedures of laboratory samples.

**COMESA ZWS HS ISO 16020:2006**  
**Steel for reinforcement and prestressing of concrete – Vocabulary.**

Price Code: Gr 6  
21 pages

Identical to ISO 16020:2005, CHS 099:2005

Defines terms and symbols to be used in the field of reinforcing and prestressing steel for concrete.

**COMESA ZWS HS 16143:2007**

**Stainless steels for general purposes**

**Part 1: Flat products**

Price Code: Gr 6

23 pages

Identical to ISO 16143-1:2004, CHS 147.1:2005

Specifies the technical delivery conditions for hot/cold rolled sheet/plate and strip for general purposes made of the most important corrosion – resistant stainless steel grades.

**Part 2: Semi-finished products, bars, rods and sections**

Price Code: Gr 6

25 pages

Identical to ISO 16143-2:2004, CHS 147.2:2005

Specifies a technical delivery conditions for semi-finished products, hot or cold formed bars, rod and sections for general purposes made of the most important corrosion – resistant stainless steel grades.

**Part 3: Wire**

Price Code: Gr 5

20 pages

Identical to ISO 16143-3:2005, CHS 147.3:2005

Specifies requirements for stainless steel wire for which no product standard exists. It includes round, flat and shaped wire, made of the most commonly used types of stainless steels for general corrosion resistance and high temperature service. The wire maybe supplied in coils or in straightened and cut lengths.

**COMESA ZWS HS ISO 17186:2007**

**Leather – Physical and mechanical tests – determination of surface coating thickness.**

Price Code: Gr 3

5 pages

Identical to ISO 17186:2002, CHS 244:2006

Specifies a method for determining the thickness of the surface coating applied to leather when measured under zero compression. It is applicable to all types of leather.

**COMESA ZWS HS ISO 17227:2007**

**Leather – Physical and mechanical tests – determination of dry heat resistance of leather**

Price Code: Gr 3

4 pages

Identical to ISO 17227:2002, CHS 248:2006

Specifies a method of determining the dry heat resistance of conditioned leathers. It is applicable to all leathers.

**COMESA ZWS HS ISO 18613:2007**

**Repair of flat wooden pallets**

Price Code: Gr 5

16 pages

Identical to ISO 18613:2003. CHS 219:2006

Specifies the maximum defects and damage allowed before a flat wooden pallet shall be repaired and defines the minimum repair criteria that shall be used.

# COMESA ZWS HS IEC ADOPTIONS

**NOTE:** Some COMESA endorsed standards appear under the IEC and ISO sections

**COMESA ZWS HS IEC 884-2.5:2009**  
**Plugs and socket-outlets for household and similar purposes**  
 Price Code: Gr. 7  
 37 pages  
 Identical to IEC 884-2.5:1995

Applies to shuttered and non-shuttered, fused and non-fused adaptors for a.c only.

**COMESA ZWS HS IEC 60034:2013**  
**Rotating electrical machines**  
**Part 11: Thermal protection**  
 Price Code: Gr.6  
 25 pages  
 Identical to IEC 60034.11, CHS 282.11:2007

Specifies requirements relating to the use of thermal protectors and thermal detectors incorporated into the stator windings or placed in other suitable positions in induction machines in order to protect them against serious damage due to thermal overloads.

**COMESA ZW HS IEC 60038:2013**  
**Standard voltages**  
 Price Code: Gr. 4  
 21 pages  
 Identical to IEC 60038:1997, CHS 288:2007

Applies to a.c. transmission, distribution and utilization systems and equipment for use in such systems with standard frequencies 50Hz having a nominal voltage above 100V.

**COMESA ZW HS IEC 60041:2017**  
**Field accepted tests to determine the hydraulic performance of hydraulic turbines, storage pumps and pump-turbines**  
 Price Code: Gr. 14  
 419 pages  
 Identical to IEC 60050-466:1990, FDHS 283

Specifies methods for any size and type of impulse or reaction turbine, storage pump or pump turbine. Determines whether the contract guarantees have been fulfilled and deals with the rules governing these tests as well as the methods of computing the results and the content and style of the final report.

**COMESA ZW HS IEC 60050-421:2017**  
**International electrotechnical vocabulary – Overhead lines**  
 Price Code: Gr. 7  
 37 pages  
 Identical to IEC 60050-466:1990, FDHS 275

Covers terms and definitions used within power transformers and reactors

**COMESA ZW HS IEC 60050-461:2017**  
**International electrotechnical vocabulary – Overhead lines**  
 Price Code: Gr. 7  
 29 pages  
 Identical to IEC 60050-466:1990, FDHS 276

Covers terms and definitions used for electrical cable

**COMESA ZW HS IEC 60050-466:2017**  
**International electrotechnical vocabulary – Overhead lines**  
 Price Code: Gr. 7  
 49 pages  
 Identical to IEC 60050-466:1990, FDHS 277

Covers terms and definitions used within the Overhead lines

**COMESA ZW HS IEC 60059:2013**  
**Standard current ratings**  
 Price Code: Gr..7  
 5 pages  
 Identical to IEC 60059, CHS 289:2007

Specifies standard current ratings for electrical devices, apparatus, instruments and equipment and should be applied to the designing of utilization systems or equipment as well as to operating characteristics.

**COMESA ZW HS IEC 60076:2013**  
**Power transformers**  
**Part 1: General**  
 Price Code: Gr. 7  
 89 pages  
 Identical to IEC 60076:2000, CHS 303.1:2010

Applies to three –phase and single-phase power transformers (including auto-transformers) with the exception of certain categories of small and special transformers.

**COMESA ZW HS IEC 60104:2013**  
**Aluminium – magnesium – silicon alloy wire for overhead line conductors**  
 Price Code: Gr. 5  
 11 pages  
 Identical to IEC 60104, CHS 309:2007

Applicable to aluminium-magnesium-silicon alloy wires of two types having different mechanical and electrical properties for the manufacture of stranded conductors for overhead power transmission purposes.

**COMESA ZW HS IEC 60227:2009**  
**Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V**

**Part 1: General requirements**  
 Price Code: Gr. 6  
 39 pages  
 Identical to IEC 60227.1:1998, CHS 225.1:2006

Applies to rigid and flexible cables with insulation and sheath if any based on polyvinyl chloride of rated voltages Uo/U up to and including 450/750 V used in power installations of nominal voltage not exceeding 450/750 V.

**Part 2: Test methods**  
 Price Code: Gr. 5  
 25 pages  
 Identical to IEC 60227.2:2003, CHS 225.2:2006

The methods of carrying out the tests specified in all parts of IEC 60227.

**Part 3: Non – sheathed cables for fixed wiring**  
 Price Code: Gr. 6  
 33 pages  
 Identical to IEC 60227.3:1997, CHS 225.3:2006

Details the particular specifications for polyvinyl chloride insulated single-core non-sheathed cables for fixed wiring of rated voltages up to and including 450/750 V.

**Part 4: Sheathed cables for fixed wiring**

Price Code: Gr. 5

39 pages

Identical to IEC 60227.4:1997, CHS 225.4:2006

Details the particular specification for light polyvinyl chloride sheathed cables of rated voltage of 300/500 V

**Part 5: Flexible cables (cords)**

Price Code: Gr. 6

43 pages

Identical to IEC 60227.5:2003, CHS 225.5:2006

Details the particular specifications for polyvinyl chloride insulated flexible cables (cords) of rated voltages up to and including 300/500 V.

**Part 6: Lift cables and cables for flexible connections**

Price Code: Gr 6

39 pages

Identical to IEC 60227.6:2001, CHS 225.6:2006

Details the particular specifications for both circular and flat lift cables and cables for flexible connections of rated voltages up to and including 450/750 V.

**Part 7: Flexible cables screened and unscreened with two or more conductors**

Price Code: Gr. 6

21 pages

Identical to IEC 60227.7:2003, CHS 225.7:2006

Details the particular specifications for polyvinyl chloride insulated screened control cables of rated voltages up to and including 300/500 V.

**COMESA ZW HS IEC 60228:2009**

**Conductors for insulated cables**

Price Code: Gr. 7

37 pages

Identical to 60228:2004, CHS 221:2005

Specifies the nominal cross-sectional areas, in the range 0, 5 mm<sup>2</sup> to 2 500 mm<sup>2</sup> for conductors in electric power cables and cords of a wide range of types. Requirements for numbers and sizes of wires and resistance values are also included. These conductors include solid and stranded copper, aluminium and aluminium alloy conductors in cables for fixed installations and flexible copper conductors.

**COMESA ZW HS IEC 60309:2009**

**Plugs socket-outlets and couplers for industrial purposes**

**Part 1: General requirements**

Price Code: Gr. 10

183 pages

Identical to IEC 60309.1:2005, CHS 226.1:2006

Applies to plugs and socket-outlets, cable couplers and appliance couplers with a rated operating voltage not exceeding 690V d.c or a.c and 500 Hz a.c and a rated current not exceeding 250 A, primarily intended for industrial use either indoors or outdoors.

**Part 2: Dimensional interchangeability requirements for pin and contact tube accessories**

Price Code: Gr. 9

101 pages

Identical to IEC 60309.2:2005, CHS 226.2:2006

Applies to plugs and socket-outlets, cables couplers and appliance couplers with a rated operating voltage not exceeding 690 V, 500 Hz and a rated current not exceeding 125 A primarily intended for industrial use, either indoors or outdoors

**COMESA ZW HS IEC 60433:2013**

**Insulators for overhead lines with a nominal voltage above 1000 V – Ceramic insulators for A.C. systems – Characteristics of insulator units of the long rod type**

Price Code: Gr. 4

13 pages

Identical to IEC 60433:1998, CHS 228:2006

Applies to string insulator units of the long rod type with insulating parts of ceramic material intended for use in a.c. overhead power lines with a nominal voltage greater than 1000 V and a frequency not greater than 100 Hz. It is also applicable to insulators of similar design, used in substations.

**COMESA ZW HS IEC 60502:2009**

**Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U<sub>m</sub> = 1,2 Kv) Up to 30 Kv (U<sub>m</sub> = 36 kV)**

**Part 1: Cables for rated voltages of 1 kV (U<sub>m</sub> 1,2 Kv) and 3 kV (U<sub>m</sub> = 3,6 kV)**

Price Code: Gr. 7

115 pages

Identical to IEC 60502.1:1998, CHS 227.1:2006

Specifies the construction, dimensions and test requirements of power cables with extruded solid insulation for rated voltages of 1 Kv (U<sub>m</sub> = 1,2 kV) and 3 kV (U<sub>m</sub> = 3,6 kV) for fixed installations such as distribution networks or industrial installations.

**Part 2: Cables for rated voltages of 6 kV (U<sub>m</sub> = 7,2 kV) up to 30 kV (U<sub>m</sub> = 36 kV)**

Price Code: Gr 7

157 pages

Identical to IEC 60502.2:2005, CHS 227.2:2006

Specifies the construction, dimensions and test requirements of power cables with extruded solid insulation from 6 kV up to 30 kV for fixed installations such as distribution networks or industrial installations.

**Part 4: Test requirements on accessories for cables with rated voltages of 6 kV (U<sub>m</sub> = 7,2 kV) up to 30 kV (U<sub>m</sub> = 36 kV)**

Price Code: Gr 7

61 pages

Identical to IEC 60502.4:2005, CHS 227.4:2006

Specifies the test requirements for type testing of accessories for power cables with rated voltages from 3, 6/6 (7, 2) kV up to 18/30 (36) kV, complying with IEC 60502.2.

**COMESA ZW HS IEC 60884:2009**

**Plugs and socket-outlets for household and similar purposes**

**Part 1: General requirements**

Price Code: Gr 12

247 pages

Identical to IEC 60884.1:2002, CHS 229.1:2006

Applies to plugs and fixed or portable socket-outlets for a.c only with or without earthing contact with a rated voltage greater than 50V but not exceeding 440V and a related current not exceeding 32A intended for household and similar purposes either indoors or outdoors.

**COMESA ZW HS IEC 60884-2.1:2009**  
**Plugs and socket-outlets for household and similar purposes**

**Part 2: Particular requirements for fused plugs**

Price Code: Gr 5

15 pages

Identical to IEC 60884-2.1:1987, CHS 229.2.1:2006

Applies where fuses are primarily intended to protect the flexible cable or cord (e.g. with ring circuits). The fuses are not intended to protect appliances or parts of them against overload

**COMESA ZW HS IEC 60884-2.2:2009**

**Plugs and socket-outlets for household and similar purposes**

**Part 2: Particular requirements for socket-outlets for appliances**

Price Code: Gr 6

25 pages

Identical to IEC 60884-2.2:1989, CHS 292.2.2:2006

Applies to socket-outlets integrated or intended to be incorporated in or fixed to appliances (hereinafter referred to as “socket-outlets for appliances

**COMESA ZW HS IEC 60888:2009**

**Hard-drawn aluminium wire for overhead line conductors.**

Price Code: Gr 3

9 pages

Identical to IEC 60888:1987, CHS 223:2006

Applicable to hard-drawn aluminium wires for the manufacture of stranded conductors for overhead power transmission purposes. It specifies the mechanical and electrical properties of wires in the diameter range 1.25mm to 5.00mm.

**COMESA ZW HS IEC 60889:2009**

**Zinc-coated steel wires for stranded conductors**

Price Code: Gr. 5

25 pages

Identical to IEC 60889:1987, CHS 22:2005

Applies to zinc-coated steel wires used in the construction and/or reinforcement of conductors for overhead power transmission purposes.

**COMESA ZW HS IEC 61140:2013**

**Protection against electric shock – Common aspects for installation and equipment**

Price Code: Gr. 8

83 pages

Identical to IEC 61140:2001, CHS 301:2010

Applies to the protection of persons and animals against electric shock. It is intended to give fundamental principles and requirements which are common to electrical installations, systems and equipment or necessary for their co-ordination.

**COMESA ZW HS IEC 61328:2013**

**Live working – Guidelines for the installation of transmission line conductors and earth wires – Stringing equipment and accessory items**

Price Code: Gr. 7

131 pages

Identical to IEC 61328:2003, CHS 311:2007

Provides recommendations for the selection and testing where necessary of conductor stringing equipment and accessory items used for the installation of overhead conductors and overhead earthwires.

**COMESA ZW HS IEC 61378:2013**

**Convertor transformers**

**Part 1: Transformers for industrial applications**

Price Code: Gr. 6

57 pages

Identical to IEC 61378.1:1997, CHS 310.1:2010

Deal with the specification, design and testing of power transformers and reactors which are intended for integration within semiconductor convertor plants. It is not applicable to transformers designed for industrial or public distribution of a.c. power in general.

**Part 2: Transformers for HVDC applications**

Price Code: Gr. 5

45 pages

Identical to IEC 61378.2:2001, CHS 310.2:2010

Applies to oil-immersed three-phase convertor transformers for use in HDVC power transmission. It applies to transformers having two, three or multiple windings.

**COMESA ZW HS IEC 61427:2009**

**Secondary cells and batteries for photovoltaic energy systems (PVES) – General requirements and methods of test**

Price Code: Gr 5

29 pages

Identical to IEC 61427:2005, CHS 220:2006

Gives general information relating to the requirements of the secondary batteries used in photovoltaic energy systems (PVES) and to the typical methods of test used for the verification of battery performances.

**COMESA ZW HS IEC 61466:2013**

**Composite string insulator units for overhead lines with a nominal voltage greater than 1 000V**

**Part 1: Standard strength classes and end fittings**

Price Code: Gr. 7

43 pages

Identical to IEC 61466.1:1997, CHS 297.1:2010

Applicable to composite string insulator units for a.c. overhead lines with a nominal voltage greater than 1 000V and a frequency not greater than 100Hz. It also applies to insulators of similar design used in substations or on electric traction lines.

**Part 2: Dimensional and electrical characteristics**

Price Code: Gr. 4

13 pages

Identical to IEC 61466.2:2002, CHS 297.2:2010

Applies to composite string insulator units with a specified mechanical load (SML) of 40 Kn to 210 Kn for a.c. overhead lines with a nominal voltage greater than 1 000V and a frequency not greater than 100Hz.

**COMESA ZW HS IEC 61865:2013**

**Overhead lines - Calculation of the electrical component of distance between live parts and obstacles – Method of calculation**

Price Code: Gr. 7

45 pages

Identical to IEC 61865:2001, CHS 299:2007

Provides guidance for the calculation of electrical distances between live and earthed parts required to prevent air-gap breakdown which may endanger members of the public who legitimately come close to live parts. It is applicable only to overhead lines designed to operate at more than 45kV phase-to-phase a.c.



**COMESA ZW HS IEC 62219:2009**  
**Overhead electrical conductors – Formed wire, concentric lay, stranded conductors**  
Price Code: Gr 6  
47 pages  
Identical to IEC 62219:2002, CHS 224:2006

Specifies the electrical and mechanical characteristics of concentric lay, overhead conductors of wires formed or shaped before, during or after stranding.



# ZWS SADC ADOPTIONS

## SADC ZWS HS 78:2017

### Canned Sardines and Sardine-Type Products

Price Code: Gr 5

8 pages

Identical to SADCSTAN HS 78:2017

This Standard applies to canned Sardines-type products packed in water or oil or other suitable packing medium. It does not apply to products where fish content constitute less than 50% m/m of the net contents of the can.

## SADC ZWS HS 79:2017

### Dried Fresh Water Small Pelagics

Price Code: Gr 4

5 pages

Standard applies to farmed fresh whole bream of genus *Oreochromis* and *Tilapia*. For direct consumption or further processing.

## SADC ZWS HS 80:2017

### Farmed Tilapia (Bream)

Price Code: Gr 4

6 pages

Specifies the requirements and methods of test for dried *Rastrineobola argentea*, *Rastrineobola sardella*, *Stolothrissa tanganicae*, *Limnothrissa miodon*, and *Poecilothrissa moeruensis* and *Engraulicypris bangweuluensis*.

## SADC ZWS HS 81:2017

### Fresh And Frozen Whole Fin Fish

Price Code: Gr 5

8 pages

Identical to SADCSTAN HS 81:2017

This Standard specifies requirements and methods of sampling and test for fresh and frozen whole fin fish intended for human consumption.

## SADC ZWS HS 82:2017

### Fresh And Chilled Fish

Price Code: Gr 5

9 pages

This standard applies to fresh and chilled fish as defined and offered for direct consumption without further processing. It does not apply to products indicated as intended for further processing or for other industrial use.

## SADC ZWS HS 83:2017

### General Standard For Quick Frozen Fish Fillets

Price Code: Gr 5

8 pages

Identical to SADCSTAN HS 83:2017

This Standard applies to quick frozen of fish as defined below and offered for direct consumption without further processing. It does not apply to products indicated as intended for further processing or for other industrial purposes.

## SADC ZWS HS 84:2017

### Smoked Finfish, Smoke –Flavoured Finfish And Smoke-Dried Finfish

Price Code: Gr 6

11 pages

This standard applies to smoked, smoke-flavoured and smoked – dried finfish prepared from fresh, chilled or frozen raw material. It deals with whole finfish, fillets and sliced and similar products thereof.

## SADC ZWS HS 85:2017

### Salted fish and dried salted fish

Price Code: Gr 6

14 pages

Identical to SADCSTAN HS 85:2017

This Standard applies to salted fish and dried salted fish which has been fully saturated with salt (heavy salted) or to salted fish which has been preserved by partial saturation to a salt content not less than 12% by weight of the salted fish for human consumption.

## SADC ZWS HS 86:2017

### Fish Sausages

Price Code: Gr 4

7 pages

This standard specifies requirements and methods of sampling and test for fish sausages intended for human consumption or as an ingredient in other foods.

## SADC ZWS HS 87:2017

### Crackers from marine and fresh fish, crustacean and Molluscan shellfish

Price Code: Gr 4

8 pages

Identical to SADCSTAN HS 87:2017

This Standard specifies requirements crackers, biscuits and other similar snacks prepared from marine and freshwater fish, crustacean and molluscan shellfish

## SADC ZWS HS 88:2017

### Good Aquaculture Practices Bream (TILAPIA) Farm

Price Code: Gr 6

16 pages

This standard applies to Good Aquaculture Practices (GAP) for bream (Tilapia) in pond and cage farming including harvesting and post-Harvest handling in order to produce products of good quality and safe for consumption. This standard however does not cover hatching and nursing.

## SADC ZWS HS 89:2017

### Railway Safety Management General

Price Code: Gr 7

49 pages

This SADC SARA standard describes the minimum elements of safety management system (SMS) to enable the RAs to develop an SMS for the management of safe railway operations under his/her control, taking into account each of the following in the following in the asset life cycle phases.

## SADC ZWS HS 90:2017

### Technical requirements for engineering and operational standards -General

Price Code: Gr 5

12 pages

This SADC SARA HT 90 gives the generic technical requirements for engineering and operational systems that form part of a railway safety management system which complies with the SADC SARA HT 90 Regional Safety Policy

**SADC ZWS HS 91:2017**  
**Technical requirements for engineering and operational standards –Track ,civil and electorical infrastructure**  
Price Code: Gr 7  
28 pages

This Standard covers the asset life cycle components of design, construction/manufacturing and implementation, commissioning, monitoring and maintainance, modification and decommissioning and disposal

**SADC ZWS HS 92:2017**  
**Technical requirements for engineering and operational standards –Rolling Stock**  
Price saCode: Gr 5  
13 pages

This Standard covers the asset life cycle components of design ,construction/manufacturing and implementation ,commissioning ,monitoring and maintainance ,modification and decommissioning and disposal of rolling stock

**SADC ZWS HS 93:2017**  
**Human factors management**  
Price Code: Gr 9  
122 pages

This Standard provides the minimum requirements to RA’s for the management of HF for employees who undertake safety-related work.It is to read and implement in conjunction with the relevant national legislation standards applicable in the country in which the RA operates as well as other SARA safety standards

**SADC ZWS HS 94:2017**  
**Technical requirements for engineering and operational standards –Track, civil and electorical infrastructure level crossing**  
Price Code: Gr 7  
43 pages

This Standard aims to provide guidance and information for the utilization of standards applicable to the transportation of dangerous goods adopted by SADCTAN/TC2 SARA members in accordance with the provisions of the Southern African Development Community Protocol on Transport, Communications and Meteorology.

**SADC ZWS HS 95:2017**  
**Technical requirements for engineering and operational standards – Operational principles for safe movement on rail**  
Price Code: Gr 6  
17 pages

This Standard covers the minimum requirements for operational principles for safe movement on rail.It includes the operational to be complied with to ensure that operational safety is appropriately addressed in all operational circumstances.

**SADC ZWS HS 96:2017**  
**Requirements for systematic engineering and operational safety standards – Train authorisation and control and telecommunications**  
Price Code: Gr 8  
48 pages

This Standard covers the minimum requirements for train authorization and control systems and telecommunications systems,which provide a means to enable safe train and shunt movements of rolling stock through the use of appropriate technology.

**SADC ZWS HS HT :104:2020**  
**ARS ZW HS 1371:2022**  
**Cross border road Management System**  
Price Code: Gr 7  
28 pages

This Standard is designated for appalication by member states of the Tripartite Region.It is a self regulatory scheme that encourages cross boarder transport operators to implement a cross boarder road Transport Management System

**SADC ZWS HT 105 Part 1:2020**  
**ARS ZW HS 1355 Part 1:2022**  
**Vehicle Standards –Specification For vehicle Road Worthiness Part 1: Roadworthiness of vehicles already in use**  
Price Code: Gr 7  
30 pages

This Part 1 of the specification covers the requirements for the examination and testing for roadworthiness of motor vehicles operating within the territories and across the borders within the Tripartite Region of COMESA-EAC-SADC.

**SADC ZWS HS HT 105 Part 2 :2020**  
**ARS ZW HS 1355: Part 2:2022**  
**Vehicle Standards –Specification For vehicle Road Worthiness Part 2: Roadworthiness of vehicles prior to entry into service and thereafter**  
Price Code: Gr 6  
28 pages

Part 2 of this specification deals with methods and considerations to provide for the future introduction of more advanced safety requirements such as those detailed in Table 1 whilst offering options to minimize costly and burdensome technical and administrative controls and procedures. It caters for the situation where many countries or regions have requirements which differ in certain detail, but which are intended and designed to afford a reasonable degree of safety to the vehicle occupants and to other road users. Examples of where differences between national or regional requirements do, or may exist, but which are considered as providing an equal or an acceptable degree of safety are given in Table 2 using UN ECE Regulations as the base.

**SADC ZWS HS HT 105 Part 3 :2020**  
**ARS ZW ARS HS 1355 Part 3: 2022**  
**Vehicle Standards –Specification For vehicle Road Worthiness Part 3: Supporting Information**  
Price Code: Gr 7  
46 pages

Covers the requirements intended to support the vehicle examiner and test stations using other Parts of this specification

**SADC ZWS HS HT 105 Part 4 :2020**  
**ARS ZW HS Part 4:2022**  
**Vehicle Standards –Specification For vehicle Road Worthiness Part 4: Requirements for vehicles examiners**  
Price Code: Gr 6  
28 pages

Covers information intended to aid in the selection and appointment of vehicle examiners their duties ,their training and ongoing updating of vehicle examiners

**SADC ZWS HT 105 Part 5 :2020**  
**ARS ZW HS 1355:2020**  
**Vehicle Standards – Specification For vehicle Road Worthiness**  
**Part 5: Requirements for Testing Equipment**  
Price Code: Gr 6  
28 pages

This specification contains information on selection and installation of testing equipment required to test the roadworthiness of vehicles in accordance with the requirements for the range of defined test lane classes that compromise the defined vehicle test station categories

**SADC ZWS HT 105 Part 6 :2020**  
**ARS ZW HS 1355:Part 6:2022**  
**Vehicle Standards – Specification For vehicle Road Worthiness**  
**Part 6: Requirements For Combination Of Vehicles**  
Price Code: Gr 3  
28 pages

This specification contains information to aid vehicle examiners or any person wishing to perform a visual inspection to determine whether a vehicle combination exhibits features or conditions which would result in it being classed as unworthy

**SADC ZWS HT 106 Part 1 :2020**  
**ZWS ISO/IEC 18013: Part 1:2018**  
**Information Technology - Personal Identification – ISO-Compliant Driving licence**  
**Part 1: Physical characteristics and basic data set**  
Price Code: Gr 8  
90 pages

This document establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) in regard to both visual human-readable features and ISO machine-readable technologies. It creates a common basis for international use and mutual recognition of the IDL without impeding individual national/community/regional motor vehicle authorities in taking care of their specific needs.

**SADC ZWS HS HT 106 Part 2 :2020**  
**ZWS ISO/IEC 18013: Part 2:2018**  
**Part 2: Machine Readable Technologies**  
Price Code: Gr 8  
90 pages

ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) with regard to human-readable features (ISO/IEC 18013-1), ISO machine-readable technologies (ISO/IEC 18013-2), and access control, authentication and integrity validation (ISO/IEC 18013-3). It creates a common basis for international use and mutual recognition of the IDL without impeding individual countries/states in applying their privacy rules and national/community/regional motor vehicle authorities in taking care of their specific needs.

**SADC ZWS HS HT 106 Part 2:2020**  
**ZWS ISO/IEC 18013: Part 3:2017**  
**Part 3: Access control, authentication and integrity validation**  
Price Code: Gr. 8  
202 pages

ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) with regard to human-readable features (ISO/IEC 18013-1), machine-readable technologies (ISO/IEC 18013-2), and access control, authentication and integrity validation (ISO/IEC 18013-3). It creates a common basis for international use and mutual recognition of the IDL without impeding

individual countries/states to apply their privacy rules and national/community/regional motor vehicle authorities in taking care of their specific needs

**SADC ZWS HS HT 106 Part 4:2020**  
**ZWS ISO/IEC 18013: Part 4:2019**  
**Part 4: Test methods**  
Price Code: Gr 8  
208 pages

This document describes the test methods used for conformity testing, that is methods for determining whether a driving licence can be considered to comply with the requirements of the ISO/IEC 18013 series for: machine readable technologies (ISO/IEC 18013-2), and access control, authentication and integrity validation (ISO/IEC 18013-3). The test methods described in this document are based on specifications defined in ISO/IEC 18013-2 and ISO/IEC 18013-3 and underlying normative specifications. This document deals with test methods specific to IDL requirements. Test methods applicable to (smart) cards in general (e.g. those specified in the ISO/IEC 10373 series) are outside the scope of this document.

**SADC ZWS HS 107:2020**  
**ARS ZW HT 107:2022**  
**Transportation of dangerous goods by road**  
Price Code: Gr 11  
261 pages  
Adoption of SADC HT 107:2019

This standard establishes requirements for the safe operation of all road vehicles used for the transport of dangerous goods.  
-In quantities in excess of the specified exempt quantities  
-In operations that are not exempt from compliance with this standard.  
The following elements of the road transport operation are included in this standard:  
-The classification of dangerous goods  
-The operation of dangerous good vehicles, which in turn, includes responsibilities and requirements for the consignor, the consignee, the operator, the driver and the qualified person as well as en route procedures  
-Loading, off-loading of vehicles and the handling of dangerous goods in the course of the operation  
-Load constraints and cargo handling  
-Requirements governing vehicle and equipment design and construction  
-Vehicle and equipment maintenance, inspections and tests  
-Information systems and documentation

**SADC ZWS HT 108:2022**  
**Honey**  
Price Code: Gr 5  
13 pages  
Replaces COMESA ZWS HS 349:2004

This Standard applies to all honeys produced by honey bees and covers all styles of honey presentations which are processed and ultimately intended for direct consumption.

**SADC ZW HT 109:2023**  
**Quality and Performance Standard for Lighting Products**  
Price Code: Gr.7  
38 pages

This standard covers the energy efficiency and functional performance of four main categories of general lighting products:

- Lamps:
  - General service lamps; and Tubular lamps;
- Luminaires:

o Certain indoor ambient luminaires; and Outdoor / streetlight luminaires.

**Note 1** – Product safety standards for the products covered in the scope of this performance standard are published in other regulatory notices. It is expected that the country/jurisdiction would ensure the product meets the required safety standard prior to assessing the product for performance compliance.

**Note 2** – The scope of luminaires covered concerns the provision of new luminaires and not the replacement of lamps in existing luminaires. Lamps that do not meet the criteria in the definition of general service lamps, including for example, certain high-intensity discharge (HID) lamps used as replacement lamps, are not included in the scope of this quality and performance standard.

#### **SADC ZW HT 110:2024**

##### **Minimum Energy Performance Standards for Air Conditioners**

Price Code: Gr 5

24 pages

Identical to SADC HT 110:2023

This harmonized standard applies to all new electrical non-ducted single-split, self-contained air-cooled air conditioners, air-to-air reversible heat pumps, and portable air conditioners, with a rated cooling output of at or below 16 kilo-Watts (kW) placed on the market for any application.

#### **SADC ZW HT 111:2024**

##### **Minimum Energy Performance Standards for Refrigerating Appliances**

Price Code: Gr 5

19 pages

Identical to SADC HT 111:2023

This harmonized standard applies to all refrigerating appliances of the vapor compression type, with a rated volume at or above 10 Liters (L) and at or below 1,500 L, powered by electric mains and offered for sale or installed in any application.

#### **SADC ZWS HS 180:2008**

##### **Industrial restraint belts**

Price Code: Gr 5

13 pages

Replaces ZWS 180:1998

Specifies the general design, material, construction and performance requirements for industrial restraint belts.

#### **SADC ZWS HS 318:2004**

##### **Uniform provisions concerning the approval of pneumatic tyres for commercial vehicles and their trailers**

Price Code: Gr 7

44 pages

Identical to UN ECE Regulation 54

Applies to new pneumatic tyres primarily designed for use by all road vehicles.

#### **SADC ZWS HS 328:2004**

##### **Uniform provisions concerning the approval of pneumatic tyres for motor vehicles and their trailers**

Price Code: Gr 7

34 pages

Identical to UN ECE Regulation 30

Covers new pneumatic tyres designed primarily not only for vehicles in categories M<sub>1</sub>, O<sub>1</sub>, and O<sub>2</sub>.

#### **SADC ZWS HS 630:2006**

##### **Metrological and technical requirements for non – automatic, non – self or semi – self indicating, ungraduated counter scales subject to legal metrology control**

Price Code: Gr 4

9 pages

Specifies the metrological and technical requirements for non-automatic, non-self or semi-self indicating, ungraduated vibrating counter scales that are subject to metrological control in terms of legal metrology legislation.

#### **SADC ZWS HS 715:2006**

##### **Metrological and technical requirements for non automatic, denominated beam scales and balances subject to legal metrology control**

Price Code: Gr 5

12 pages

Specifies the metrological and technical requirements for non-automatic, undenominated beam scales and balances that are subject to metrological control in terms of legal metrology legislation.

#### **SADC ZWS HS 899:2010**

##### **High penetration – Resistant laminated safety glass for vehicles**

Price Code: Gr.5

13 pages

Covers high penetration-resistant laminated safety glass including bullet-resistant glazing materials for use in vehicles.

#### **SADC ZWS HS 911:2003**

##### **Frozen lobster and frozen lobster products**

Price Code: Gr 8

7 pages

Covers requirements for handling preparation, processing, packaging, freezing, storage and quality of frozen lobster tails, frozen whole lobster (cooked or raw) or any other frozen lobster product derived from lobsters. Also covers requirements for factories and employees involved in the production.

#### **SADC ZWS HS 912:2003**

##### **Frozen shrimps (prawns) langoustines and crabs**

Price Code: Gr 7

30 pages

Covers the requirements for the hygienic harvesting, preparation, processing and shrimps langoustines and crabs whether frozen at sea or on shore and the requirements for raw materials and the final product including its packaging and storage.

#### **SADC ZW HS 943:2014**

##### **Lights for motor vehicles**

###### **Part 1: Incandescent lamps**

Price Code: Gr. 7

43 pages

Covers incandescent tungsten filament lamps of the following categories for use in motor vehicles and trailers.

###### **Part 2: Headlights**

Price Code: Gr. 5

14 pages

Covers the requirements for the photometric properties of headlights emitting an asymmetrical dipped beam or a main beam, or both, and used in headlight system meeting left-hand rule-of-road requirements.

**Part 3: Secondary lights**

Price Code: Gr. 6  
25 pages

Covers the photometric characteristics of secondary lights for vehicles, (i.e. position lights, stop lights, direction-indicator lights, parking lights, reversing lights, rear registration-plate lights and end-out-line marker lights) and of assemblies of these.

**SADC ZW HS 944:2014**

**The determination of performance (at net power) of internal combustion engines**

**Part 1: Road Vehicle Internal Combustion Engines at Sea Level**

Price Code: Gr. 4  
33 pages

Covers a method for testing engines designed for road vehicles. It is applicable to the evaluation of their performances with a view, in particular, to presenting curves of power, torque and specific fuel consumption at full load as a function of engine speed.

**Part 2: Compression ignition engines at altitude**

Price Code: Gr. 4  
9 pages

Covers a method for determining the net power of compression ignition engines at an altitude of 1 400m above sea level.

**Part 3: Agricultural vehicle internal combustion engines at sea level**

Price Code: Gr. 7  
33 pages

Covers a bench method for testing the following categories of engines, which are intended for use in agricultural tractors and machines which may be fitted with a supercharging device using a mechanical supercharger or turbocharger.

**SADC ZW HS 945:2014**

**Braking motor and towed vehicles, designed for low speed or for use off public roads**

**Part 1: Low speed vehicles**

Price Code: Gr. 7  
12 pages

Applies to the braking systems of low speed motor vehicles with a maximum design speed of between 6km/h and 40km/h and motor vehicles for use off public roads.

**Part 2: Low speed trailers**

Price Code: Gr. 7  
23 pages

Applies to the braking systems of low speed trailers, including trailers purely for agricultural and forestry purposes, with a maximum design speed of between 6km/h and 40 km/h.

**SADC ZW HS 946:2014**

**Anchorage for Restraining Devices in Motor Vehicles**

Price Code: Gr. 5  
14 pages

Covers requirements for the location, dimensions and strength of anchorages for safety belt assemblies and lap belts for adult occupants of forward-facing seats of vehicles of categories M and N, as defined in SANS 1207.

**SADC ZW HS 947:2014**

**Rear underrun protection devices**

Price Code: Gr. 5  
6 pages

Covers requirements for rear underrun protection devices and their installation on category M,N and O vehicles having a gross vehicle mass (GVM) exceeding 3 500kg and intended for use on public roads except for the vehicles listed in 1.2.

**SADC ZW HS 948:2014**

**The measurement of noise emitted by road vehicles when stationary**

Price Code: Gr.4  
8 pages

Covers the measurement at a readily available site of noise produced by road vehicles when stationary as a check on vehicles in service.

**SADC ZW HS 949.4:2014**

**Retro-Reflective and Fluorescent Warning Signs for Road Vehicles**

**Part 4. Retro-Reflective Chevron Signs**  
Price Code: Gr.5  
13 pages

Covers requirements for retro-reflective chevron signs that incorporate a substrate and that are intended for use on motor vehicles that operating on public roads.

**SADC ZW HS 949.5:2014**

**Retro- Reflective and Fluorescent Warning Signs for Road Vehicles**

**Part 5. Retro-Reflective Chevron Decals**  
Price Code: Gr.5  
14 pages

Covers requirements for retro-reflective warning signs manufactured as protective coated chevron decals having self-adhesive bases of pigmented vinyl or other polymeric material and intended for use on motor vehicles operating on public roads.

**SADC ZW HS 979:2014**

**Uniform provisions concerning the approval of retro-reflecting devices for power driven vehicles and their trailers**

Price Code: Gr. 7  
23 pages

This regulation applies to retro-reflecting devices used on road vehicles.

**SADC ZW HS 980:2014**

**Globally harmonized system of classification and labelling of chemicals (GHS)**

Price Code: Gr. 13  
315 pages

Covers the harmonized criteria for the classification of hazardous substances and mixtures including waste for their safe transport use at the workplace or in the home according to their health, environmental and physical hazards. It gives the harmonized communication elements for labeling and safety data sheets.

**SADC ZW HS 981:2014**

**Burnt clay masonry units – Specification**

Price Code: Gr. 6

22 pages

Replaces ZWS 221:1996

Covers burnt clay masonry units for use in masonry walling

Covers precast solid and precast hollow concrete masonry units for use in walling.

**SADC ZW HS 983:2014**

Rammed earth structures – Code of practice

Price

Code:

Gr.

7

40 pages

Gives guidance on the design, construction and test methods for rammed earth structures.

**SADC ZW HS 982:2014**

**Concrete masonry units – Specification**

Price Code: Gr. 6

Amended by MD 623:2000, MD 659:2005

17 pages

Replaces ZWS 119:1995



# ZWS ARS ISO ADOPTIONS

## **ZWS ARS ISO 8548: Part 1:1989**

### **Prosthetics and orthotics – Limb deficiencies**

#### **Part 1:1989: Method of describing limb deficiencies present at birth**

Price Code: Gr 5

12 pages

Identical to ARS ISO 8548-1:1989

This document specifies the operation of a drive-through screening station (DTSS) for mass testing as part of pandemic response management.

**NOTE:** COVID-19 is an exemplary disease for which such a station is developed.

## **ZWS ARS ISO 8548: Part 2:2020**

### **Prosthetics and orthotics – Limb deficiencies**

#### **Part 2:2020: Method of describing lower limb amputation stumps**

Price Code: Gr 5

20 pages

Identical to ARS ISO 8548-2:2020

This document establishes a method of describing and measuring lower limb amputation stumps. It also lists the measurements required for the provision of a prosthesis.

## **ZWS ARS ISO 8548: Part 3:1993**

### **Prosthetics and orthotics – Limb deficiencies**

#### **Part 3:1993: Method of describing upper limb amputation stumps**

Price Code: Gr 5

20 pages

Identical to ARS ISO 8548-3:1993

This part of ISO 8548 establishes a method of describing upper limb amputation stumps and for recording the descriptive information.

## **ZWS ARS ISO 8548: Part 4:1998**

### **Prosthetics and orthotics – Limb deficiencies**

#### **Part 4:1998: Description of causal conditions leading to amputation**

Price Code: Gr 2

4 pages

Identical to ARS ISO 8548-4:1998

This part of ISO 8548 establishes a method of describing upper limb amputation stumps and for recording the descriptive information.

## **ZWS ARS ISO 8548: Part 5:2003**

### **Prosthetics and orthotics – Limb deficiencies**

#### **Part 5:2003: Description of the clinical condition of the person who has had an amputation**

Price Code: Gr 2

2 pages

Identical to ARS ISO 8548-5:2003

This part of ISO 8548 establishes a method of describing those attributes of a person who has had an amputation which may affect their rehabilitation.

## **ZWS ARS ISO 8549: Part 1:2020**

### **Prosthetics and orthotics – Vocabulary**

#### **Part 1:2020: General terms for external limb prostheses and external orthoses**

Price Code: Gr 2

2 pages

Identical to ARS ISO 8549-1:2020

This document defines general terms used to describe external limb prostheses and orthoses, and the personnel involved in the practice of prosthetics and orthotics.

**NOTE 1:** The complete range of levels of limb amputation are listed and defined in ISO 8549-2. The complete range of classes of orthoses are listed and defined in ISO 8549-3.

This document does not apply to breast, ocular or other external prostheses used to replace other parts of the human body, nor to dental prostheses or orthoses.

**NOTE 2:** For the purposes of this document, the abbreviated term 'prosthetics' and its derivatives only apply to external limb prosthetics. The abbreviated term 'orthotics' and its derivatives only apply to external orthotics.

## **ZWS ARS ISO 8549: Part 2:2023**

### **Prosthetics and orthotics – Vocabulary**

#### **Part 2:2023: Terms relating to external limb prostheses**

Price Code: Gr 4

4 pages

Identical to ARS ISO 8549-2:2023

This document defines terms used to describe external limb prostheses. The terms related to the amputation level used to in this document are described in ISO 8549 4. The types of component used in the construction of prostheses are classified and described in ISO 13405 1, ISO 13405 2 and ISO 13405 3.

For the purposes of this document, the abbreviated term 'prosthetics' and its derivatives only apply to external limb prosthetics.

## **ZWS ARS ISO 8549: Part 4:2020**

### **Prosthetics and orthotics – Vocabulary**

#### **Part 4:2020: Terms relating to limb amputation**

Price Code: Gr 4

4 pages

Identical to ARS ISO 8549-4:2020

This document specifies a vocabulary for the description of surgical limb amputations, amputation procedures, and persons who have had an amputation.

## **ZWS ARS ISO 12875:2011**

### **Traceability of finfish products — Specification on the information to be recorded in captured finfish distribution chains**

Price Code: Gr 7

28 pages

Identical to ARS ISO 12875:2011

This International Standard specifies the information to be recorded in marine-captured finfish supply chains in order to establish the traceability of products originating from captured finfish. It specifies how traded fishery products are to be identified, and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of marine-captured finfish and their products, from catch through to retailers or caterers.

**NOTE:** Together with ISO 12877 for farmed finfish, this international Standard provides a basis for implementing chain traceability of finfish.

## **ZWS ARS ISO 12877:2011**

### **Traceability of finfish products - Specification on the information to be recorded in farmed finfish distribution chains**

Price Code: Gr 7

41 pages

Identical to ARS ISO 12877:2011



This International Standard specifies the information to be recorded in farmed finfish supply chains in order to establish the traceability of products originating from farmed finfish. It specifies how traded fishery products are to be identified, and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of farmed finfish and their products, from finfish meal, breeding and finfish farming through to retailers or caterers.

**NOTE:** Together with ISO 12875 for captured finfish, this International Standard provides a basis for implementing chain traceability of finfish.

#### **ZWS ARS ISO 12878:2012**

##### **Environmental monitoring of the impacts from marine finfish farms on soft bottom**

Price Code: Gr 7

30 pages

Identical to ARS ISO 12878:2012

This International Standard establishes an approach for sampling and empirical measurement of soft-bottom impacts from marine finfish net pen farms, and gives examples of detailed procedures for how environmental impacts from finfish net pen farm sites can be monitored in the field, including guidelines for quality assurance of sampling protocols and safety. The emphasis of the environmental impact in this International Standard is on eutrophication effects on the seabed. This International Standard identifies ecological objectives, the indicators used, and the methodology and design, and encompasses guidelines for quality assurance of sampling protocols and operational safety.

#### **ZWS ISO 14020:2022**

##### **ARSO ISO ZWS HT 14020:2024**

##### **Environmental statements and programmes for products -Principles and general requirements**

Price Code: Gr 7

25 pages

Supersedes ISO 14020:1998

This document establishes principles and specifies general requirements that are applicable to all types of product-related environmental statements and environmental statement programmes. Environmental statements result from environmental statement programmes and include self-declared environmental claims, ecolabels, environmental product declarations (EPDs) and footprint communications. This document is intended to be used in conjunction with other standards in the ISO 14020 family.

**NOTE:** Those other standards contain additional terms and definitions, principles and requirements that are relevant to their specific scopes.

#### **ZWS ISO 14021:2016/Amd 1:2021**

##### **ARS ISO ZWS HT 14021:2024**

##### **Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)**

Price Code: Gr 6

29 pages

Identical to ISO 14021/AMD 1:2021

This International Standard specifies requirements for self-declared environmental claims, including statements, symbols and graphics, regarding products. It further describes selected terms commonly used in environmental claims and gives qualifications for their use. This International Standard also describes a general evaluation and verification methodology for self-declared environmental claims and specific evaluation and verification methods for the selected claims in this International Standard. This International Standard does not preclude, override, or in any way change, legally required

environmental information, claims or labelling, or any other applicable legal requirements.

#### **ZWS ISO 14024:2018**

##### **ARSO ISO ZWS HT 14024:2024**

##### **Environmental labels and declarations – Type I Environmental labelling – Principles and procedures**

Price Code: Gr. 6

15 pages

Identical to ISO 14024:2018

This document establishes the principles and procedures for developing Type I environmental labelling programmes, including the selection of product categories, products environmental criteria and product function characteristics, and for assessing and demonstrating compliance. This document also establishes the certification procedures for awarding the label.

#### **ZWS ARS ISO 16488:2015**

##### **Marine finfish Farms - Open net cage — Design and operation**

Price Code: Gr 7

25 pages

Identical to ARS ISO 16488:2015

This International Standard presents a general method to be followed for the systematic analysis, design, and evaluation of net cage marine finfish farms. One common style of a net cage finfish farm is shown in Figure 1. A mooring system holds together a series of net cages which contain finfish. Water from the outside environment freely passes through the nets, providing the necessary environment for farming finfish. The methodology presented in this International Standard allows for determination of the adequacy of a given finfish farm's floating structure, nets, and mooring equipment for a given environment. The standard addresses specification of a design basis through evaluation of environmental conditions and acceptable risk, and specifies acceptable techniques for the design and analysis of finfish farms. This International Standard also provides guidelines for development of a handbook which documents procedures for correct maintenance and operation of the finfish farm. The application of the standard is intended to reduce the risk of escape from marine finfish farms. This International Standard is designed to be used by the operator of a net cage marine finfish farm. It is intended that through application of this International Standard that increased human safety and system integrity levels can be achieved.

#### **ZWS ARS ISO 16541:2015**

##### **Methods for sea lice surveillance on marine finfish farms**

Price Code: Gr 6

12 pages

Identical to ARS ISO 16541:2015

This International Standard specifies both a method for sea lice counts on marine finfish farms and a method for sea lice surveillance that can be carried out in any farming area to provide consistent estimates of sea lice infestation. It specifies the best practices associated with monitoring sea lice levels on marine finfish farms for various purposes including the assessment of abundance, prevalence, and treatment efficacy. This will include identifying minimum requirements for specific monitoring program elements (e.g. number of fish and cages to be sampled, frequency of sampling, the level of detail recorded, etc.). The standard will apply to all marine finfish farms which experience infestation with any of the range of "sea lice" (copepodid) parasites.

#### **ZWS ARS ISO 16741:2015**

##### **Traceability of crustacean products — Specifications on the information to be recorded in farmed Crustacean distribution chains**

Price Code: Gr 7

34 pages

Identical to ARS ISO 16741:2015

This International Standard specifies the information to be recorded in farmed crustacean supply chains in order to establish the traceability of products originating from farm raised crustaceans. It specifies how farmed crustacean products traded are to be identified and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of crustacean and their products, from farm through to retailers or caterers. The types of business identified in this International Standard for farmed crustacean distribution chains are the following:

- a) farming
  - 1) broodstock collection
  - 2) hatcheries and nurseries
  - 3) crustacean farm
  - 4) harvesting;
- b) processors;
- c) traders and wholesalers;
- d) retailers and caterers;
- e) logistics including materials brought from other domains;
- f) feed production.

**ZWS ARS ISO 17090: Part 1:2021**  
**Health informatics – Public key infrastructure**  
**Part 1:2021: Overview of digital certificate services**

Price Code: Gr 7

37 pages

Identical to ARS ISO 17090-1:2021

This document defines the basic concepts underlying the use of digital certificates in healthcare and provides a scheme of interoperability requirements to establish a digital certificate-enabled secure communication of health information. It also identifies the major stakeholders who are communicating health-related information, as well as the main security services required for health communication where digital certificates can be required. This document gives a brief introduction to public key cryptography and the basic components needed to deploy digital certificates in healthcare. It further introduces different types of digital certificates — identity certificates and associated attribute certificates for relying parties, self-signed certification authority (CA) certificates, and CA hierarchies and bridging structures.

**ZWS ARS ISO 17090: Part 2:2008**  
**Health informatics – Public key infrastructure**  
**Part 2:2008: Certificate profile**

Price Code: Gr 6

26 pages

Identical to ARS ISO 17090-2:2008

This part of ISO 17090 specifies the certificate profiles required to interchange healthcare information within a single organization, between different organizations and across jurisdictional boundaries. It details the use made of digital certificates in the health industry and focuses, in particular, on specific healthcare issues relating to certificate profiles.

**ZWS ARS ISO 17090: Part 3:2021**  
**Health informatics – Public key infrastructure**  
**Part 3:2021: Policy management of certification authority**

Price Code: Gr 6

35 pages

Identical to ARS ISO 17090-3:2021

This document gives guidelines for certificate management issues involved in deploying digital certificates in healthcare. It specifies a structure and minimum requirements for certificate policies, as well as a structure for associated certification practice statements. This

document also identifies the principles needed in a healthcare security policy for cross-border communication and defines the minimum levels of security required, concentrating on aspects unique to healthcare.

**ZWS ARS ISO 17117: Part 1:2018**  
**Health informatics – Technological resources**  
**Part 1:2018: Characteristics**

Price Code: Gr 7

32 pages

Identical to ARS ISO 17117-1:2018

This document defines universal and specialized characteristics of health terminological resources that make them fit for the purposes required of various applications. It refers only to terminological resources that are primarily designed to be used for clinical concept representation or to those parts of other terminological resources designed to be used for clinical concept representation. This document helps users to assess whether a terminology has the characteristics or provides the functions that will support their specified requirements. The focus of this document is to define characteristics and functions of terminological resources in healthcare that can be used to identify different types of them for categorization purposes. Clauses 4 and 5 support categorization according to the characteristics and functions of the terminological resources rather than the name.

**NOTE:** Categorization of healthcare terminological systems according to the name of the system might not be helpful and has caused confusion in the past.

The target groups for this document are:

- a) organizations wishing to select terminological systems for use in healthcare information systems;
- b) developers of terminological systems;
- c) developers of terminology standards;
- d) those undertaking independent evaluations/academic reviews of terminological resources;
- e) terminology Registration Authorities.

This document contains general characteristics and criteria with which systems can be evaluated.

The following considerations are outside the scope of this document.

— Evaluations of terminological resources.

— Health service requirements for terminological resources and evaluation criteria based on the characteristics and functions.

— The nature and quality of mappings between different terminologies. It is unlikely that a single terminology will meet all the terminology requirements of a healthcare organization: some terminology providers produce mappings to administrative or statistical classifications such as the International Classification of Diseases (ICD). The presence of such maps would be a consideration in the evaluation of the terminology.

— The nature and quality of mappings between different versions of the same terminology. To support data migration and historical retrieval, terminology providers can provide maps between versions of their terminology. The presence of such maps would be a consideration in the evaluation of the terminology.

— Terminology server requirements and techniques and tools for terminology developers.

— Characteristics for computational biology terminology. Progress in medical science and in terminology science will necessitate updating of this document in due course.

**ZWS ARS ISO 17439:2022**  
**Health informatics – Development of terms and definitions for health informatics glossaries**

Price Code: Gr 4

10 pages

Identical to ARS ISO 17439:2022

This document provides details of the metadata and requirements for quality terms and definitions in health informatics for inclusion

in health informatics glossaries. This document does not cover specification of terminological content in systems, such as that represented in terminological resources, such as SNOMED CT, or, ICD. It is limited to concepts represented as terms and definitions included in standards.

This document is applicable to the following groups:

—Health informatics standards developers and standards development organizations.

—Developers, implementers, and managers of health information systems, clinical information systems, and clinical decision support systems.

—All users of health information systems clinical data, such as health statisticians, researchers, public health agencies, health insurance providers, health risk organizations, data analysts, and data managers.

#### **ZWS ARS ISO 18537:2015**

##### **Traceability of crustacean products — Specifications on the information to be recorded in captured crustacean distribution chains**

Price Code: Gr 7

28 pages

Identical to ISO 18537:2015

This International Standard specifies the information to be recorded in wild-caught crustacean supply chains in order to establish the traceability of products originating from wild-caught crustacean. It specifies how crustacean products traded are to be identified and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of crustacean and their products, from wild-caught through to retailers or caterers. The types of businesses identified in this International Standard for wild-caught crustacean distribution chains are:

- capture operators;
- landing businesses and first sale;
- processors;
- transporters and store operators;
- traders and wholesalers;
- retailers and caterers;
- logistics including materials brought from other domains.

Any given crustacean distribution chain may be made up of some or all of the above components but not necessarily in the sequence listed.

#### **ZWS ARS ISO 18538:2015**

##### **Traceability of molluscan products — Specifications on the information to be recorded in farmed molluscan distribution chains**

Price Code: Gr 7

40 pages

Identical to ISO 18538:2015

This International Standard specifies the information to be recorded in farmed molluscs supply chains (excluding cephalopods) in order to establish the traceability of products originating from farm-raised molluscs. It specifies how molluscan products traded are to be identified and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of molluscs and their products from farm through to retailers or caterers. The types of businesses identified in this International Standard for farmed molluscan distribution chains are the following:

- farming;
- a) broodstock suppliers/natural seed collectors;
- b) hatcheries and nurseries;
- c) molluscan farm;
- d) harvesting;
- depuration and shucking etc.;
- processors;

—transporters and store operators;

—traders and wholesalers;

—retailers and caterers;

—logistics including materials brought from other domains;

—feed production. Any given molluscan distribution chain can be made up of some or all of the above components, but not necessarily in the sequence listed

#### **ZWS ARS ISO 18539:2015**

##### **Traceability of Molluscan products — Specifications on the information to be recorded in captured molluscan distribution chains**

Price Code: Gr 7

30 pages

Identical to ISO 18539:2015

This International Standard specifies the information to be recorded in wild-caught molluscs supply chains in order to establish the traceability of products originating from wild-caught molluscs. It specifies how molluscan products traded are to be identified and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human consumption of molluscs and their products, from wild caught through to retailers or caterers.

The types of businesses identified in this International Standard for wild-caught molluscan distribution chains are the following:

- capture;
- landing business and first sale;
- depuration and shucking, etc.;
- processors;
- transporters and store operators;
- traders and wholesalers;
- retailers and caterers;
- logistics including materials brought from other domains.

Any given molluscan distribution chain can be made up of some or all of the above components but not necessarily in the sequence listed.

#### **ZWS ARS ISO/TS 19293:2017**

##### **Health informatics – Requirements for a record of a dispense of a medicinal product**

Price Code: Gr 4

38 pages

Identical to ARS ISO 19293:2017

This document specifies requirements for a record of a dispense of a medicinal product. It is intended to be adopted by detailed, implementable specifications, such as interoperability standards, system specifications, and regulatory programs. This document applies to information systems in which a dispense of a medicinal product is registered, and the systems that consume such information. These systems are usually in pharmacies or other healthcare institutions. This document does not necessarily apply to non-pharmacy shops or other non-clinical systems (e.g. supermarket cashiers). The scope of this document includes the activities relating to the dispensing of a medicinal product and the information content for the capture of structured information produced in those events. These activities include any actual dispense, cancellation or other outcome that may have occurred at the time of planned or actual dispense. In other words, the dispense record also contains information that medication was expected to be dispensed but was not dispensed.

#### **ZWS ARS ISO 22948:2020**

##### **Carbon footprint for seafood — Product category rules (CFP-PCR) for finfish**

Price Code: Gr 7

25 pages

Identical to ARS ISO 22948:2020

This document specifies requirements for calculating the carbon footprint specific to finfish product category rules (CFP-PCR). This methodology builds on the requirements of International Standards for life cycle assessment (LCA) and products' carbon footprints.

This document is applicable to the calculation and communication of finfish products' carbon footprints from fishing and/or cultivation of feed ingredients to the consumption of finfish products. It is applicable to the carbon footprints of products from both fisheries and aquaculture value chains. This document used alone does not apply to specifying a product's overall environmental or sustainability characteristics.

**SADC ZWS HT 106 Part 1 :2020**

**ZWS ISO/IEC 18013: Part 1:2018**

**Information Technology - Personal Identification – ISO-Compliant Driving licence**

**Part 1: Physical characteristics and basic data set**

Price Code: Gr 8

90 pages

This document establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) in regard to both visual human-readable features and ISO machine-readable technologies. It creates a common basis for international use and mutual recognition of the IDL without impeding individual national/community/regional motor vehicle authorities in taking care of their specific needs.

**SADC ZWS HS HT 106 Part 2 :2020**

**ZWS ISO/IEC 18013: Part 2:2018**

**Part 2: Machine Readable Technologies**

Price Code: Gr 8

90 pages

ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) with regard to human-readable features (ISO/IEC 18013-1), ISO machine-readable technologies (ISO/IEC 18013-2), and access control, authentication and integrity validation (ISO/IEC 18013-3). It creates a common basis for international use and mutual recognition of the IDL without impeding individual countries/states in applying their privacy rules and national/community/regional motor vehicle authorities in taking care of their specific needs.

**SADC ZWS HS HT 106 Part 2:2020**

**ZWS ISO/IEC 18013: Part 3:2017**

**Part 3: Access control, authentication and integrity validation**

Price Code: Gr. 8

202 pages

ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO-compliant driving licence (IDL) with regard to human-readable features (ISO/IEC 18013-1), machine-readable technologies (ISO/IEC 18013-2), and access control, authentication and integrity validation (ISO/IEC 18013-3). It creates a common basis for international use and mutual recognition of the IDL without impeding individual countries/states to apply their privacy rules and national/community/regional motor vehicle authorities in taking care of their specific needs.



# WITHDRAWN STANDARDS

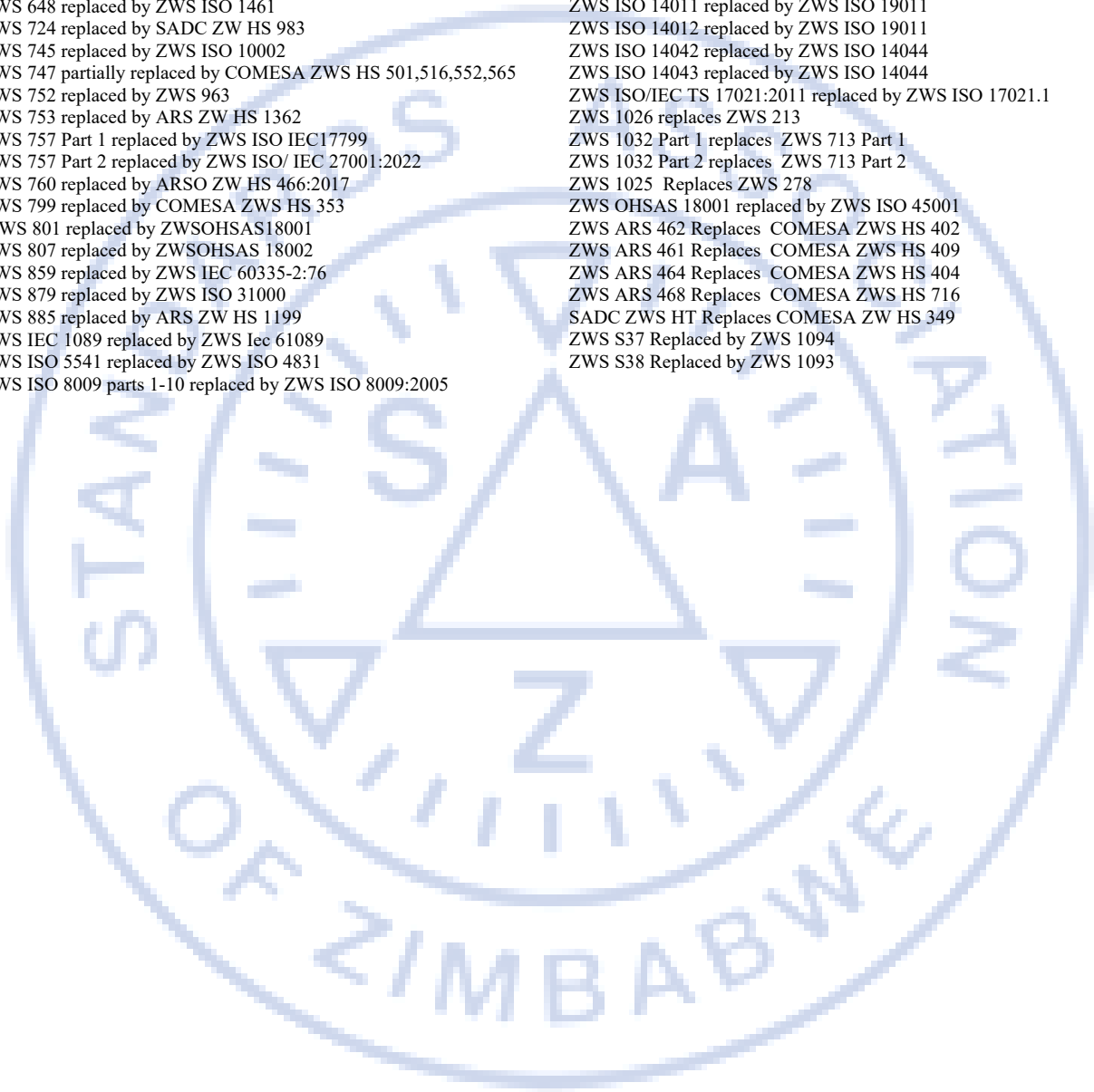
**NOTE: Standards, which have been withdrawn and replaced by a later edition with the same number, are not listed here**

COMESA ZWS HS 646:2005 replaced by ZWS 1118	ZWS C5 replaced by ZWS 138
COMESA ZWS HS ISO 4317 replaced by ZWS ISO 4317	ZWS C6 replaced by ZWS 129
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ZWS A4 replaced by ZWS 827	ZWS C11 replaced by ZWS 109
ZWS A5 withdrawn not replaced	ZWS C12 replaced by ZWS 109
ZWS A6 incorporated into ZWS 221	ZWS C13 replaced by ZWS 277
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ZWS A8 replaced by ZWS 319	ZWS C15 replaced by ZWS 834
ZWS A9 replaced by ZWS 119	ZWS C16 replaced by ZWS 241
ZWS A10 replaced by ZWS 119	ZWS C17 replaced by ZWS 835
ZWS A11 replaced by ZWS 110	ZWS C18 replaced by ZWS 836
ZWS A12 replaced by ZWS 467	ZWS C18 replaced by ZWS 834
ZWS A13 replaced by ZWS 467	ZWS C19 replaced by ZWS 837
ZWS A14 withdrawn not replaced	ZWS C20 replaced by ZWS 838
ZWS A15 replaced by ZWS 818	ZWS C21 replaced by ZWS 312
ZWS A16 replaced by ZWS 342	ZWS C22 replaced by ZWS 556
ZWS A17 replaced by ZWS 315	ZWS CA1 replaced by ZWS 334
ZWS A18 replaced by ZWS 307	ZWS CA2 withdrawn not replaced
ZWS A19 replaced by ZWS 815	ZWS CA3 replaced by ZWS 204
ZWS A20 replaced by ZWS 105	ZWS CA5 replaced ZWS 843
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ZWS A27 replaced by ZWS 184	ZWS CZ2 replaced by ZWS 341
ZWS A28 replaced by ZWS 816	ZWS D1 replaced by ZWS 189
ZWS A29 replaced by ZWS 814	ZWS D2 withdrawn not replaced
ZWS A30 replaced by ZWS 321	ZWS D3 replaced by ZWS 255
ZWS A31 Parts 1 to 4 withdrawn not replaced	ZWS D4 replaced by ZWS 223
ZWS A31 Part 5 replaced by ZWS 813	ZWS D5 replaced by ZWS 171
ZWS A32 replaced by ZWS 113	ZWS D6 replaced by ZWS 839
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ZWS A35 replaced by ZWS 221	ZWS E1 withdrawn not replaced
ZWS A36 replaced by ZWS 528	ZWS H1 replaced by ZWS 820
ZWS A37 replaced by ZWS 196	ZWS H2 replaced by ZWS 857
ZWS A38 replaced by ZWS 196	ZWS H3 replaced by ZWS 860
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ZWS A40 replaced by ZWS 538	ZWS H5 replaced by ZWS 850
ZWS A41 replaced by ZWS 119	ZWS H6 replaced by ZWS 883
ZWS A42 replaced by ZWS 812	ZWSK1 replaced by ZWS 542- 550 & 567
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ZWS B3 replaced by ZWS 825	ZWS K11 withdrawn not replaced
ZWS B4 replaced by ZWS 679	ZWS K12 withdrawn not replaced
ZWS B5 replaced by ZWS 215	ZWS K13 replaced by ZWS 357
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ZWS C3 replaced by ZWS 240	ZWS K21 replaced by ZWS 327
ZWS C4 withdrawn not replaced	ZWS K22 replaced by ZWS 140

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 ZWS K24 replaced by ZWS 135  
 ZWS K25 replaced by ZWS 136  
 ZWS K26 replaced by ZWS 128 now withdrawn  
 ZWS K27 replaced by ZWS 620  
 ZWS K28 replaced by ZWS 219  
 ZWS K29 replaced by ZWS 207  
 ZWS K30 replaced by ZWS 864  
 ZWS K31 replaced by ZWS 302  
 ZWS K32 replaced by ZWS 220  
 ZWS K33 withdrawn not replaced  
 ZWS L1 replaced by ZWS 247  
 ZWS L2 replaced by ZWS 247  
 ZWS L3 replaced by ZWS 247  
 ZWS L4 replaced by ZWS 247  
 ZWS L5 replaced by ZWS 174  
 ZWS L6 replaced by ZWS 856  
 ZWS L7 withdrawn not replaced  
 ZWS L8 replaced by ZWS 855  
 ZWS L9 withdrawn not replaced  
 ZWS L10 replaced by ZWS 854  
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 ZWS N5 replaced by ZWS 284  
 ZWS N6 replaced by ZWS 849  
 ZWS N8 replaced by ZWS 847  
 ZWS N9 replaced by ZWS 848  
 ZWS N10 replaced by ZWS 846  
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 ZWS O7 replaced by ZWS 553  
 ZWS O8 replaced by ZWS 120  
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 ZWS O10 replaced by ZWS 333  
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 ZWS O12 replaced by ZWS 130  
 ZWS O14 replaced by ZWS 130  
 ZWS O15 replaced by ZWS 569  
 ZWS O16 replaced by ZWS 169  
 ZWS CO1 replaced by ZWS 208  
 ZWS P1 replaced by ZWS 502&ZWS 786  
 ZWS R1 replaced by ZWS 236  
 ZWS R2 replaced by ZWS 886  
 ZWS S1 replaced by ZWS 265  
 ZWS S2 replaced by ZWS 888  
 ZWS S3 replaced by ZWS 887  
 ZWS S4 replaced by ZWS 746  
 ZWS S5 partially replaced by COMESA ZWS HS 638,644,646  
 ZWS S5 replaced by ZWS 1073  
 ZWS S6 replaced by ZWS 1075  
 ZWS S7 replaced by ZWS 747  
 ZWS S8 replaced by ZWS S25  
 ZWS S9 replaced by ZWS 348  
 ZWS S10 replaced by ZWS S25  
 ZWS S11 replaced by ZWS S25  
 ZWS S12 replaced by ZWS S25  
 ZWS S13 replaced by ZWS S25  
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 ZWS S41 replaced by ZWS 1074  
 ZWS X1 replaced by ZWS 361  
 ZWS X2 replaced by ZWS 919  
 ZWS X5 withdrawn not replaced  
 ZWS Z3 replaced by ZWS 1114  
 ZWS Z5 replaced by ZWS 529  
 ZWS Z7 replaced by ZWS 186  
 ZWS Z8 replaced by ZWS 202  
 ZWS Z9 withdrawn not replaced  
 ZWS Z10 replaced by ARS ZW HS 1558  
 ZWS Z11 replaced by ZWS 1055  
 ZWS Z12 replaced by ZWS 153  
 ZWS Z13 replaced by ZWS 303  
 ZWS Z14 Part 1 replaced by ZWS 229  
 ZWS Z14 Part 2 replaced by ZWS 159  
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 ZWS Z14 Part 4 replaced by ZWS 159  
 ZWS Z14 Part 6 replaced by ZWS 217  
 ZWS Z15 replaced by ZWS 1054  
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 ZWS Z18 replaced by ZWS 1100  
 ZWS Z19 replaced by ARS ZW HS 1555 and 1557  
 ZWS Z20 replaced by ZWS 1101  
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 ZWS Z22 replaced by ZWS 235  
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 ZWS Z24 replaced by ZWS 154  
 ZWS CZ1 replaced by ZWS 913.1  
 ZWS 108 replaced by ZWS 109  
 ZWS 119 replaced by SADC ZW HS 982  
 ZWS 124 withdrawn not replaced  
 ZWS 128 withdrawn not replaced  
 ZWS 129 replaced by ZWS IEC 60335-1  
 ZWS 131 replaced by ZWS IEC 60335-2.6  
 ZWS 132 replaced by ZWS IEC 60335-2:30  
 ZWS 144 replaced by ZWS 467  
 ZWS 145 replaced by ZWS 467  
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 ZWS 151 replaced by COMESA ZWS HS 349  
 ZWS 155 withdrawn not replaced  
 ZWS 161 replaced by ZWS 336  
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 ZWS 256 replaced by ZWS 1045  
 ZWS 257 replaced by ZWS 257 Part 4  
 ZWS 269 replaced by ZWS 1045  
 ZWS 275 replaced by ZWS 1006;2016/IS 2189:2008  
 ZWS 299 replaced by ZWS IEC 947 Part 2  
 ZWS 300 replaced by ZWS ISO 9000 series

ZWS 301 replaced by ZWS ISO 8402  
ZWS 306 replaced by ZWS 119  
ZWS 307 replaced by ZWS EN 196 & ZWS EN 197  
ZWS 312 replaced by ZWS IEC 60335.2-3  
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ZWS 335 replaced by ZWS 257 Parts 1 and 2  
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ZWS 388 replaced by ARS ZW HS 461  
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ZWS 648 replaced by ZWS ISO 1461  
ZWS 724 replaced by SADC ZW HS 983  
ZWS 745 replaced by ZWS ISO 10002  
ZWS 747 partially replaced by COMESA ZWS HS 501,516,552,565  
ZWS 752 replaced by ZWS 963  
ZWS 753 replaced by ARS ZW HS 1362  
ZWS 757 Part 1 replaced by ZWS ISO IEC17799  
ZWS 757 Part 2 replaced by ZWS ISO/ IEC 27001:2022  
ZWS 760 replaced by ARSO ZW HS 466:2017  
ZWS 799 replaced by COMESA ZWS HS 353  
ZWS 801 replaced by ZWSOHSAS18001  
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ZWS 859 replaced by ZWS IEC 60335-2:76  
ZWS 879 replaced by ZWS ISO 31000  
ZWS 885 replaced by ARS ZW HS 1199  
ZWS IEC 1089 replaced by ZWS Iec 61089  
ZWS ISO 5541 replaced by ZWS ISO 4831  
ZWS ISO 8009 parts 1-10 replaced by ZWS ISO 8009:2005

ZWS ISO 8401 replaced by ZWS ISO 9000  
ZWS ISO 8782 part 1- 8 not replaced  
ZWS ISO 9002 replaced by ZWS ISO 9001  
ZWS ISO 8187 replaced by ZWS IEC 62552  
ZWS ISO 5155 replaced by ZWS IEC 62552  
ZWS ISO 7371 replaced by ZWS IEC 62552  
ZWS ISO 9003 replaced by ZWS ISO 9001  
ZWS ISO 9004.1 replaced by ZWS ISO 9004  
ZWS ISO 10011 replaced by ZWS ISO 19011  
ZWS ISO 14010 replaced by ZWS ISO 19011  
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ZWS ISO 14012 replaced by ZWS ISO 19011  
ZWS ISO 14042 replaced by ZWS ISO 14044  
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ZWS ISO/IEC TS 17021:2011 replaced by ZWS ISO 17021.1  
ZWS 1026 replaces ZWS 213  
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ZWS 1032 Part 2 replaces ZWS 713 Part 2  
ZWS 1025 Replaces ZWS 278  
ZWS OHSAS 18001 replaced by ZWS ISO 45001  
ZWS ARS 462 Replaces COMESA ZWS HS 402  
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ZWS ARS 464 Replaces COMESA ZWS HS 404  
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ZWS S38 Replaced by ZWS 1093



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### Standardization documentation

#### Environment, Health protection, Safety (Vocabulary)

##### 01.040.07

#### Natural and applied sciences (Vocabularies)

##### ZWS EN 1659:2023

In vitro diagnostic systems - culture media for micro-biology – Terms and definitions

#### 01.040.13 Environment, Health protection, Safety (Vocabulary)

##### ZWS ISO 4880

Burning behavior of textiles and textile products - Vocabulary

#### 01.040.77 Metallurgy (Vocabulary)

##### COMESA ZWS HS ISO 16020: 2006

Steel for reinforcement and prestressing of concrete – Vocabulary

#### 01.080.10 Public information symbols. Signs. Plates. Labels

##### ZWS ISO 3864: Part 2:2016

Graphical symbols – Safety colours and safety signs

**Part 2:** Design principles for product safety labels

##### ZWS ISO 3864: Part 3:2024

Graphical Symbols – Safety Colors and Safety Signs

**Part 3:** Design principles for graphical symbols for use in safety signs

##### ZWS ISO 3864: Part 4: 2011

Graphical symbols – Safety colours and safety signs

**Part 4:** Colorimetric and photometric properties of safety sign materials

##### ZWS ISO 7010:2011

Graphical signs – Safety colors and safety signs - registered safety signs

#### 01.120 Standardization, General rules

##### ZWS 100:2010

Code of practice for standard for standards

##### ZWS Directive: Part 2:2022

ZWS Directive

**Part 2:** Drafting and presentation of Zimbabwe national standards

#### 01.140 Information sciences. Publishing

##### ZWS 106: 1974

Standard export documents

##### ZWS 757: 2005

Information security management

##### ZWS ISO 15489:2016

Information and documentation records management

**Part 1:** Concepts

##### ZWS ISO IEC 27002:2007

Information security management

#### 01.140.20 Information sciences Including documentation, librarianship and archive systems

##### ZWS ISO 11620:2023

Information and documentation – Library performance indicators

#### 03 Services. Company organization, Management and Quality. Administration. Transport. Sociology

#### 03.020 Sociology. Demography

##### ZWS ISO 20252:2019

Market, opinion and social research, including insights and data analytics — Vocabulary and service requirements

#### 03.060 Finances. Banking. Monetary systems. Insurance

##### ZWS ISO 4217:2015

Codes for the representation of currencies and funds

##### ZWS ISO 6166:2013

Securities and related financial instruments — International securities identification numbering system (ISIN)

##### ZWS ISO 9362:2022

Banking – Banking telecommunication messages – Business identifier code (BIC)

##### ZWS ISO 13616: Part 1:2020

Financial services - International bank account number (IBAN)

**Part 1:** Structure of the IBAN

##### ZWS ISO 13616: Part 2:2020

Financial services -International bank account number (IBAN)

**Part 2:** Role and responsibilities of the Registration Authority

##### ZWS ISO 17442: Part 1:2020

Financial services - Legal entity identifier (LEI)

**Part 1:** Assignment

##### ZWS ISO 17442:2020: Part 2:2020

Financial services - Legal entity identifier (LEI)

**Part 2:** Application in digital certificates

#### 03.080 Service

#### 03.080.10 Industrial services

##### ZWS 320: 2007

Cleaning services Industry – Cleaning performance for commercial, residential and health premises.

#### 03.080.30 Services for consumers

##### ZWS 904: 2008

Guidelines for the design control measured for street vended foods in Zimbabwe.



**ZWS ISO 10002:2004**

Quality management - Customer satisfaction - Guidelines for complaints handling in organizations

**ZWS ISO 18295: Part 1:2017**

Customer contact centres

**Part 1:2017:** Requirements for customer contact centres

**ZWS ISO 18295: Part 2:2017**

Customer contact centres

**Part 2:2017:** Requirements for clients using the services of customer contact centres

**03.080.99 Other services****ZWS ISO/IEC 20000**

Information technology – Service Management – Service Management System Requirements

**ZWS ISO 13810:2015**

Tourism services – Industrial Tourism – Service provision

**ZWS ISO 14785:2014**

Tourist information offices – Tourist information and reception services – Requirements

**ZWS ISO 18065:2015**

Tourism and related services – Tourist services for public use provided by natural protected areas authorities – requirements

**ZWS ISO 21101:2014**

Adventure tourism – Safety management systems – Requirements

**ZWS ISO 21103:2014**

Adventure tourism – Information for participation

**03.080.30 - Services for consumers****ZWS ISO/IEC 19479:2019**

Information technology for learning, education, and training - Learner mobility achievement information (LMAI)

**03.100.01 Company organization and management in general****ZWS ISO/IEC GUIDE 73:2011**

Risk Management – Vocabulary

**ZWS 26000:2010**

Guidance on social responsibility

**ZWS ISO 8601: Part 1: 2019**

Data elements and interchange formats – Information interchange – Representation of dates and times: Basic rules

**ZWS ISO 30401:2018**

Knowledge Management System –Requirements

**ZWS ISO 31000:2010**

Risk management

**ZWS ISO/IEC 31010:2019**

Risk management – Risk assessment techniques

**ZWS ISO 31022:2020**

Risk management – Guidelines for the management of legal risk

**ZWS ISO 31030:2021**

Travel risk management – Guidance for organisations

**ZWS ISO 31073:2020**

Risk management – Vocabulary

**ZWS ISO 22300:2021**

Security and resilience — vocabulary

**ZWS ISO 22301:2019**

Security and resilience – business continuity management systems – requirements

**ZWS ISO 22316 :2017**

Security and resilience — organizational resilience — principles and attributes

**ZWS ISO/TS 22317 :2021**

Security and resilience - business continuity management systems - guidelines for business impact analysis

**ZWS ISO/TS 22318:2021**

Security and resilience — business continuity management systems -guidelines for supply chain continuity management

**ZWS ISO/TS 22319:2017**

Security and resilience - Community resilience — Guidelines for planning the involvement of spontaneous volunteers

**ZWS ISO/TS 22320:2018**

Security and resilience – Emergency management – Guidelines for incident management

**ZWS ISO/TS 22330:2018**

Security and resilience – Business continuity management systems – Guidelines for people aspects of business continuity

**ZWS ISO/TS 22331:2018**

Business continuity management systems – Guidelines for business continuity strategy

**ZWS ISO/TS 22398:2013**

Societal security – Guidelines for exercises

**ZWS ISO 37000:2021**

Governance of organisations — Guidance

**03.100.02 Governance and ethics****ZWS ISO 20914:2019**

Medical laboratories — practical guidance for the estimation of measurement uncertainty

**ZWS ISO 53800:2024**

Guidelines for the promotion and implementation of gender equality and women’s empowerment

**03.100.10 Purchasing, Procurement, Logistics****ZWS ISO 55000:2024**

Asset management – Overview, principles and terminology

**ZWS ISO 55001:2024**

Asset management – Management systems – Requirements

**ZWS ISO 55002: 2018**

Asset management — Management systems — Guidelines for the application of ISO 55001

**ZWS ISO/TS 55010:2019**

Asset management – Guidance on the alignment of financial and non-financial functions in asset management

### 03.100.30 Management of human resources

#### ZWS ISO 10018:2012

Quality Management – Guidelines on people involvement and competence

#### ZWS ISO/TS 14029:2022

##### ARSO ISO ZWS HT 14029:2024

Environmental statements and programmes for products — Mutual recognition of Environmental Product Declarations (EPDs) and footprint communication programmes

#### ZWS ISO TS 24178:2021

Human resource management – Organizational culture metrics cluster

#### ZWS ISO TS 24179:2020

Human resource management – Occupational health and safety metrics

#### ZWS ISO TR 30406:2017

Human Resources Management-Sustainable Employability Management for Organizations

#### ZWS ISO 30407:2017

Human Resources Management-Cost per Hire

#### ZWS ISO 30408:2016

Human Resource Management- Guidelines on Human Resources

#### ZWS ISO 30409:2016

Human Resource Management- Workforce Planning

#### ZWS ISO 30410:2018

Human Resources Management-Impact of Hire Metric

#### ZWS ISO 30400:2016

Human Resource Management-Vocabulary

#### ZWS ISO 30414:2018

Human resource management – Guidelines for internal and external human capital reporting

#### ZWS ISO TS 30415:2021

Human Resources Management – Diversity and Inclusion

#### ZWS ISO TS 30423:2021

Human resource management – Compliance and ethics metrics cluster

#### ZWS ISO TS 30425:2021

Human Resource Management – Workforce availability metrics cluster

#### ZWS ISO TS 30427:2021

Human Resources Management – Costs metrics cluster

#### ZWS ISO TS 30428:2021

Human Resources Management – skills and capabilities metrics cluster

#### ZWS ISO TS 30430:2021

Human Resources Management – recruitment metrics cluster

#### ZWS ISO TS 30431:2021

Human Resources Management – leadership metrics cluster

#### ZWS ISO TS 30432:2021

Human Resources Management – workforce productivity metrics cluster

#### ZWS ISO TS 30433:2021

Human Resources Management – Succession planning metrics cluster

#### ZWS ISO 30435:2023

Human resource management — Workforce data quality

#### ZWS ISO TS 30437:2023

Human resource management — Learning and development metrics

#### ZWS ISO 10667:2020: Part 1

Assessment service delivery – procedures and methods to assess people in work and organizational settings: Requirements for the client

#### ZWS ISO 10667:2020: Part 2

Assessment service delivery – procedures and methods to assess people in work and organizational settings: Requirements for service providers

### 03.100.70 Management Systems

#### ZWS ISO 28001:2007

Security management systems for the supply chain — Best practices for implementing supply chain security, assessments and plans — Requirements and guidance

#### ZWS ISO TS 29001:2020

Petroleum, petrochemical and natural gas industries - Sector-specific quality management systems - Requirements for product and service supply organizations

#### ZWS ISO 42001:2023

Information technology — Artificial intelligence — Management system

### 03.120 Quality

#### 03.120.10 Quality Management and Quality Assurance

#### ZWS ISO 9000:2015

Quality management systems - Fundamentals and vocabulary

#### ZWS ISO 9001:2015

Quality management systems – Requirements

#### ZWS ISO 9002:2016

Quality management systems – Guidelines for the Application of ISO 9001:2015

#### ZWS 9004:2009

Managing for the sustained success of an organization – A quality management approach

#### ZWS ISO 10001:2018

Quality management – Customer satisfaction – Guidelines for codes of conduct for organizations

#### ZWS ISO 10002:2018

Quality Management –Customer satisfaction –Guidelines for complaints handling for organizations.

#### ZWS ISO 10003:2018

Quality management – Customer satisfaction – Guidelines for dispute resolution external to organizations.

#### ZWS ISO 10004:2018

Quality management – Customer satisfaction – Guidelines for monitoring and measuring

#### ZWS ISO10005:2018.

Quality management - Guidelines for quality plans

**ZWS ISO 10006:2017**

Quality management systems – Guidelines for quality management in projects

**ZWS ISO 10007:2017**

Quality management systems – Guidelines for configuration management

**ZWS ISO 10008:2022**

Quality management – Customer satisfaction – Guidance for business-to-consumer electronic commerce transactions

**ZWS ISO 10010:2022**

Quality management - Guidance to understand, evaluate and improve organizational quality culture

**ZWS ISO 10012:2003**

Measurement management systems - Requirements for measurement processes and measuring equipment

**ZWS ISO 10013:2021**

Quality management systems – Guidance documented information

**ZWS ISO 10014:2009**

Quality management – Managing an organization for quality results – Guidance for realizing financial and economic benefits

**ZWS ISO/TR 10015:2019**

Quality management – Guidance for competence management and people development

**ZWS ISO / TR 10017:2003**

Guidelines on statistical techniques for ISO 9001:2000

**ZWS ISO 10018:2020**

Quality Management – Guidance on people engagements

**ZWS ISO TS 10020:2022**

Quality management Systems - Organizational change management - Processes

**ZWS ISO 13485:2004**

Medical devices - Quality management systems - Requirements for regulatory purposes

**ZWS ISO 14004:2016**

Environmental management systems – General guidelines on implementation

**ZWS ISO 15161:2002**

Guidelines on the application of ISO 9001:2000 for the food and drink industry

**ZWS ISO 15189:2022**

Medical laboratories - Requirements for quality and competence

**ZWS ISO 16949: 2009**

Quality management systems - Particular requirements for the application of ISO 9001: 2000 for automotive production and relevant service part organizations

**ZWS ISO 18091:2014**

Quality management systems – Guidelines for the application of ISO 9001:2008 in local government

**ZWS ISO 19011:2012**

Guidelines for quality and/or environmental management system auditing

**ZWS ISO 21795: Part 1:2021**

Mine closure and reclamation planning.  
**Part 1:** requirements

**ZWS ISO 21795: Part 2:2021**

Mine closure and reclamation planning.  
**Part 2:** guidance

**ZWS ISO 22870:2006**

Point-of-care testing (POCT) – Requirements for quality and competence

### 03.120.20 Product and company certification. Conformity assessment

**ARSO ZW HS 1357:2022**

Vehicle testing station evaluation

**ZWS ISO/IEC Guide 23:2005**

Method of indicating conformity with standards for third party certification systems

**ZWS ISO/IEC Guide 27:2005**

Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity

**ZWS ISO/IEC Guide 28:2005**

Conformity assessment - Guidance on a third - party certification system for products

**ZWS ISO/IEC Guide 43:2003**

Proficiency testing by inter laboratory comparison

**ZWS ISO /IEC Guide 53:2005**

Conformity assessment - Guidance on the use of an organization's quality management system in product certification

**ZWS ISO /IEC Guide 60:2005**

Conformity assessment - Code of good practice

**ZWS ISO /IEC Guide 64:2009**

Guide for addressing environmental issues in product standards

**ZWS ISO /IEC Guide 65:2005**

General requirements for bodies operating product certification systems

**ZWS ISO/IEC Guide 67:2005**

Conformity assessment - Fundamentals of products certification

**ZWS ISO /IEC guide 68:2005**

Environmental management life cycle - Examples of application of ISO 14042

**ZWS ISO /IEC 17000:2020**

Conformity assessment – Vocabulary and general principles

**ZWS ISO / PAS 17001:2007**

Conformity assessment – Impartiality – principles and requirements

**ZWS ISO /PAS 17004:2007**

Conformity assessment – disclosure of information – principles and requirements

**ZWS ISO /PAS 17002:2005**

Conformity assessment - Confidentiality - Principles and requirements

**ZWS ISO /PAS 17003 – 2005**

Conformity assessment – Complaints and appeals, principles and requirements

**ZWS ISO/ 17011:2017**

General requirements for accreditation bodies – Accreditation conformity assessment results

**ZWS ISO/IEC 17020:2012**

Conformity assessment – Requirements for the operation of various types of bodies performing inspection

**ZWS ISO/ IEC 17021:2011**

Conformity assessment – requirements for bodies providing audit and certification of management systems

**ZWS ISO/IEC TS 17022:2012**

Conformity assessment – Requirements and recommendations for content of a third-party audit report on management systems

**ZWS ISO /IEC 17024:2012**

Conformity assessment - General requirements for bodies operating certification of persons

**ZWS ISO/IEC 17029:2019**

Conformity assessment – General principles and requirements for validation and verification bodies

**ZWS ISO /IEC 17030:2005**

General requirements for third party marks of conformity 27001

**ZWS ISO /IEC 17040:2005**

Conformity assessment - General requirements for peer assessment of conformity assessment bodies

**ZWS ISO/IEC 17043:2023**

Conformity assessment – General requirements for the competency of proficiency testing providers

**ZWS ISO/ 17050:2005**

Supplier declaration of conformity

**ZWS ISO/IEC 17065:2012**

Conformity assessment – Requirements for bodies certifying products, processes and services

**ZWS ISO/IEC 17067:2013**

Conformity assessment – Fundamentals of product certification and guidelines for product certification schemes

**03.140 Patents and Intellectual property****ZWS ISO 10668:2010**

Brand valuation — Requirements for monetary brand valuation

**03.180 Education****ZWS ISO 21001:2018**

Educational organisations – management systems for educational organisations – requirements with guidance for use

**ZWS ISO 29994:2021**

Education and learning services – requirements for distance learning

**03.330.20****ZWS ISO 39001:2012**

Road traffic safety (RTS) management systems – requirements with guidance for use

**07 Mathematics, Natural sciences****07.100.30 Food microbiology****ZWS ISO 4831:2007**

Microbiology of food and animal feeding stuffs – horizontal method for the detection and enumeration of coliforms – most probable number technique

**ZWS ISO 4833:2005**

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of micro-organisms – Colony count technique at 30°C

**ZWS ISO 6579: Part 1:2017/Amd.1:2020**

Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella

**Part 1:** Detection of Salmonella spp.

**ZWS ISO 7218:2007/Amd: 2013**

Microbiology of the food chain - General requirements and guidance for microbiological examinations

**ZWS ISO 7251:2005**

Microbiology – General guidance for enumeration of presumptive Escherichia coli – Most probable number technique

**ZWS ISO 7954:2005**

Microbiology – General guidance for enumeration of yeast and moulds – colony count technique at 30°C

**ZWS ISO 8199:2018**

Water quality — General requirements and guidance for microbiological examinations by culture

**ZWS ISO 11133:2014**

Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media

**ZWS ISO 16649: 2018**

Microbiology of the food chain - Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli

**Part 1:** Colony-count technique at 44 °C using membranes and 5-bromo-4-chloro-3- indolyl beta-D-glucuronide

**ZWS ISO 21527: Part 1:2008**

Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds

**Part 1:** Colony count technique in products with water activity greater than 0,95

**ZWS ISO 21527: Part 1:2008**

Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds

**Part 2:** Colony count technique in products with water activity less than or equal to 0,95

**ZWS ISO 21528: Part 2:2017**

Microbiology of the food chain- Horizontal method for the detection and enumeration of enterobacteriaceae

**Part 2:** Colony-count technique

**11 Health care technology****11.020.01****ZWS 992:2019**

HIV and wellness management systems

**ZWS ISO 7101:2023**

Healthcare organization management — Management systems for quality in healthcare organizations — Requirements

**ZWS ARS ISO 17090: Part 1:2021**

Health informatics – Public key infrastructure

**Part 1:2021:** Overview of digital certificate services

**ZWS ARS ISO 17090: Part 2:2008**  
Health informatics – Public key infrastructure  
**Part 2:2008:** Certificate profile

**ZWS ARS ISO 17090: Part 3:2021**  
Health informatics – Public key infrastructure  
**Part 3:2021:** Policy management of certification authority

## 11.040 Medical equipment

**ZWS Z6:1964**  
Medical gas cylinders and anaesthetic apparatus

**ZWS T1:1967**  
Rubber closures for injectable products

**ZWS ISO 13485:2004**  
Medical devices - Quality management systems - Requirements for regulatory purposes

**ZWS ISO 15174:2012**  
Milk and milk products – Microbial coagulants – Determination of total milk-clotting activity

**ZWS ISO 15198:2004**  
Clinical laboratory medicine - In - vitro diagnostic medical devices – Validation of user quality control procedures by the manufacturer

**ZWS ISO 17593:2009**  
Clinical laboratory testing and in – vitro medical devices – Requirements for in vitro monitoring systems for self- testing of oral anticoagulant therapy

### 11.040.10 Anaesthetic, respiratory and reanimation equipment

**ZWS ISO 20072:2011**  
Aerosole drug device design verification – Requirements and test methods

### 11.040.20 Transfusion, infusion and injection equipment

**ZWS ISO 7864:2004**  
Sterile hypodermic needles for single use

**ZWS ISO 8537:2016**  
Sterile single-use syringes with or without needle, for insulin set

**ZWS ISO 9626:2016**  
Stainless steel needle tubing for the manufacture of medical devices

**ZWS ISO 10555:2005**  
Sterile, single- use intravascular catheters

**ZWS ISO 11070:2005**  
Sterile, single-use intravascular catheter introducers

**ZWS ISO 11608:2012**  
Needle based injection systems for medical use – Requirements and test methods

**ZWS ISO 14972:2005**  
Sterile obturators for single-use with over-needle peripheral intravascular catheters

**ZWS ISO 6009:2016**  
Hypodermic needles for single use – color coding for identification

**ZWS ISO 21649: 2009**  
Needle – Free injections for medical use – Requirements and test methods

### 11.040.25 Syringes, needles and catheters

**ZWS ISO 7886:2011**  
Sterile hypodermic syringes for single use

**ZWS ISO 11608: 2012**  
Needle-based injection systems for medical use – Requirements and test methods

### 11.040.40 Implants for surgery, prosthetics and orthotics including pacemakers

**ZWS ARS ISO 8548: Part 1:1989**  
Prosthetics and orthotics – Limb deficiencies  
**Part 1:1989:** Method of describing limb deficiencies present at birth

**ZWS ARS ISO 8548: Part 2:2020**  
Prosthetics and orthotics – Limb deficiencies  
**Part 2:2020:** Method of describing lower limb amputation stumps

**ZWS ARS ISO 8548: Part 3:1993**  
Prosthetics and orthotics – Limb deficiencies  
**Part 3:1993:** Method of describing upper limb amputation stumps

**ZWS ARS ISO 8548: Part 4:1998**  
Prosthetics and orthotics – Limb deficiencies  
**Part 4:1998:** Description of causal conditions leading to amputation

**ZWS ARS ISO 8548: Part 5:2003**  
Prosthetics and orthotics – Limb deficiencies  
**Part 5:2003:** Description of the clinical condition of the person who has had an amputation

**ZWS ARS ISO 8549: Part 1:2020**  
Prosthetics and orthotics – Vocabulary  
**Part 1:2020:** General terms for external limb prostheses and external orthoses

**ZWS ARS ISO 8549: Part 2:2023**  
Prosthetics and orthotics – Vocabulary  
**Part 2:2023:** Terms relating to external limb prostheses

**ZWS ARS ISO 8549: Part 4:2020**  
Prosthetics and orthotics – Vocabulary  
**Part 4:2020:** Terms relating to limb amputation

### 11.040.55 Diagnostic equipment

**ZWS ISO 19001:2013**  
In vitro diagnostic medical devices – Information supplied by the manufacturer with in vitro diagnostic reagents for staining in biology

### 11.040.99 Other medical equipment

**ZWS ISO 23907:2012**  
Sharps injury protection – Requirements and test methods – Sharps containers

**ZWS ISO 23908:2011**  
Sharps injury protection – Requirements and test methods – Sharps protection features for single-use hypodermic needles, introducers for catheters and needles used for blood sampling

## 11.060.20 Dental equipment

**ZWS 819:2010**  
Toothpaste

## 11.080 Sterilization and disinfection

**ARS ZW HS 1702:2023**  
Disinfectants – Glossary of terms

**ZWS 292:1993**  
Detergent-disinfectants (iodophors)

**ZWS 298:2001**  
Detergent-disinfectants based on quaternary ammonium compounds

**ZWS 302:2001**  
Quaternary ammonium compound disinfectants

**ZWS 865:1966**  
Black and white disinfectant fluids

**ZWS ISO 15883:Part 2:2023**  
Washer disinfectors  
**Part 2:** Requirements and tests for washer-disinfectors employing thermal disinfection for critical and semi-critical medical devices

**ZWS ISO 15883: Part 3:2006**  
Washer disinfectors  
**Part 3:** Requirements and tests for washer-disinfectors employing thermal disinfection for human waste containers

**ZWS ISO 15883: Part 4:2018**  
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**Part 4:** Requirements and tests for washer-disinfectors employing chemical disinfection for thermolabile endoscopes

**ZWS ISO 15883: Part 5:2021**  
Washer disinfectors  
**Part 5:** Performance requirements and test method criteria for demonstrating cleaning efficacy

**ZWS ISO 18153:2003**  
In vitro diagnostic medical devices — Measurement of quantities in biological samples — Metrological traceability of values for catalytic concentration of enzymes assigned to calibrators and control materials

**ZWS ISO 20184: Part 1:2018**  
Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for frozen tissue:  
**Part 1:** Isolated RNA

**ZWS ISO 20184: Part 2:2018**  
Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for frozen tissue:  
**Part 2:** Isolated proteins

**ZWS ISO 20186: Part 1:2019**  
Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:  
**Part 1:** Isolated cellular RNA

**ZWS ISO 20186: Part 2:2019**  
Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:  
**Part 2:** Isolated genomic DNA

**ZWS ISO 20186: Part 3:2019**  
Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for venous whole blood:  
**Part 3:** Isolated circulating cell free DNA

## 11.100 Laboratory medicine

**ZWS ISO 15190:2020**  
Medical laboratories - Requirements for safety

**ZWS ISO 15195:2004**  
Laboratory medicine - Requirements for reference measurement laboratories

**ZWS ISO 22367:2020**  
Medical laboratories — Application of risk management to medical laboratories

### 11.100.01 Laboratory medicine in general

**ZWS ISO 22870:2006**  
Point-of-care testing (POCT) – Requirements for quality and competence

### 11.100.10 In vitro diagnostic test systems

**ZWS EN 12322:1999**  
In vitro diagnostic medical devices – Culture media for microbiology – Performance criteria for culture media

**ZWS ISO 15193:2011**  
In vitro diagnostic medical devices – Measurement of quantities in samples of biological origin – Requirements for content and presentation of reference measurement procedures

**ZWS ISO 15194:2011**  
In vitro diagnostic medical devices – Measurement of quantities in samples of biological origin – Requirements for certified reference materials and the content of supporting documentation

**ZWS ISO 15197:2013**  
In vitro diagnostic test systems – Requirements for blood glucose monitoring systems for self-testing in managing diabetes mellitus

**ZWS ISO 16256:2012**  
Clinical laboratory testing and in vitro diagnostic test systems – Reference method for testing the in vitro activity of antimicrobial agents against yeast fungi involvement in infectious diseases

**ZWS ISO 17822:2020**  
In vitro diagnostic test systems — Nucleic acid amplification-based examination procedures for detection and identification of microbial pathogens — Laboratory quality practice guide

**ZWS ISO 18113:Part 1:2022**  
In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)  
**Part 1:** Terms, definitions and general requirements

**ZWS ISO 18113:Part 2:2022**  
In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)  
**Part 2:** In vitro diagnostic reagents for professional use

**ZWS ISO 18113:Part 3:2022**  
In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)  
**Part 3:** In vitro diagnostic instruments for professional use

**ZWS ISO 18113:Part 4:2022**  
In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)  
**Part 4:** In vitro diagnostic reagents for self-testing

**ZWS ISO 18113:Part 5:2022**

In vitro diagnostic medical devices – Information supplied by the manufacturer (Labelling)

**Part 5:** In vitro diagnostic instruments for self-testing

**ZWS ISO 20166: Part 1:2018**

Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:

**Part 1:** Isolated RNA

**ZWS ISO 20166: Part 2:2018**

Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:

**Part 2:** Isolated proteins

**ZWS ISO 20166: Part 3:2018**

Molecular in vitro diagnostic examinations — Specifications for pre-examination processes for formalin-fixed and paraffin-embedded (FFPE) tissue:

**Part 3:** Isolated DNA

**ZWS ISO 20916: 2019**

In vitro diagnostic medical devices — clinical performance studies using specimens from human subjects — good study practice

**ZWS ISO 21151:2020**

In vitro diagnostic medical devices – measurement of quantities in samples of biological origin – Requirements for international harmonization protocols establishing metrological traceability of values assigned to calibrators and human samples

**ZWS ISO 21474: Part 1:2020**

In vitro diagnostic medical devices – multiplex molecular testing for nucleic acids Part 1: Terminology and general requirements for nucleic acid quality evaluation

**ZWS ISO 23640:2012**

In vitro diagnostic medical devices – Evaluation of stability of in vitro diagnostic reagents

**11.100.20 Biological evaluation of medical devices****ZWS ISO 20776:2009**

Clinical laboratory testing an in vitro diagnostic test systems – susceptibility testing of infectious agents and evaluation of performance of antimicrobial susceptibility test devices

**11.120.01 Pharmaceutics in general****ZWS 163:1975**

Pharmaceuticals

**ZWS 864:2004**

Quality assurance of pharmaceuticals - Good manufacturing practices and inspection

**11.120.10 Medicaments****ARSO ZW HS 956 Part 1:2017**

African Traditional Medicine – Medicinal plant Standards

**Part 1:** Aloe Vera

**ARS ZWS HT 956: Part 2:2024**

African Traditional Medicine — Medicinal plant standards

**Part 2:** Ambrosia maritima

**ARS ZWS HS 956: Part 3:2024**

African Traditional Medicine - Medicinal plant standards:

**Part 3:** Urtica dioica and Urtica urens

**ARS ZWS HT 956: Part 4:2024**

African traditional medicine - Medicinal plant standards:

**Part 4:** Calotropis procera

**ARS ZWS HT 956: Part 5-1:2024**

African traditional medicine- Medicinal plant standards - Anacardium occidentale

**Part 5-1:** Seed-nut

**ARS ZWS HT 956: Part 5-3:2024**

African Traditional Medicine- Medicinal plant standards- Anacardium occidentale

**Part: 5-3:** Cashew apple

**ARS ZWS HT 956: Part 6:2024**

African Traditional Medicine- Medicinal plant standards

**Part 6:** Moringa oleifera

**ARS ZWS HT 956: Part 7:2024**

African Traditional Medicine - Medicinal Plant

**Part 7:** Prunus Africana

**ARS ZWS HT 956: Part 8:2024**

African Traditional Medicine - Medicinal Plant

**Part 8:** Vernonia Amygdalina

**ARS ZWS HT 956: Part 10:2024**

African traditional medicine- Medicinal plant standards

**Part 10:** Adansonia digitata seed oil

**ARS ZWS HT 956: Part 11:2024**

African traditional medicine — Medicinal plant standards

**Part 11:** Garcinia kola

**ARS ZWS HT 956: Part 12:2024**

African traditional medicine - Medicinal plant standards

**Part 12:** Hibiscus sabdariffa Linn variety Rahad and other species Hibiscus

**ARS ZWS HT 956: Part 14:2024**

African traditional medicine - Medicinal plant standards

**Part 14:** Scent leaf (Ocimum gratissimum)

**11.180 Aids for disabled or handicapped persons****ZWS 323:1991**

Wheelchairs for the disabled

**11.180.10 - Aids and adaptation for moving****ZWS ISO 7176: Part 1:2014**

Wheelchairs

**Part 1:2014:** Determination of static stability

**ZWS ISO 7176: Part 2:2017**

Wheelchairs

**Part 2:2017:** Determination of dynamic stability of electrically powered wheelchairs

**ZWS ISO 7176: Part 3:2012**

Wheelchairs

**Part 3:2012:** Determination of effectiveness of brakes

**ZWS ISO 7176: Part 4:2008**

Wheelchairs

**Part 4:2008:** Energy consumption of electric wheelchairs and scooters for determination of theoretical distance range

**ZWS ISO 7176: Part 5:2008**

Wheelchairs

**Part 5:2008:** Determination of dimensions, mass and manoeuvring space

**ZWS ISO 7176: Part 6:2018**

Wheelchairs

**Part 6:2018:** Determination of maximum speed of electrically powered wheelchairs

**ZWS ISO 7176: Part 7:1998**

Wheelchairs

**Part 7:1998:** Measurement of seating and wheel dimensions

**ZWS ISO 7176: Part 8:2015**

Wheelchairs

**Part 8:2015:** Requirements and test methods for static, im-pact and fatigue strengths

**ZWS ISO 7176: Part 26:2007**

Wheelchairs

**Part 26:2007:** Vocabulary

**ZWS ISO 7176: Part 30:2018**

Wheelchairs

**Part 30:2018:** Wheelchairs for changing occupant posture – test methods and requirements

## 11.200 Birth control

**ZWS ISO 4074:2003**

Rubber condoms

**ZWS ISO 7439:2011**

Copper-bearing contraceptive intrauterine devices – Requirements and tests

**ZWS ISO 7857:1999**

Intra-uterine devices

**ZWS ISO 8009:2005**

Reusable rubber and silicone contraceptive diaphragms - Requirements and test methods

**ZWS ISO 16037:2003**

Rubber condoms for clinical trials- measurement of physical properties

**ZWS ISO 16038:2006**

Rubber condoms - Guidance on the use of ISO 4074 in the quality management of natural rubber latex condoms

**ZWS ISO 23409:2011**

Male condoms – Requirements and test methods for condoms made from synthetic materials

**ZWS ISO 25841:2011**

Female condoms – Requirements and test methods

**ZWS ISO 29942:2011**

Prophylactic dams – Requirements and test methods

## 13 Environment, health protection and safety

### 13.020.10 Environmental management

**ZWS ISO 14001:2015**

Environmental management systems - Requirements with guidance for use

**ZWS ISO 14004:2016**

Environmental management systems - General guidelines on principles, systems and supporting techniques

**ZWS ISO 14008:2019**

Monetary valuation Of Environmental Impacts And Related Environmental Aspects

**ZWS ISO 14009:2020**

Environmental management systems — Guidelines for incorporating material circulation in design and development

**ZWS ISO 14015:2022**

Environmental management — Guidelines for environmental due diligence assessment

**ZWS ISO 14031:2000**

Environmental management - Environmental - performance evaluation – Guidelines

**ZWS ISO/TR 14032:2000**

Environmental management - Examples of environmental performance evaluation (EPE)

**ZWS ISO 14045:2012**

Environmental management eco-efficiency assessment of product systems – Principles, requirements and requirements

**ZWS ISO /TR 14047:2012**

Environmental management – Life cycle impact assessment – Illustrative examples on how to apply ISO 14044 to impact assessment situations

**ZWS ISO 14049:2012**

Environmental management-lifecycle assessment – Illustrative examples on how to apply ISO 14044 to global and scope definition and inventory analysis

**ZWS ISO 14050:2020**

Environmental management - Vocabulary

**ZWS ISO 14051:2011**

Environmental management – Material flow cost accounting – General framework

**ZWS ISO 14052:2017**

Environmental management – Material flow cost accounting – Guidance for practical implementation in a supply chain

**ZWS ISO 14053:2021**

Environmental management – material flow cost accounting – guidance for phased implementation in organisations

**ZWS ISO 14072:2014**

Environmental management – Life cycle assessment – Requirements and guidelines for organizational Life cycle assessment

**ZWS ISO 18601:2013**

Packaging and the environment — General requirements for the use of ISO standards in the field of packaging and the environment

**ZWS ISO 19011:2018**

Guidelines for auditing management systems

**ZWS ISO 37001:2016/Amd. 1:2024**

Anti-bribery management systems — Requirements with guidance for use

### 13.020.20 Environmental economics. Sustainability

**ZWS ISO 17033:2019**

Ethical claims and supporting information – principles and requirements

**ZWS ISO 20400:2017**

Sustainable Procurement



### 13.020.30 Environmental impact assessment

#### ZWS ISO 24510:2008

Activities relating to drinking water and waste water services – guidelines for the assessment and for the improvement of the service to users.

#### ZWS ISO 14050:1998

Environmental management - Vocabulary

#### ZWS ISO/TR 14061:1999

Information to assist forestry organizations in the use of environmental management systems standards ISO 14001 and 14004

#### ZWS ISO /TR 14062:2003

Environmental management – Integrate set environmental aspects into product design and development

#### ZWS ISO/TR 14073:2017

Environmental Management Water footprint

#### ZWS ISO 19011:2012

Guidelines for quality and/ or environmental management system auditing

### 13.020.40 Pollution and pollution control and conservation

#### ZWS IWA 42:2023

Net zero guidelines

#### ZWS ISO 14063:2008

Environmental management – environmental communication – Guidelines and examples

#### ZWS ISO 14064:2018

Greenhouse gases

#### ZWS ISO 14066:2011

Greenhouse gases – Competence requirements for greenhouse gases validation teams and verification teams

#### ZWS ISO 14067:2013

Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication

#### ZWS ISO 14068:Part 1:2023

Climate change management — Transition to net zero  
**Part 1:** Carbon neutrality

#### ZWS ISO 14090:2019

Adaptation to climate change – Principles, requirements and guidelines

#### ZWS ISO 14091:2021

Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment

#### ZWS ISO 14092:2020

Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities

#### ZWS ISO 14093:2022

Mechanism for financing local adaptation to climate change – Performance-based climate resilience grants – Requirements and guidelines

### 13.020.50 Ecolabelling

#### ZWS ISO 14020:2022

##### ARSO ISO ZWS HT 14020:2024

Environmental statements and programmes for products -Principles and general requirements

#### ZWS ISO 14021:2016/Amd 1:2021

##### ARSO ISO ZWS HT 14021:2024

Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)

#### ZWS ISO 14026:2017

##### ARSO ISO ZWS HT 14026:2024

Environmental labels and declarations — Principles, requirements and guidelines for communication of footprint information

#### ZWS ISO 14024:2018

##### ARSO ISO ZWS HT 14024:2024

Environmental labels and declarations - Type I environmental labelling - Principles and procedures

#### ZWS ISO 14025:2006

Environmental labels and declarations - Type III environmental declarations

#### ZWS ISO 14027:2017

Environmental labels and declarations – Development of product category rules

#### ZWS ISO 14006:2020

Environmental management systems- guidelines for incorporating eco design.

#### ZWS ISO 14002: Part 1

Environmental management systems- guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area.

#### ZWS ISO 14002: Part 2: 2023

Environmental management systems — guidelines for using iso 14001 to address environmental aspects and conditions within an environmental.

#### ZWS ISO 14007:2019

Environmental management systems- guidelines for determining environmental costs and benefits

#### ZWS IEC 62430:2019

Environmentally conscious design – Principles, requirements and guidance.

### 13.020.60 Products life-cycles

#### ZWS ISO 14034:2016

Environmental management – Environmental Technology Verification (ETV)

#### ZWS ISO 14044:2006

Environmental management – Water Footprint –Illustrative examples on how to apply ISO 14046

#### ZWS ISO 14040:2006/ Amd 1:2020

Environmental management - Life cycle assessment - Principles and framework

#### ZWS ISO 14044:2006/ Amd 2:2020

Environmental management - Life cycle assessment - Requirements and guidelines

#### ZWS ISO 14045:2012

Environmental management eco-efficiency assessment of product systems – Principles, requirements and guidelines

**ZWS ISO/TR 14047:2012**

Environmental management life-cycle impact assessment – Illustrative examples on how to apply ISO 14044 to impact assessment situations

**ZWS ISO 14048:2002**

Environmental management - Life-cycle assessment - Data documentation format

**ZWS ISO 14049:2012**

Environmental - Life cycle assessment – Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis

**ZWS ISO TR 14055: Part 2:2022**

Environmental management — guidelines for establishing good practices for combatting land degradation and desertification Part 2: Regional case study examples

**ZWS ISO/TS 14074:2022**

Environmental management — life cycle assessment — principles, requirements and guidelines for normalization, weighting and interpretation

### 13.030 Waste

#### 13.030.30 Special waste

**ZWS 704:2000**

Radioactive waste management

#### 13.040 Air quality

##### 13.040.01 Air quality in general

**ZWS 977:2015**

Air quality and emissions

**ZWS ISO 4221:1999**

Air quality – Determination of mass concentration of sulfur dioxide in ambient air - Thorin spectrophotometric method

**ZWS ISO 4225:2000**

Air quality - General aspects - Vocabulary

**ZWS ISO 4226:1999**

Air quality - General aspects - Units of measurement

**ZWS ISO 6879:2000**

Air quality - Performance characteristics and related concept for air quality measuring methods

**ZWS ISO 7168:1999**

Air quality - Exchange of data

**ZWS ISO 7708:2000**

Air quality - Particle size fraction definitions for health related sampling

**ZWS ISO 8672:2000**

Air quality - Determination of the number concentration of airborne inorganic fibres by phase optical microscopy - Membrane filter method

**ZWS ISO 8756:2000**

Air quality - Handling of temperature, pressure and humidity data

##### 13.040.20 Ambient atmospheres

**ZWS ISO /TR 4219: 2000**

Air quality - Determination of gaseous sulfur compounds in ambient air - Sampling equipment

**ZWS ISO 4220:1999**

Ambient air - Determination of gaseous acid pollution index - Titrimetric method with indicator or potentiometric end point detection

**ZWS ISO /TR 4227:1999**

Planning of ambient air quality monitoring

**WS ISO/TR 6767:2000**

Ambient air - Determination of the mass concentration of sulfur dioxide -Tetrachloromercurate (TCM) pararosaniline method

**ZWS ISO /TR 6768:2000**

Ambient air - Determination of mass concentration for the determination of the mass concentration of nitrogen dioxide present in ambient air

**ZWS ISO 7996:2000**

Ambient air - Determination of the mass concentration of nitrogen oxides - Chemiluminescence method

**ZWS ISO 8186:2000**

Ambient air - Determination of the mass concentration of carbon monoxide - Gas chromatographic method

**ZWS ISO 9359:2000**

Air quality stratified sampling method for assessment of ambient air quality

**ZWS ISO 9835:2000**

Ambient air - Determination of a black smoke index

**ZWS ISO 9855:2000**

Ambient air - Determination of the particulate lead content of aerosols collected on filters - Atomic absorption spectrometric method

**ZWS ISO 10313:2000**

Ambient air - Determination of the mass concentration of ozone – Chemiluminescence method

##### 13.040.40 Stationary source emissions

**ZWS ISO 7934:2000**

Stationary sources emissions - Determination of mass concentration of sulfur dioxide -Hydrogen peroxide/barium perchlorate/thorin method

**ZWS ISO 7935:2000**

Stationary source emissions - Determination of the mass concentration of sulfur dioxide - Performance characteristics of automated measuring methods

**ZWS ISO 9096:2000**

Stationary source emissions - Determination of concentration and mass flow rate of particulate material in gas carrying ducts - Manual gravimetric method

**ZWS ISO 10396:2000**

Stationary source emissions - Sampling for the automated determination of gas concentrations

**ZWS ISO 10397:2000**

Stationary source emissions - Determination of asbestos plant emissions - Method by fibre count measurement

##### 13.040.50 Transport exhaust emissions

**ZWS ISO 789:1999**

Agricultural tractors - Test procedures

**ZWS ISO 3173:1999**

Road vehicles - Apparatus for measurement of opacity of exhaust gas form diesel engines operating under steady state conditions

**ZWS ISO 3929:1999**  
Road vehicles - Measurement method for exhaust gas emissions during inspection or maintenance

**ZWS ISO 3930:2001**  
Instruments for measuring vehicle exhaust emissions

**ZWS ISO/TR 4011:1999**  
Road vehicles - Apparatus for measurement of the opacity of exhaust gas from diesel engines

**ZWS ISO 6460:1999**  
Road vehicles - Measurement method of gaseous pollutants emitted by motorcycles equipped with a controlled ignition engine

**ZWS ISO 6855:1999**  
Road vehicles - Measurement methods for gaseous pollutants emitted by mopeds equipped with a controlled ignition engine

**ZWS ISO 6970:1999**  
Motorcycles and mopeds - Pollution tests - Chassis dynamometer bench

**ZWS ISO/TR 9310:1999**  
Road vehicles - Smoke measurement of compression - Ignition (diesel) engines - Survey of short in-service tests

## 13.060 Water quality

### 13.060.10 Water of natural resources

**ZWS 457:2015**  
Natural mineral water

**ZWS 678:2013**  
Development, maintenance and management of ground water resources

### 13.060.20 Drinking water

**ZWS ISO 24512:2008**  
Activities relating to drinking water and wastewater services - Guidelines for the management of drinking water utilities and for the assessment of drinking water services

**ZWS 560:1997**  
Water for domestic supplies

### 13.060.20 Drinking water

**ZWS ISO 24512:2008**  
Activities relating to drinking water and wastewater services - Guidelines for the management of drinking water utilities and for the assessment of drinking water services

**ZWS 791:2015**  
Packaged drinking water other than natural mineral water

### 13.060.30 Sewage water

**ZWS 558:1999**  
Waste water

**ZWS 572:1998**  
Waste water - Determination of temperature

**ZWS 573:1997**  
Waste water - Determination of dissolved oxygen

**ZWS 574:1997**  
Waste water - Determination of chemical oxygen demand

**ZWS 575:1997**  
Waste water - Determination of oxygen absorbed

**ZWS 576:1997**  
Waste water - Determination of total suspended solids, total dissolved solids and total solids

**ZWS 579:1997**  
Waste water - Determination of calcium and magnesium content - Titrimetric method

**ZWS 581:1998**  
Waste water - Determination of soap, oil or grease

**ZWS 582:1997**  
Waste water - Determination of free and saline ammonia

**ZWS 583:1997**  
Waste water - Determination of arsenic content - Gutzeit method

**ZWS 584:1997**  
Waste water - Determination of barium content

**ZWS 585:1997**  
Waste water - Determination of boron content - UV spectrometric method

**ZWS 586:1997**  
Waste water - Determination of cadmium content - Dithizone method

**ZWS 587:1997**  
Waste water - Determination of chlorides content

**ZWS 589:1997**  
Waste water - Determination of total chromium content (as Cr)

**ZWS 590:1997**  
Waste water - Determination of copper content - UV spectrometric method after complexation

**ZWS 591:1997**  
Waste water - Determination of cyanides content

**ZWS 593:1997**  
Waste water - Determination of non-ionic surfactants using Dragendorff reagent

**ZWS 594:1997**  
Waste water - Determination of fluoride content

**ZWS 595:1997**  
Waste water - Determination of lead content - UV spectrometric method using dithizone

**ZWS 596:1997**  
Water Quality - Determination of manganese content - Persulfate colorimetric method

**ZWS 597:1997**  
Waste water - Determination of mercury content

**ZWS 598:1997**  
Waste water - Determination of nickel content - UV spectrometric method after complexation with dimethylglyoxime

**ZWS 599:1997**  
Waste water - Determination of total nitrogen content - Kjeldahl distillation using selenium catalyst

**ZWS 600:1997**  
Waste water - Determination of phenolic compounds content (as phenol) - UV Spectrometric analysis

**ZWS 601:1997**  
Waste water - Determination of sulfides content - Titrimetric method

**ZWS 602:1997**  
Waste water - Determination of zinc content - UV spectrometric method

**ZWS 603:1997**  
Waste water - Determination of total phosphates content (as P)

**ZWS 627:1997**  
Waste water - Determination of sodium content - Flame photometric method

**ZWS 699:1997**  
Waste water - Determination of residual organophosphorus pesticides - Gas chromatographic method

### 13.060.50 Examination of water for chemical substances

**ZWS 459:1993**  
Measurement of water pH value

**ZWS 479:1995**  
Water quality - Determination of chloride - Silver nitrate titration with chromate indicator (MOHR's method)

**ZWS 480:1995**  
Water quality - Determination of sulfate - Gravimetric method using barium chloride

**ZWS 481: 995**  
Water quality - Determination of nitrate - Spectrometric method using sulfosalicylic acid

**ZWS 482:1995**  
Water quality - Determination of nitrite - Molecular absorption spectrometric method

**ZWS 483:1995**  
Water quality - Determination of ammonium - Distillation and titration method

**ZWS 484:1995**  
Water quality - Determination of calcium content – EDTA - titrimetric method

**ZWS 485:1995**  
Water quality - Determination of the sum of calcium and magnesium - EDTA titrimetric method

**ZWS 486:1995**  
Water quality - Determination of iron - Spectrometric method using 1, 10-phenanthroline

**ZWS 487:1995**  
Water quality - Determination of manganese - Formaldoxime spectrometric method

**ZWS 488:1995**  
Water quality - Determination of cobalt, nickel, copper zinc, cadmium and lead - Flame atomic absorption spectrometric methods

**ZWS 489:1996**  
Water quality - Determination of phosphorus - Ammonium molybdate spectrometric method

**ZWS 490:1995**  
Water quality - Determination of fluoride - Electrochemical probe method for potable and lightly polluted water

**ZWS 491:1996**  
Water quality - Guidelines for the determination of total organic carbon (TOC)

**ZWS 492:1995**  
Water quality - Determination of total arsenic - Silver diethyl-dithiocarbamate spectrophotometric method

**ZWS 493:1996**  
Water quality - Determination of cyanide as cyanogen chloride

**ZWS 494:1996**  
Water quality - Determination of total chromium - Atomic absorption spectrometric methods

**ZWS 495:1995**  
Water quality - Determination of chemical oxygen demand

**ZWS 496: 1995**  
Water quality - Determination of biochemical oxygen demand after 5 days (BOD5) – Dilution and seeding method

**ZWS 497: 1995**  
Water quality - Determination of total mercury by flameless atomic absorption spectrometric method after digestion with bromine

**ZWS 578:1997**  
Water quality - Determination of sulfate content - Turbidimetric method

**ZWS 580:1997**  
Water quality - Determination of sodium and potassium - Flame emission spectrometry

**ZWS 588:1998**  
Water quality - Determination of residual chlorine

**ZWS 592:1997**  
Water quality - Determination of anionic surfactants by measurement of methylene blue index (MBAS)

**ZWS 593:1997**  
Water quality - Determination of non-ionic surfactants using Dragendorff reagent

**ZWS 596:1997**  
Water quality - Determination of manganese content - Persulfate colorimetric method

**ZWS 602:1997**  
Water quality - Determination of zinc content - UV spectrometric method

**ZWS 604:1997**  
Water quality - Determination of total chromium (VI)

**ZWS 605:1997**  
Water quality - Determination of selenium - Atomic absorption spectrometric method (hydride technique)

**ZWS 606: 1997**  
Water quality - Determination of alkalinity - Titrimetric method

**ZWS 626:1997**  
Water quality - determination of iron, manganese, potassium and sodium content – Direct air-acetylene flame method

**ZWS 628:1997**  
Water quality - Determination of potassium content - Flame photometric method

**ZWS 642:1997**  
Water quality - Determination of calcium content - Direct flame atomic absorption

**ZWS 643:1998**

Water quality - Determination of electrical conductivity

**ZWS 681:2001**

Water quality - Determination of atrazine and other nitrogen and phosphorus containing pesticides in water by gas chromatography with nitrogen-phosphorus detector

**ZWS 682:1999**

Water quality - Determination of organochlorine pesticides - Liquid - liquid extraction gas chromatographic method

**ZWS 683:2000**

Water quality - Determination of N-Methylcarbamyloximes and N-Methylcarbamates - Direct aqueous injection HPLC with post column derivatization

**ZWS 711:2000**

Water quality - Determination of Chlorinated phenoxy acids and other acidic herbicides by gas chromatography

**ZWS 722:1998**

Water quality - Determination of sodium by atomic absorption spectrometry

**ZWS 723:1998**

Water quality - Determination of phenol index - 4 aminoantipyrine spectrometric methods after distillation

**ZWS ISO 5815.2:2003**

Water quality - Determination of biochemical oxygen demand after n days (BOD<sub>n</sub>): Method for undiluted samples

### 13.060.60 Examination of physical properties of water

**ZWS 477:1996**

Water quality - Examination and determination of colour

**ZWS 478:1995**

Water quality - Determination of turbidity

**ZWS 641:1997**

Water quality - Determination of total hardness of water ethylene diamine tetra-acetic (EDTA) method

### 13.060.70 Examination of biological properties of water

**ZWS 577:1997**

Water quality - Determination of total dissolved solids - Conductivity methods

**ZWS 629:1997**

Water quality - Detection of and enumeration of coliform organisms thermos tolerant coliform organisms and presumptive Escherichia coli

**ZWS 880:2010**

Water quality - Detection and enumeration of vibro cholerae

### 13.100 Occupational safety

**SADC ZW HT 109:2023**

Quality and Performance Standard for Lighting Products

**SADC ZW HT 110:2024**

Minimum Energy Performance Standards for Air Conditioners

**SADC ZW HT 111:2024**

Minimum Energy Performance Standards for Refrigerating Appliances

**ZWS 202:1977**

Safety colours and safety signs

**ZWS 645:2002**

Safety on construction sites

**ZWS ISO 8086:2005**

Dairy plant - Hygiene conditions

**ZWS ISO 37301:2021**

Compliance management systems — Requirements with guidance for use

**ZWS ISO 45001:2018**

Occupational health and safety management systems – requirements with guidance for use

**ZWS ISO 45002:2023**

Occupational health and safety management systems – General guidelines for the implementation of ISO 45001:2018

**ZWS ISO 45003:2021**

Occupational health and safety management – Psychological health and safety at work – Guidelines for managing psychosocial risks

**ZWS ISO 45004:2024**

Occupational health and safety management — Guidelines on performance evaluation

**ZWS ISO PAS 45005:2020**

Occupational health and safety management – General guidelines for safe working during the COVID 19 pandemic

**ZWS ISO 45006:2023**

Occupational health and safety management — Guidelines for organizations on preventing, controlling and managing infectious diseases

### 13.120 Domestic safety

**ZWS 101:1976**

Safety factors and smoke emission of domestic stoves burning solid fuels at a rate not exceeding 5kg per hour

**ZWS IEC 60335:2013**

Household and similar electrical appliances – safety

**ZWS IEC 62257:2013**

Recommendations for small renewable energy and hybrid systems for rural electrification

**ZWS IEC TS 62257 Part 9-5:2018**

Recommendations for renewable energy and hybrid system for rural electrification Part 9-5: Integrated systems – Laboratory evaluation of standalone renewable energy products for rural electrification

**ZWS IEC 62257 Part 9-8:2020**

Integrated systems – Requirements for standalone renewable energy products with power rating less than or equal to 350W.

### 13.200 Accident and disaster control

**ZWS IEC 60479: Part 4:2020**

Effects of current on human beings and livestock  
**Part 4:** effects of lightning strokes

## 13.220.10 Fire fighting

### ZWS 176:2000

Fire doors

### ZWS 225:2018

Portable fire extinguishers

### ZWS 251:1980

Code of practice for fire extinguishing installations and equipment on premises – Sprinkler systems

### ZWS 813:1974

Portable fire extinguishers - Hand operated fire extinguishers for aircraft and other purposes

### ZWS 829:1973

Rubber reel hose for fire fighting purposes

### ZWS 916:2011

Disposable portable condensed aerosol fire extinguishers

### ZWS 972:2019

Selection, installation and Maintenance of First-Aid Fire Extinguishers

### ZWS 1006:2016 / IS 2189:2008

Selection, installation and maintenance of automatic fire detection, alarm system and Automatic fire extinguishing systems (IS 2189:2008 Selection, installation and maintenance of automatic fire detection and alarm system code of practice, MOD)

## 13.220.40 Ignitability and burning behavior of materials and products

### ZWS ISO 6940:2011

Textile fabrics – Burning behavior – Determination of ease of ignition of vertically oriented specimens

### ZWS ISO 6941:2011

Textile fabrics – Burning behavior – Measurement of flame spread properties of vertically oriented specimens

## 13.260 Protection against electric shock. Live working

### COMESA ZWS HS IEC 61140:2013

Protection against electric shock – Common aspects for installation and equipment

## 13.280 Radiation protection

### ZWS ISO 361:361

Basic Ionizing radiation symbol

### ZWS 701:2000

Radiological protection in dentistry

### ZWS 702:2000

The use of radioactive materials in medical practice

### ZWS 703:2000

Radiation protection in veterinary radiology

### ZWS 705:2000

The safe use of x-rays in medical diagnosis

## 13.030 Waste

### 13.030.30 Special waste

### ZWS 704:2000

Radioactive waste management

## 13.300 Protection against dangerous goods

### ZWS 341:1972

The storage, transport and use of small quantities of flammable liquids

## 13.310 Protection against crime

### ZWS 468:1995

Burglar resisting safes

### ZWS 535:2021

Manned security services

### ZWS 1009:2016

Vehicle security – whole of vehicle marking – Datadot systems.

### ZWS 1057:2022

Manned security services – cash and valuables in transit services (collection and delivery)

## 13.320 Alarm and warning systems

### ZWS 271:1993

Intruder alarm systems in buildings

## 13.340 Protective equipment

### 13.340.10 Protective clothing

### ZWS 125:1974

Protective apparel for use against pesticides

### ZWS 143:1975

Life-jackets

### ZWS 231:2002

Boiler suits

### ZWS 339:1991

Industrial leather hand protectors and leather protective clothing

### ZWS ISO 20471:2013/ Amd 1:2016

High visibility clothing – test methods and requirements

## 13.340.20 Head protective equipment

### ZWS 239:1998

Protective helmets for equestrian activities

### ZWS 303:1993

Safety helmets for industrial use and for firemen

### ZWS 395:1993

Hearing protectors - Ear-plugs

### ZWS 442:1993

Hearing protectors —Ear-muffs

### ZWS 564:1998

Protective helmets for pedal cyclists

**ZWS 700:1998**  
Protective helmets for motor cyclists

### **13.340.30 Respiratory protective devices**

**ZWS 1058:2020**  
General washable/reusable barrier masks.

**ZWS EN 14683:2019**  
Medical face masks- requirements and testing methods

**ZWS 608:1998**  
Respiratory protective devices for self-rescue - Self-contained closed circuit breathing apparatus - Chemical oxygen (KO<sub>2</sub>) escape apparatus - Requirements, testing and marking

**ZWS 653:2000**  
Respiratory protective devices - Definitions

**ZWS 654:1998**  
Respiratory protective devices - Classification

**ZWS 655:1998**  
Respiratory protective devices - Nomenclature of components

**ZWS 656:1998**  
Respiratory protective devices - List of terms

**ZWS 657:1998**  
Respiratory protective devices - Full face masks for special use

**ZWS 659:1998**  
Respiratory protective devices - Compressed air line breathing apparatus for use with a full face mask, half mask or a mouth-piece assembly - Requirements, testing and marking

**ZWS 660:1998**  
Respiratory protective devices - Gas filters and combined filters

**ZWS 661:1998**  
Respiratory protective devices - Particle filters - Requirements, testing and marking

**ZWS 662:1998**  
Respiratory protective devices - Gas cylinder valves - Thread connection for insert connector

**ZWS 663:1998**  
Respiratory protective devices - Powered particle filtering devices incorporating helmets or hoods

**ZWS 664:1998**  
Respiratory protective devices - Power assisted particle filtering devices incorporating full face mask, half masks or quarter masks - Requirements, testing and marking

**ZWS 665 – 1998**  
Respiratory protective devices - Threads for face pieces - Thread Connection M 45 x 3

**ZWS 666:1998**  
Respiratory protective devices - Powered fresh air hose breathing apparatus incorporating a hood - Requirements, testing and marking

**ZWS 667:1998**  
Respiratory protective devices - Compressed air line breathing apparatus incorporating a hood – Requirements, testing and marking

**ZWS 668:1998**  
Respiratory protective devices - Compressed air line or powered fresh air hose breathing apparatus incorporating a hood for use in abrasive blasting operations - Requirements, testing and marking

**ZWS 669:2000**  
Respiratory protective devices - AX gas filters and combined filters for use against low boiling organic compounds - Requirements, testing and marking

**ZWS 670:1998**  
Respiratory protective devices - SX gas filters and combined filters for use against specific named compounds - Requirements, testing and marking

**ZWS 672: 1998**  
Respiratory protective devices for escape - Self-contained open-circuit compressed air breathing apparatus with full face mask or mouthpiece assembly – Requirements, testing and testing

### **13.340.40 Protective gloves**

**ZWS Z17:1971**  
Industrial gloves

### **13.340.50 Protective footwear**

**ZWS Z4:1961**  
Miners boots (Derby type with premoulded stuck-on sole and heel)

**ZWS 280:1985**  
Lined polyvinyl chloride boots

**ZWS 281:1985**  
Lined rubber gumboots

**ZWS ISO 20344:2021**  
Personal protective equipment — Test methods for footwear

**ZWS ISO 20345:2021/Amd 1:2024**  
Personal protective equipment - Safety footwear

**ZWS ISO 20347:2021/Amd 1:2024**  
Personal protective equipment — Occupational footwear

### **13.340.99 Other protective equipment**

**SADC ZWS HS 180:2008**  
Industrial restraint belts

## **17 Metrology and measurement physical phenomena**

### **17.060 Measurement of volume, mass, density and viscosity**

**ZWS 432:1993**  
Relative density of liquids

**ZWS ISO 1042:1998**  
Laboratory glassware – one-mark volumetric flasks

### **17.100 Measurement of force, weight and pressure**

**SADC ZWS HS 630:2006**  
Metrological and technical requirements of non-automatic, non-self or semi self-indicating, ungraduated counter scales subject to legal metrology control

**SADC ZWS HS 715:2006**

Metrological and technical requirements for non-automatic, undominated beam scales and balances subject to legal metrology control

**17.140.01 Acoustic measurements and noise abatement in general****ZWS ISO 3740:2000**

Acoustic – Determination of sound power levels of noise sources – Guidelines for the use of basic standards

**ZWS ISO 3747:2010**

Acoustic – Determination of sound power and sound energy levels of noise sources using sound pressure – Engineering/survey methods for use insitu in a reverberant environment

**17.160 - Vibrations, shock and vibration measurements****ZWS 1065:2024**

Noise and Vibration

**19 Testing****19.060 Mechanical testing****19.100 Non-destructive testing****ZWS 671:1999**

Non-destructive testing of winding equipment

**ZWS 884:2003**

Method of magnetic particle flaw detection

**ZWS ISO 3057:1998**

Non-destructive testing – Metallographic replica techniques of surface examination

**ZWS ISO 3058:1998**

Non-destructive testing – Aids to visual inspection – Selection of low-power magnifiers

**ZWS ISO 3059:2012**

Non-destructive testing – penetrant testing and magnetic particle testing – viewing conditions

**ZWS ISO 3452.1:2013**

Non destructive testing – penetrant testing – General principles

**ZWS ISO 3452.2:2013**

Non - destructive testing – penetrant testing – Testing of penetrant materials

**ZWS ISO 3452.3:2013**

Non- destructive testing – penetrant testing – Reference test blocks

**ZWS ISO 3452.4:1998**

Non- destructive testing - penetrant testing – Equipment

**ZWS ISO 3452.5:2008**

Non- destructive testing – penetrant testing – Penetrant testing at temperatures lower than 10°C

**ZWS ISO 3452.6:2008**

Non- destructive testing – penetrant testing – Penetrant testing at temperatures higher than 50°C

**ZWS ISO 5579:2013**

Non-Destructive testing – radiographic testing of metallic materials using film and X – or gamma rays – Basic Rules

**ZWS ISO 9712:2013**

Non- destructive testing – Qualification and certification of NDT personnel

**ZWS ISO 9934.1:2016**

Non- destructive testing – magnetic particle testing – General principles

**ZWS ISO 9934.2:2002**

Non- destructive testing – magnetic particle testing – Detection media

**ZWS ISO 9934.3:2013**

Non -destructive testing – magnetic particle testing – Equipment

**ZWS ISO 12706:2009**

Non -destructive testing – penetrant testing - Vocabulary

**ZWS ISO/TR 25108:2006**

Non-destructive testing – Guidelines for NDT personnel training organizations

**21 Mechanical systems and components for general use****21.040 Screw threads****ZWS 882:2005**

Pipe threads for tubes and fittings where pressure tight joints are made on the threads

**21.060 Fasteners****21.060.10 Bolts, Screws, Studs****ZWS O10:1968**

Wood screws

**ZWS 116:1974**

Self-tapping screws and metallic drive screws

**ZWS 474:1996**

Mechanical properties of fasteners – Bolts, screws and studs

**21.060.50 Pins, Nails****ZWS 285:1986**

Mild steel wire nails

**21.220 Flexible drives and transmissions****ZWS 227:1978**

Endless V-belt drives sections Y, Z, A, C and D

**ZWS 228:1978**

Endless wedge belt drives of SPZ, SPA, SPB and SPC sections

**23 Fluid systems and components for general use****23.020 Fluid storage devices****23.020.10 Stationary containers and tanks****ZWS 783:2005**

Carbon steel welded horizontal cylindrical storage tanks



## 23.020.30 Pressure vessels/gas cylinders

### ZWS 199:1984

Non-refillable metallic containers up to 1.4 litres capacity and 85mm diameter for liquefied or compressed non-flammable gases

### ZWS 215:1993

Design and manufacture of welded steel cylinders for low pressure service

### ZWS 293:1986

Fusion welded steel air receivers

### ZWS 529:1973

Identification colours for gas cylinders

## 23.040 Pipelines components and pipelines

### ZWS 186:1976

Identification of pipelines

### 23.040.10 Iron and steel pipes

#### ZWS 102:1993

Steel pipes

#### ZWS 243:1979

Cast iron pipes and pipe fittings for use above ground in drainage installations

### 23.040.20 Plastics pipes

#### ZWS 156:1975

Plasticized polyvinyl chloride (UPVC) components for rainwater systems

#### ZWS 177:1976

Black polyethylene pipes for cold water services

#### ZWS 219:1993

Unplasticized polyvinyl chloride (UPVC) sewer and drain pipes and pipe fittings

#### ZWS 220:1993

Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and fittings

#### ZWS 327:2001/2002

Unplasticized polyvinyl chloride pressure pipes

#### ZWS 900:2004

Structured wall pipes and fittings of unplasticized poly (vinyl chloride) (PVC -U) for buried drainage and sewage systems

#### ZWS ISO 1167: Part 1:2006

Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure  
**Part 1:** General method

#### ZWS ISO 1167: Part 2:2006

Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure  
**Part 2:** Preparation of pipe test pieces

#### ZWS ISO 1167: Part 3:2007

Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure  
**Part 3:** Preparation of components

#### ZWS ISO 1167: Part 4:2007

Thermoplastics pipes, fittings, and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure  
**Part 4:** Preparation of assemblies

#### ZWS ISO 2505:2005

Thermoplastics pipes — Longitudinal reversion — Test method and parameters

#### ZWS ISO 3127:1994

Thermoplastics pipes – Determination of resistance to external blows – Round-the-clock method

#### ZWS ISO 3219:1993

Plastics – Polymers/resins in the liquid state or as emulsions or dispersions – Determination of viscosity using a rotational viscometer with defined shear rate

#### ZWS ISO 4427:2007

Polyethylene (PE) pipes for water supply specification

#### ZWS ISO 9852:2007

Unplasticized poly(vinyl chloride) (PVC-U) pipes — Di-chloromethane resistance at specified temperature (DCMT) — Test method

### 23.040.40 Metal fittings

#### ZWS141: 1978

Cast iron fittings for asbestos-cement pressure pipes

#### ZWS 325:1990

Capillary and compression fittings for copper tubes

#### ZWS 326:1990

Copper tubes

#### ZWS 537:1997

Malleable cast iron fittings threaded to ISO 7: Part 1

### 23.040.50 Pipes/fittings of other materials

#### ZWS 1076:1964

Concrete pipe laying design

#### ZWS 113:2000

Fibre-cement pressure pipes and joints

#### ZWS 195:1976

Asbestos-cement pipes for sewerage and drainage

#### ZWS 315:1995

Concrete pipes (non-pressure )

#### ZWS 342:1977

Earthenware drain and sewer pipes and fittings

### 23.040.70 Hoses and hose reel assemblies

#### ZWS 814:1968

Concrete pipe fittings including manholes and inspection covers

#### ZWS 816:1968

Precast reinforced box culverts

### 23.040.60 Flanges /couplings and joints

#### ZWS 196:1976

Materials for elastomeric joint rings for pipework and pipelines

#### ZWS 238:1978

Hose clamps (worm drive type) for general purpose use

**ZWS 1045:2019**  
Installation, commissioning and maintenance of fire hose reels

### **23.040.99 Other pipeline components**

**ZWS 237:1978**  
Testing water boreholes

### **23.060 Valves**

**ZWS 222:1984**  
Draw-off taps and above-ground stop valves for water services (screw-down pattern)

#### **23.060.30 Gate valves**

**ZWS 148:1993**  
Cast steel gate valves

**ZWS 149:1993**  
Cast iron gate valves for water works

**ZWS 289:1986**  
Cast iron wedge and double disk gate valves for general purposes

**ZWS 148:1994**  
Cast steel gate valves

### **23.080 Pumps**

**ZWS 881:2013**  
B – Type bush pump

### **23.120 Ventilators. Fans. Air-conditioners**

**ZWS ISO 5151/Amd 1:2020**  
Non-ducted air conditioners and heat pumps — Testing and rating for performance

**ZWS ISO 16358-1:2013/Amd 1:2019**  
Air-cooled air conditioners and air-to-air heat pumps -- Testing and calculating methods for seasonal performance factors  
**Part 1:** Cooling seasonal performance factor

**ZWS ISO 16358: Part 2:2013**  
Air-cooled air conditioners and air-to-air heat pumps -Testing and calculating methods for seasonal performance factors  
**Part 2:** Heating seasonal performance factor

**ZWS ISO 16358:Part 3:2013**  
Air-cooled air conditioners and air-to-air heat pumps -- Testing and calculating methods for seasonal performance factors  
**Part 3:** Annual performance factor

**ZWS ISO 18326:2018**  
Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct – Testing and rating for performance

## **25 Manufacturing engineering**

### **25.080.60 Sawing machines**

**ZWS 731:1992**  
Woodcutting band saw blades

### **25.100 Cutting tools**

### **25.100.30 Drills**

**ZWS 279:1995**  
Twist drills

### **25.100.40 Saws**

**ZWS 139:1975**  
Meat-cutting band saw blades

### **25.100.60 Files**

**ZWS 824:2012**  
Files and rasps – Rasps and engineer's file

### **25.100.70 Abrasives**

**ZWS 248:1983**  
Abrasive papers and cloths

### **25.140 Hand-held tools**

#### **25.140.30 Hand operated tools**

**ZWS 168:1975**  
Screwdrivers

**ZWS 282:1993**  
Open-end, ring and combination spanners

### **25.160 Welding, brazing and soldering**

#### **25.160.20 Welding consumables**

**ZWS 192:1976**  
Covered electrodes for the manual metal-arc welding of carbon and carbon manganese steels

**ZWS 270:1992**  
Filler metals for brazing

#### **25.160.30 Welding equipment**

**ZWS 347:1991**  
Handheld blowpipes, mixers and nozzles, using fuel gas and oxygen, for gas welding, cutting and related processes

#### **25.160.40 Welded joints and welds**

**ZWS EN 1435:2002**  
Non-destructive examination of welds – Radiographic examination of welded joints

#### **25.160.50 Brazing and soldering**

**ZWS 860:1967**  
Soft solders

**ZWS 242:1979**  
Resin cored solders (metric units)

### **25.220.40 Metallic coatings**

**ZWS ISO 1461:1998**  
Hot-dip galvanized coatings on iron and steel articles

## 27 Energy and heat transfer engineering

### ZWS ISO 50001:2018

Energy management systems – Requirements with guidance for use

### ZWS ISO 50002:2014

Energy audits – Requirements with guidance for use

### ZWS ISO 50003:2014

Energy management systems – Requirements for bodies providing audit and certification of energy management systems

### ZWS ISO 50004:2020

Energy Management System- Guidance for the Implementation Maintenance and Improvement of and 50001 Energy management System

### ZWS ISO 50006:2014

Energy management systems – Measuring energy performance using energy baselines

### ZWS ISO/TS 50008:2018

Energy management and energy savings – Building energy data management for energy performance – Guidance for a systemic data exchange approach

### ZWS ISO 50015:2014

Energy management systems – Measurement and verification of energy performance of organizations

### ZWS ISO 50021:2019

Energy management and energy savings — General guidelines for selecting energy savings evaluators

### ZWS ISO/TS 50044:2019

Energy saving projects (EnSPs) guidelines for economic and financial evaluation.

### ZWS ISO 50045:2019

Technical guidelines for the evaluation of energy savings of thermal power plants

### ZWS ISO 50046:2019

General methods for predicting energy savings

### ZWS ISO 50049:2020

Calculation methods for energy efficiency and energy consumption variations at country, region and city levels: Relation to energy savings and other factors

## 27.020 Internal combustion engines

### COMESA ZWS HS ISO 8528:2013

Reciprocating internal combustion engine driven alternating current generating sets

## 27.060 Burners and boilers

### ZWS 182:1976

Steel boiler and superheater tubes

### ZWS 649:200

The inspection and repair of boilers

## 27.160 Solar energy engineering

### ZWS 278:1984

Collectors for solar water heaters

### ZWS 322:1993

Photovoltaic modules

### ZWS 522:2017

Solar batteries

### ZWS 523:1999

Fluorescent lights for use in photovoltaic systems

### ZWS 524:1998

Charge controllers for photovoltaic systems using lead-acid batteries

### ZWS 536:1998

Design, sizing and installation of battery based photovoltaic systems

### ZWS 713:2007

Domestic solar heaters

### ZWS 744:2003

Code of practice for the installation of solar water heaters

### ZWS 1017:2017

Domestic solar water heaters – mechanical qualification test methods

### ZWS 1025:2017

Domestic storage solar heating systems

### ZWS 1026:2017

Fixed electric storage water heaters

### ZWS 1029:2017

Thermostats for electric storage water heaters

### ZWS 1031:2017

The installation, maintenance replacement and repair of fixed electric storage water heating systems

### ZWS 1032-1:2017

Thermal performance test using outdoor method

### ZWS 1032-2:2017

Thermal performance test using indoor method

### ZWS 1033:2017

Energy efficiency of electrical and electronic apparatus

### ZWS ISO 9459:1999

Solar heating – Domestic water heating systems

### ZWS ISO 6509-1:2014

Corrosion of Metals and Alloys

## 27.190 Biological sources and alternative sources of energy

### ZWS ISO 20675:2018

Biogas - Biogas production, conditioning, upgrading and utilization - terms, definitions and classification scheme

### ZWS ISO 23590:2020

Household biogas system requirements: design, installation, operation, maintenance and safety

## 27.200 Refrigeration Technology

### ZWS 1012:2019

Requirements for certification of refrigeration and air conditioning practitioners.

## 29 Electrical engineering

### 29.020 Electrical engineering in general

#### ZWS 316:1997

Graphical symbols for electrical diagrams

#### ZWS 400: 2006

Electrical wiring of premises (ZWS wiring rules)

#### COMESA ZW HS IEC 60038:2013

Standard voltages

#### COMESA ZWS HS 60059:2013

Standard current ratings

#### ZWS IEC 60364-7-710:2021

Low voltage electrical installations or location:

**Part 7- 710:** Requirement for special installations or location-medical location

#### ZWS IEC 60364-7-711:2018

Low voltage electrical installations or location

**Part 7- 711:** requirements for special installations or location-exhibitions, shows and stands

### 29.035 Insulating materials

#### ZWS 138:1975

Bitumen-based filling compounds for electrical purposes

### 29.040.20 Insulating gases

#### COMESA ZWS HS IEC 62219:2009

Overhead electrical conductors – Formed wire, concentric lay, stranded conductors

### 29.060 Electrical wires and cables

#### 29.060.10 Wires

##### ZWS 834:1872

Enameled copper conductors (polyvinylacetal base with high mechanical properties)

##### ZWS 109:1995

Winding wires

##### ZWS 526:1996

Copper for electrical purposes

##### ZWS 834:1972

Enameled copper conductors (polyvinyl acetal base with high mechanical properties)

##### ZWS 890:2005

Specification of high-voltage bus bar and bus bar connections

#### 29.060.20 Cables

##### ZWS 188:1976

Cable glands for elastomer and plastic insulated cables

##### ZWS 240:1999

Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1 900/3 330V)

##### ZWS 680:1998

Materials of insulated electric cables and flexible cords

##### ZWS 732:2001

Electric cables – Flexible cords and flexible cables

##### ZWS 764:2001

Cables and conductors – Dimensions of the components of electric cables, flexible cables and flexible cords

##### ZWS 765:2001

Cables and conductors – Flexing test and flexible cords

##### ZWS 766:2001

Cables and conductors – Kink resistance of circular flexible cords

##### ZWS 767:2001

Cables and conductors – Conductor resistance

##### ZWS 768: 2001

Cables and conductors – Alternating current spark test on electric cables and cords

##### ZWS 769:2001

Cables and conductors – Power frequency voltage test on electric cables

##### ZWS 770:2001

Cables and conductors – Dielectric resistance on electric cables

##### ZWS 771:2001

Cables and conductors – Heat resistances of cables and flexible cords

##### ZWS 772:2001

Cables and conductors – Flexing test for extensible loads

##### ZWS 773:2001

Cables and conductors - Wear resistance of braided and uninkable cords

##### ZWS 774:2001

Cables and conductors – Bending test for highly flexible cords such as tinsel cords

##### ZWS 775:2001

Cables and conductors – Extension test for extensible leads

##### ZWS 776:2001

Cables and conductors – Overall dimensions and ovality of electric cables and cords

##### ZWS 889:2004

Conductors for overhead electrical transmission lines

##### COMESA ZWS HS IEC 60227:2009

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Flexible cables (Cords)

##### COMESA ZWS HS IEC 60228:2009

Conductors for insulated cables

##### COMESA ZWS HS IEC 60502:2009

Power cables with extruded insulation and their accessories for rated voltages from 1kV ( $U_m = 1,2kV$ ) Up to 30 kV ( $U_m = 36kV$ )

##### COMESA ZWS HS IEC 60889:2009

Zinc coated steel wires for stranded conductors

##### COMESA ZWS HS IEC 61427:2009

Secondary cells and batteries for photovoltaic energy systems (PVE) – General requirements and methods of test

## 29.080 Insulation

### 29.080.10 Insulators

#### ZWS 172:1975

Ceramic insulators and pole fittings for telephone lines

#### ZWS 178:1976

Low voltage insulators

#### COMESA ZWS HS IEC 60433:2013

Insulators for overhead lines with a nominal voltage above 1000V – Ceramic insulator for A.C. systems – Characteristics of insulator units of the long rod type

#### COMESA ZW HS IEC 61466:2013

Composite string insulator units for overhead lines with a nominal voltage greater than 1000 V

## 29.120 Electrical accessories

### 29.120.10 Conduits

#### ZWS 179:1976

Cleats, bobbins and leading-in tubes

#### ZWS 241:1979

Screwed metal conduit and fittings for electrical wiring

#### ZWS 277:1993

Non-metallic conduit (metric units)

### 29.120.20 Connecting devices

#### ZWS 206:1977

Snap-on connectors

#### ZWS 555:1997

Cold pour resin compound and heat-shrink cable joints in the voltage range up to 1 000V a.c. and 1 500 d.c.

### 29.120.30 Plugs, socket outlets, couplers

#### ZWS 121:1989

Two-pole and earthing-pin plugs socket-outlets and socket-outlet adaptors for circuits up to 250volts

#### ZWS 205:1977

Electric cable soldering sockets

#### ZWS 556:1977

13 A plugs, socket-outlets adaptors and connection units

#### COMESA ZWS HS IEC 884.2.5:2009

Plugs and socket-outlets for household and similar purposes

#### COMESA ZWS HS IEC 60309-1:2009

Plugs, socket – outlets and cables for industrial purposes – General requirements

#### COMESA ZWS HS IEC 60309.2:2009

Plugs socket-outlets and couplers for industrial purposes – Dimensional interchangeability requirements for pin and contact tube accessories

#### COMESA ZWS HS IEC 60884-1:2009

Plugs and socket – Outlets for household and similar purposes – General requirements

#### COMESA ZWS HS IEC 60884.2.1:2009

Plugs and socket-outlets for household and similar purposes – Particular requirements for fused plugs

#### COMESA ZWS HS IEC 60884.2.2:2009

Plugs and socket-outlets for household and similar purposes – Particular requirements for socket-outlets for appliances

### 29.120.40 Switches

#### ZWS 147:1998

Switches for household and similar fixed electrical installations – General requirements

### 29.120.50 Fuses

#### ZWS 122:1991

General purpose fuse links for domestic and similar purpose (primarily for use in plugs)

## 29. 130 Switchgear and control gear

### 29.130.20 Low voltage switchgear and control gear

#### ZWS IEC 60364:Part 5-53:2019

Low voltage electrical installations

**Part 5-53:** Selection and erection of electrical equipment- Devices for protection for safety, isolation, switching, control and monitoring

### 29.130.20 Low voltage switchgear and control gear

#### ZWS IEC 439:1996/1998

Low-voltage switchgear and control gear assemblies

#### ZWS IEC 947:1998

Low-voltage switchgear and control gear

#### ZWS IEC 61439: Part 1:2020

Low voltage switchgear and Controlgear assemblies

**Part 1:** General rules

## 29.140 Lamps and related equipment

### 29.140.20 Incandescent lamps

#### ZWS 464:1995

Incandescent lamps

#### ZWS IEC 432:1995

Safety specifications for incandescent lamps

### 29.140.30 Fluorescent / Discharge lamps

#### ZWS 127:1978

Ballasts for fluorescent lamps

#### ZWS 249:1980

Ballasts for low pressure sodium vapour and high intensity discharge lamps and reference ballasts for low pressure sodium vapour and high intensity discharge lamps

#### ZWS 354:1978

Fluorescent lamp ballasts

## 29.140.40 Luminaires

**ZWS 273:1982**  
Electric luminaires

**ZWS 290:1986**  
Electric luminaires-handlamps

## 29.160 Rotating machinery

**COMESA ZWS HS IEC 60034:2013**  
Rotating electrical machines

## 29.160.20 Generators

**COMESA ZWS HS ISO 8528:2013**  
Reciprocating internal combustion engine driven alternating current generating sets – Alternating current generators for generating sets

### 29.160.30 Motors

**ZWS 274:1983**  
Single-phase induction motors

**ZWS 835:2003**  
Three-phase induction motors

### 29.160.40 Generating sets

**COMESA ZW HS ISO 8528:2013**  
Reciprocating internal combustion engine driven alternating current generating sets

## 29.180 Transformers, reactors

**ZWS 191:1976**  
Current transformers

**ZWS IEC 76:1998**  
Power transformers

**COMESA ZWS HS IEC 60076:2013**  
Power Transformers

**COMESA ZWS HS IEC 61378:2013**  
Converter transformers

## 29.220 Galvanic cells and batteries

**ZWS 212:1978**  
Primary cells and batteries

**ZWS 291:1986**  
Multi-cell dry batteries

## 29.240 Power distribution networks

**ZWS 120:2022**  
Eucalyptus poles, cross-arms and spacers for power distribution and communication systems

**ZWS 833:1971**  
Tubular steel poles

## 29.240.20 Power transmission and distribution lines

**ZWS IEC 1089:2013**  
Round wire concentric lay overhead electrical stranded conductors

**ZWS IEC 61089:2013**  
Amendment 1  
Round wire concentric lay overhead electrical stranded conductors

**COMESA ZWS HS IEC 60104:2013**  
Aluminum-Magnesium-Silicon alloy wire for overhead line conductors

**COMESA ZWS HS IEC 60888:2009**  
Hard-Drawn aluminum wire for overhead line conductors

**COMESA ZWS HS IEC 61328:2013**  
Live working – Guidelines for the installation of transmission line conductors and earth wires – Stringing equipment and accessory items

**COMESA ZW HS IEC 61865:2013**  
Overhead lines – Calculation of the electrical component of distance between live parts and obstacles – Method of calculation

## 31 Electronics

### 31.180 Printed circuits and boards

**ZWS 832:1968**  
Distribution miniature circuit-breaker boards for low and medium voltages

## 33 Telecommunications

### 33.120 Components and accessories for telecommunications equipment

#### 33.120.40 Aerials

**ZWS 386:1993**  
Aerials for the reception of sound and television broadcasting in the frequency range 30MHz to 1 GHz: Electrical and mechanical characteristics

### 33.200 Telecontrol and Telemetry

**ZWS IEC 61850: Part 1:2013**  
Communication networks and systems for power utility automation  
**Part 1:** Introduction and overview

**ZWS IEC 61850: Part 2:2019**  
Communication networks and systems for power utility automation  
**Part 2:** Glossary

**ZWS IEC 61850: Part 3:2013**  
Communication networks and systems for power utility automation  
**Part 3:** General Requirement

**ZWS IEC 61850: Part 4:2011**  
Communication networks and systems for power utility automation  
**Part 4:** System and Project Management

**ZWS IEC 61850: Part 5:2013**

Communication networks and systems for power utility automation

**Part 5:** Communication requirements for functions and device models

**ZWS IEC 61850: Part 6:2018**

Communication networks and systems for power utility automation

**Part 6:** Configuration description language for communication in electrical substations related to IEDs

**ZWS IEC 61850: Part 80-1:2016**

Communication networks and systems for power utility automation

**Part 80-1:** Guideline to exchanging information from a CDC-based data model using IEC 60870-5-101 or IEC 60870-5-14

**ZWS IEC 61850: Part 80-3:2016**

**Communication networks and systems for power utility automation**

**Part 80-3:** Mapping to web protocols – Requirements and technical choices

**ZWS IEC 61850: Part 80-4:2016**

Communication networks and systems for power utility automation

**Part 80-4:** Translation from the COSEM object model (IEC 62056) to the IEC 61850 data model

**ZWS IEC 61850: Part 90-2:2016**

Communication networks and systems for power utility automation

**Part 90-2:** Using IEC 61850 for communication between substations and control centres

**ZWS IEC 61850: Part 90-3:2016**

Communication networks and systems for power utility automation

**Part 90-3:** Using IEC 61850 for condition monitoring diagnosis and analysis

**ZWS IEC 61850: Part 90-4:2016**

Communication networks and systems for power utility automation

**Part 90-4:** Network engineering guidelines

**ZWS IEC 61850: Part 90-5:2012**

Communication networks and systems for power utility automation

**Part 90-5:** Use of IEC 61850 to transmit synchro-phasor information according to IEEE C37.118

**ZWS IEC 61850: Part 90-5:2012**

Communication networks and systems for power utility automation

**Part 90-6:** Use of IEC 61850 for distribution automation system

**ZWS IEC 61850: Part 90-7:2012**

Communication networks and systems for power utility automation

**Part 90-7:** Object models for power convertors in distributed energy resources (der) systems

**ZWS IEC 61850: Part 90-8:2016**

Communication networks and systems for power utility automation

**Part 90-8:** Object model for E-mobility

**ZWS IEC 61850: Part 90-10:2017**

Communication networks and systems for power utility automation

**Part 90-10:** Models for scheduling

**ZWS IEC 61850: Part 90-11:2020**

Communication networks and systems for power utility automation

**Part 90-11:** Methodologies for modelling of logics for IEC 61850 based applications

**ZWS IEC 61850: Part 90-12:2020**

Communication networks and systems for power utility automation

**Part 90-12:** Wide area network engineering guidelines

**ZWS IEC 61850: Part 90-13:2021**

Communication networks and systems for power utility automation

**Part 90-13:** Deterministic networking technologies

**ZWS IEC 61850: Part 90-17:2017**

Communication networks and systems for power utility automation

**Part 90-17:** Using IEC 61850 to transmit power quality data

## 35 Information Technology

### 35.020 Information technology (IT) in general

**ZWS 387:1993**

Aerials for the reception of sound and television broadcasting in the frequency range 30 MHz to 1 GHz; Methods of measurement of electrical performance parameters

**ZWS 498:1998**

The installation of communal and single antenna systems for the reception of television and sound broadcast transmissions

**ZWS 499:1995**

Passive antennae for the reception of VHF and UHF television and VHF sound transmissions

**ZWS ISO/ IEC 20000.5:2013**

Information technology – service management – Exemplar implementation plan for ISO/IEC 20000-1

**ZWS ISO/ IEC 20000.10:2013**

Information technology – service management – Concepts and terminology

**ZWS ISO/IEC 22237: Part 1:2021**

Information technology — Data centre facilities and infrastructures

**Part 1:** General concepts

**ZWS ISO/IEC 22237: Part 2:2018**

Information technology — data centre facilities and infrastructures

**Part 2:** building construction

**ZWS ISO/IEC 22237: Part 3:2021**

Information technology – Data centre facilities and infrastructures

**Part 3:** Power distribution

**ZWS ISO/IEC 22237: Part 4:2021**

Information technology – Data centre facilities and infrastructures

**Part 4:2021:** Environmental control

**ZWS ISO/IEC 22237: Part 5:2018**

Information technology — Data centre facilities and infrastructures

**Part 5:** Telecommunications cabling infrastructure

**ZWS ISO/IEC 22237: Part 6:2024**

Information technology — Data centre facilities and infrastructures

**Part 6:** Security systems

**ZWS ISO/IEC 22989:2022**

Information technology – Artificial intelligence – Artificial intelligence concepts and terminology

**ZWS ISO /IEC 27001:2022**

Information Security, cybersecurity and privacy protection – Information security management system – Requirements

**ZWS ISO/IEC 27002:2022**

Information security, cybersecurity and privacy protection — Information security controls

**ZWS ISO/IEC 27003:2017**

Information technology – Security techniques – Information security management systems – Guidance

**ZWS ISO/IEC 27004:2016**

Information technology - Security techniques - Information security management systems - Monitoring, measurement, analysis and evaluation

**ZWS ISO/IEC 27402:2023**

Cybersecurity — IoT security and privacy — Device baseline requirements

**ZWS ISO/IEC 30162:2022**

Internet of Things (IoT) – Compatibility requirements and model for devices within industrial IoT systems

**35.030 - IT Security****ZWS ISO/IEC 9798:2024**

SIT Security techniques- Entity authentication

**Part 3:** Mechanisms using digital signature techniques

**ZWS ISO/IEC TS 27570:2021**

Privacy protection - Privacy guidelines for smart cities

**ZWS ISO/IEC 27010:2015**

Information technology - Security techniques -Information security management for inter-sector and inter-organizational communications

**ZWS ISO/IEC TS 27110:2021**

Information technology, cybersecurity and privacy protection – Cybersecurity framework development guidelines

**35.040 Character sets and information coding****ZWS ISO/IEC 16963:2017**

Information technology — Digitally recorded media for information interchange and storage — Test method for the estimation of lifetime of optical disks for long-term data storage

**ZWS ISO 17825:2024**

Information technology — Security techniques — Testing methods for the mitigation of non-invasive attack classes against cryptographic modules

**ZWS ISO/IEC 27005:2022**

Information security, cybersecurity and privacy protection — Guidance on managing information security risks

**ZWS ISO/IEC 27006:2011**

Information technology – Security techniques – Requirements for bodies providing audit and certification of information security management systems

**ZWS ISO/IEC 27007:2020**

Information security, cybersecurity and privacy protection — guidelines for information security management systems auditing

**ZWS ISO/IEC 27013:2012**

Information technology – Security techniques – Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000.1

**ZWS ISO/IEC 27014:2020**

Information security, cybersecurity and privacy protection - governance of information security

**ZWS ISO/IEC 27032:2023**

Cybersecurity - Guidelines for internet security

**ZWS ISO/IEC 27033.6:2016**

Information technology – Security techniques – Network security: Securing wireless IP network access

**ZWS ISO/IEC 27040:2022**

Information technology – Security techniques – Storage security

**ZWS ISO/IEC 27400:2022**

Cybersecurity — IoT security and privacy — Guidelines

**ZWS ISO IEC/TR 38502:2014**

Information technology – Governance of IT – Framework and model

**35. 060 - Languages used in information technology****ZWS ISO 15022: Part 1:1999**

Securities — Scheme for messages (Data Field Dictionary)

**Part 1:** Data field and message design rules and guidelines

**ZWS ISO 15022: Part 2:1999**

Securities — Scheme for messages (Data Field Dictionary)

**Part 2:** Maintenance of the data field dictionary and catalogue of messages

**35.080 Software****ZWS ISO/IEC 24773: Part 1:2019**

Software and systems engineering – Certification of software and systems engineering professionals

**Part 1:**2019: General requirements

**ZWS ISO/IEC 38500: 2015**

Information technology — Governance of IT for the organization

**35.200 - Interface and interconnection equipment****ZWS ISO/IEC 14763:2019**

Information technology – Implementation and operation of customer premises cabling

**Part 2:**2019: Planning and installation

**35.210 Cloud computing****ZWS ISO/IEC 5140:2024**

Information Technology — Cloud computing — Concepts for multi-cloud and the use of multiple cloud services



**ZWS ISO/IEC 19086: Part 4:2019**  
Cloud computing – Service level agreement (SLA) frame-work  
Part 4: 2019: Components of Security and of Protection of PII

### **35.240.15 Identification cards and related devices**

**ZWS ISO 7812: Part 1:2017**  
Identification cards – Identification of issuers  
**Part 1:** Numbering system

**ZWS ISO 7812: Part 2:2017**  
Identification cards – Identification of issuers  
**Part 2:** Application and registration procedures

**ZWS ISO 8583:2023**  
Financial-transaction-card-originated messages - Inter-change message specifications

### **35.240.40 IT applications in banking**

**ZWS ISO 13492:2007**  
Financial services – Key management related data element –  
Application and usage of ISO 8583 data elements 53 and 96

### **35.240.67 - IT applications in building and construction**

**ZWS ISO/IEC 19650:2019**  
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling  
**Part 1:** 2018: Concepts and principles

### **35.240.80 - IT applications in health care technology**

**ZWS ISO/ IEEE 11073: Part 40102:2022**  
Health informatics -Device interoperability  
**Part 40102:** Foundational - cybersecurity - capabilities for mitigation

**ZWS ISO 11238:2024**  
Health informatics - Identification of medicinal products - Data elements and structures for the unique identification and exchange of regulated information on substances

**ZWS ISO 11239:2023**  
Health informatics -Identification of medicinal products - Data elements and structures for the unique identification and exchange of regulated information on pharmaceutical dose forms, units of presentation

**ZWS ISO 11615:2017/Amd.1:2022**  
Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated medicinal product information

**ZWS ISO 11616:2017**  
Health informatics -Identification of medicinal products- Data elements and structures for unique identification and exchange of regulated pharmaceutical product information

**ZWS ISO 13606: Part 4:2019**  
Health informatics - Electronic health record communication  
**Part 4:** Security

**ZWS ISO/TS 20428:2024**  
Genomics Informatics — Data elements and their metadata for describing structured clinical genomic sequence information in electronic health records

**ZWS ISO 21393:2021**  
Genomics informatics — Omics Markup Language (OML)

**ZWS ISO/TS 22690:2021**  
Genomics informatics - Reliability assessment criteria for high-throughput gene-expression data

**ZWS ISO/TS 22692:2020**  
Genomics informatics — Quality control metrics for DNA sequencing

**ZWS ISO/ TS 22693:2021**  
Genomics informatics - Structured clinical gene fusion report in electronic health records

**ZWS ISO 25720:2009**  
Health informatics - Genomic Sequence Variation Markup Language (GSVML)

**ZWS ARS ISO 17117: Part 1:2018**  
Health informatics – Technological resources  
**Part 1:**2018: Characteristics

**ZWS ARS ISO 17439:2022**  
Health informatics – Development of terms and definitions for health informatics glossaries

**ZWS ARS ISO/TS 19293:2017**  
Health informatics – Requirements for a record of a dispense of a medicinal product

### **35.240.99 IT applications in other fields**

**ZWS ISO/IEC 17917:2024**  
Smart cities – guidance to establishing a decision-making framework for sharing data and information services

## **37 Image Technology**

### **37.100 Graphic technology**

**ZWS 857:1964**  
Printers' metal

## **39 Precision mechanics, jewellery**

### **39.060 Jewellery**

**ZWS 1114:2023**  
Marking articles made of gold

**ZWS Z2:1961**  
Marking articles made of sterling silver

**ZWS Z2:1961**  
Marking articles made of sterling silver

## **49.140 Space systems and operations**

**ZWS ISO 20780:2018**  
Space systems — fibre optic components — Design and verification requirements

## 43 Road vehicle engineering

### 43.020 Road vehicles in general

#### ARS ZW HS 1379:2022

Definitions and classifications of power-driven vehicles and trailers

#### ARS ZW HS 1595 :2022

Vehicle homologation

#### ZWS ISO 3779:1998

Road vehicles – Vehicles identification number (VIN) – Content and structure

#### ZWS ISO 4100:1998

Road vehicles – World parts manufacturer identifier (WPMI) code

#### ZWS ISO TR/3780:1998

Road vehicles – World manufacturer identifier (WMI) code

#### ZWS ISO 3833:1998

Road vehicles – Types – Terms and definitions

#### ZWS ISO TR/8357:1998

Road vehicles – Instructions for the implementation of the assignment of world manufacturer identifier (WMI) codes for vehicle identification number (VIN) systems and for world parts manufacturer identifier (WPMI) codes

### 43.040 Road vehicle system

#### 43.040.01 Road vehicle systems in general

##### SADC ZW HS 944:2014

The determination of performance (at net power) of internal combustion engines

##### SADC ZW HT 104:2020

Cross border road management system

##### SADC ZWS HT 105 Part 1:2020

##### ARS ZW HS 1355 Part 1:2022

Vehicle Standards – Specification For vehicle Road Worthiness

##### SADC ZW HT 105: Part 2 2020

##### ARS ZW HS: Part 2:2022

Roadworthiness of vehicles prior to entry into service and thereafter

##### SADC ZW HT 105: Part 3:2020

##### ARS ZW HS 1355

Supporting information.

##### SADC ZW HT 105 Part 4:2020

##### ARS ZW HS 1355 Part 4:2022

Requirements for vehicle examiners

##### SADC ZW HT 105: Part 5: 2020

##### ARS ZW HS 1355: Part 5:2022

Requirements for testing equipment

##### SADC ZW HT 105: Part 6: 2020

##### ARS ZW HS 1355 Part 6:2022

Requirements for combination of vehicles

##### SADC ZW HT 104:2020

##### ARS ZW HS 1371:2022

Cross border road management system

##### SADC ZW HT 105: Part 1 2020

Roadworthiness of vehicle already in use

##### ZWS ISO/IEC 18013: Part 2:2018

Information technology- personal identification – ISO –

##### SADC ZWS HT 106 Part 1 :2020

##### ZWS ISO/IEC 18013: Part 1:2018

Information Technology - Personal Identification – ISO-Compliant Driving licence

**Part 1:** Physical characteristics and basic data set

##### SADC ZW HS 106: Part 2:2020

Compliant driving licence. Machine- readable technologies

##### ZWS 1079:2022

Uniform provisions concerning the approval of M2 and M3 small capacity vehicles with regard to their general construction

##### ZWS ISO 4925:2020

Road vehicles – Specification of non-petroleum-based brake fluids for hydraulic system

##### ZWS ISO 4926:2020

Road vehicles – Hydraulic braking systems – Non-petroleum - based reference fluid

##### ZWS ISO/IEC 18013: Part 4:2019

Personal identification –ISO- compliant driving license

##### SADC ZWS HS 106 Part 4 2020

Test methods

##### ZWS ISO/IEC 18013: Part 3:2017

Information technology personal identification –ISO –

##### SADC ZW HS 106: Part 3:2020

Compliant driving license. Access control, authentication and integrity validation

### 43.040.20 Lighting devices

##### ZWS 258:1982

Motor vehicle lighting and signaling equipment

##### SADC ZW HS 943:2014

Lights for motor vehicles

### 43.040.40 Braking systems

##### SADC ZW HS 943:2014

Lights for motor vehicles

##### SADC ZW HS 945:2014

Braking motor and towed vehicles, designed for low speed or for use off public roads

##### SADC ZW HS 948:2014

The measurement of noise emitted by road vehicles when stationary

##### SADC ZWS HS 949:2014

Retro-reflective and fluorescent warning signs for road vehicles

### 43.040.50 Transmission, suspension

##### ZWS 226:1978

Automotive V-belt drives

##### ZWS 922:2011

Safety tyre bands

**ZWS 956:2014**

Ball joints

**ZWS ISO 3894:2010**

Road Vehicles – Wheels/Rims for commercial vehicles – Test Methods

### **43.040.60 Bodies and body components**

**ZWS 223:1985**

Restraining devices (safety belts) for occupants of adult built in motor vehicles

**ZWS 845:1971**

Reflex-reflecting vehicle number plates

**SADC ZW HS 947:2014**

Rear underrun protection devices

### **43.040.65 Glazing and wiper systems**

**ZWS 236:1978**

Safety glass for land transport

**SADC ZWS HS 899:2010**

High penetration – Resistant laminated safety glass for vehicles

### **43.040.80 Crash protection and restraint systems**

**SADC ZW HS 946:2014**

Anchorage for restraining devices in motor vehicles

### **43.060 Internal combustion engines for road vehicles**

#### **43.060.01 Internal combustion engines for road vehicles in general**

**SADC ZW HS 944:2014**

The determination of performance (at net power) of internal combustion engines

**ZWS ISO 20766: Part 1:2018**

Road vehicles - liquefied petroleum gas (LPG) fuel system components.

**Part 1:** General requirements and definitions

**ZWS ISO 20766: Part 2:2018**

Road vehicles — liquefied petroleum gas (LPG) fuel system components.

**Part 2:** Performance and General test methods

**ZWS ISO 20766: Part 3:2018**

Road vehicles — liquefied Petroleum gas (LPG) fuel system components.

**Part 3:** 80% stop valve

**ZWS ISO 20766: Part 4:2018**

Road vehicles — liquefied petroleum gas (LPG) fuel system components

**Part 4:** Level indicator

**ZWS ISO 20766: Part 5:2023**

Road vehicles – liquefied petroleum gas (LPG) fuel system components.

**Part 5:** Fuel selection system and electrical in-stallations

**ZWS ISO 20766: Part 6:2019/Amd 1:2022**

Road vehicles – liquefied petroleum gas (LPG) fuel system components.

**Part 6:** pressure relief valves (prv)

**ZWS ISO 20766: Part 7:2023**

Road vehicles – liquefied petroleum gas (LPG) fuel system components.

**Part 7:** Remotely controlled service valve with excess flow valve

**ZWS ISO 20766: Part 8:2023**

Road vehicles – liquefied petroleum gas (LPG) fuel system components.

**Part 8:** Fuel pump

**ZWS ISO 20766: Part 9:2019**

Road vehicles — liquefied petroleum gas (LPG) fuel system components

**Part 9:** Pressure relief Devices (PRD)

**ZWS ISO 20766: Part 10:2019**

Road vehicles - liquefied Petroleum gas (LPG) fuel system Components

**Part 10:** Gas-tight housing

**ZWS ISO 20766: Part 11:2020**

Road vehicles — liquefied petroleum gas (LPG) fuel system components

**Part 11:** Manual shut-off valve

**ZWS ISO 20766: Part 12:2019**

Road vehicles — liquefied petroleum gas (LPG) fuel system components

**Part 12:** Non-return valve

**ZWS ISO 20766: Part 13:2022**

Road vehicles — liquefied petroleum gas (LPG) fuel system components .

**Part 13:** Multivalve

**ZWS ISO 20766: Part 14:2023**

Road vehicles — Liquefied petroleum gas (LPG) fuel system components

**Part 14:** Vaporizer/pressure regulator

**ZWS ISO 20766: Part 15:2023**

Road vehicles — Liquefied petroleum gas (LPG) fuel system components

**Part 15:** Excess flow valve

**ZWS ISO 20766: Part 16:2023**

Road vehicles — Liquefied petroleum gas (LPG) fuel system components:

**Part 16:** Injectors and gas mixing device/fuel rail

**ZWS ISO 20766: Part 17:2022**

Road vehicles — Liquefied petroleum gas (LPG) fuel system components:

**Part 17:** Gas dosage unit

### **43.060.20 Air/exhaust systems**

**ZWS 520:1996**

Inlet air cleaning equipment for internal combustion engines and compressors – Performance testing

**ZWS 839:1970**

Exhaust silencers for passenger cars

### **43.120 Electric road vehicles**

**ZWS IEC 60364:Part 4-42:2014**

Low voltage electrical installations

**Part 4-42:** Protection for safety – protection against thermal effects

**ZWS IEC 62196: Part 1:2014**

Plugs, socket-outlets, vehicle connectors and vehicle inlets – conductive charging of electric vehicles

**Part 1:** General requirements

**ZWS IEC 62196: Part 2:2016**

Plugs, socket-outlets, vehicle connectors and vehicle inlets – conductive charging of electric vehicles

**Part 2:** Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories

**ZWS IEC 61851: Part 1:2017**

Electric vehicle conductive charging system

**Part 1:** General requirements

**ZWS IEC 61851: Part 21-1:2017**

Electric vehicle conductive charging system

**Part 21-1:** Electric vehicle on-board charger EMC requirements for conductive connection to AC/DC supply

**ZWS IEC 61851: Part 21-2:2018**

Electric vehicle conductive charging system

**Part 21-2:** Electric vehicle requirements for conductive connection to an AC/DC supply – EMC requirements for off-board electric vehicle charging systems

**ZWS IEC 61851: Part 23:2014**

Electric vehicle conductive charging system

**Part 23:** DC electric vehicle charging station

**ZWS IEC 61851: Part 24:2014**

Electric vehicle conductive charging system

**Part 24:** Digital communication between a d.c EV charging station and an electric vehicle for control of d.c charging

**ZWS IEC 61980: Part 1: 2020**

Electric vehicle wireless power transfer (WPT) systems

**Part 1:** General requirements

**ZWS IEC TS 61980: Part 2: 2019**

Electric vehicle wireless power transfer (WPT) systems

**Part 2:** Specific requirements for communication between electric road vehicle (EV) and infrastructure

**ZWS IEC 62576:2018**

Electric double-layer capacitors for use in hybrid electric vehicles – test methods for electrical characteristics

**ZWS IEC 62840: Part 1:2016**

Electric vehicle battery swap system

**Part 1:** General and guidance

**ZWS IEC 62840: Part 2:2016**

Electric vehicle battery swap system

**Part 2:** Safety requirements

**ZWS IEC 62840: Part 3:2021**

Electric vehicle battery swap system

**Part 3:** Particular safety and interoperability requirements for battery swap systems operating with removable RESS/battery systems

**ZWS IEC 63119: Part 1:2019**

Information exchange for electric vehicle charging roaming service

**Part 1:** General

## 53 Materials handling equipment

### 53.020 Lifting equipment

#### 53.020.30 Accessories for lifting equipment

**ZWS 259:1982**

Short link chain for lifting purposes - General conditions of acceptance

**ZWS 260:1982**

Short link chain for lifting purposes – grade M (4), non-calibrated for chain slings etc

**ZWS 261:1982**

Short link chain for lifting purposes – Grade M (4), calibrated for chain hoists and other lifting appliances

**ZWS 262:1982**

Short link chain for lifting purposes – Grade T (8), non-calibrated, for chain slings etc

**ZWS 263:1982**

Short link chain for lifting purposes – Grade T (8), calibrated, for chain hoists and other lifting appliances

**ZWS 878:2003**

Snatch blocks

#### 53.020.99 Other lifting equipment

**ZWS 268:1992**

Mechanical jacks

**ZWS 337:1991**

Hydraulic jacks

### 53.040 Continuous handling equipment

#### 53.040.10 Conveyors

**ZWS 848:1973**

Portable and mobile screw conveyors for agricultural use

#### 53.040.20 Components for conveyors

**ZWS Z14:1971**

Conveyor belting for use in flammable or explosive atmospheres

**ZWS 159:1975**

Rubber and plastics belting of textile construction for use on bucket elevators

**ZWS 217:1978**

Rubber, balata or plastics flat transmission belting of textile construction for general use

**ZWS 229:1979**

General purpose textile-reinforced conveyor belting

### 53.120 Equipment for manual handling

**ZWS 117:1974**

Small garden implements

**ZWS 153:2000**

Spades and shovels

**ZWS 154:1975**  
Forks and rakes

## **55 Packaging and distribution of goods**

### **55.020 Packaging and distribution of goods in general**

**ZWS ISO 780:2015**  
Packaging – Distribution packaging – Graphical symbols for handling and storage of packages

**ZWS ISO 3394:2012**  
Packaging – Complete, filled transport packages and unit loads – Dimensions of rigid rectangular packages

**ZWS ISO 8317:2015**  
Child-resistant packaging – Requirements and testing procedures for reclosable packages

**ZWS ISO 15394:2017**  
Packaging - Bar code and two-dimensional symbols for shipping, transport and receiving labels

**ZWS ISO 18603:2013**  
Packaging and environment— reuse

**ZWS ISO 18604:2013**  
Packaging and environment - material recycling

**ZWS ISO 18605:2013**  
Packaging and the environment – energy recovery

**ZWS ISO 18606:2013**  
Packaging and the environment – organic recovery

**ZWS ISO 21067: Part1:2016**  
Packaging – Vocabulary:  
**Part 1:** General terms

### **55.040 Packaging materials and accessories**

**ARSO ZW HS 1710:2023**  
Natural and extensible sack Kraft paper

**ARSO ZW HS 1711:2023**  
Paper and board food contact packaging material

**ARSO ZW HS 1712:2023**  
Paper plates and cups for food packaging

**ARSO ZW HS 1716:2023**  
Migration of constituents of plastic materials and articles intended to come into contact with foodstuffs

**ZWS 201:1977**  
Liners and fluting for corrugated board

**ZWS 779:2001**  
Tobacco wrapping paper (moisture-barrier coated)

### **55.080 Sacks and bags**

**ZWS 294:1999**  
Woven polypropylene bags

**ZWS 465:1994**  
Woven polypropylene grain bags

**ZWS 527:1997**  
Heavy duty thermoplastic flexible film sacks

**ZWS ISO 6591:1996**  
Packaging – Sacks – Description and method of measurement

**ZWS ISO 7023:1996**  
Packaging – Sacks – Method of sampling empty sacks for testing

**ZWS ISO 7965:1996**  
Sacks – Drop test

### **55.100 Bottles, Pots and jars**

**ARSO ZW HS 1718:2023**  
Aluminium cans for beverages

**ARSO ZW HS 1719:2023**  
Packaging – Code of practice – Glass containers

**ARSO ZW HS 1748: Part 1:2023**  
Glass containers  
**Part 1:** Bottles for carbonated and non-carbonated drinks

**ZWS ISO 7458:2000**  
Glass containers – Internal pressure resistance – Test methods

**ZWS ISO 8113:2000**  
Glass containers – Resistance to vertical load

### **55.140 Barrels, drums and canisters**

**ZWS 360:1993**  
Self-supporting plastics containers of nominal capacities 5 to 220 litres

**ZWS ISO 13106:2014**  
Plastic – blow-moulded polypropylene containers for packaging of liquid foodstuffs

### **55.160 Cases, boxes and crates**

**ARSO ZW HS 988:2023**  
Plastic crates

**ZWS O1:1965**  
Box timber

**ZWS 252:1980**  
Agricultural box shooks and box boards

**ZWS 858:2005**  
Timber drums for insulated electric cables and bare conductors

### **55.180.20 General purpose pallets**

**ZWS ISO 6780:2000**  
General purpose flat pallets for through transit goods – Principal dimensions and tolerances

**ZWS ISO 8611:2000**  
General purpose flat pallets for through transit of goods – Test methods

### **55.180.99 Freight distribution of goods**

**ZWS ISO 21898:2004**  
Packaging – Flexible intermediate bulk containers (FIBCs) for non-dangerous goods

## 55.230 Distribution and vending machines

### ZWS 1080:2022

Nicotine-containing tobacco free oral product 3-(1- methyl, 2- Pyrroindyl) Pyrindine

## 59 Textile and leather technology

### 59.060 Textile fibres

#### COMESA ZWS HS ISO/ TR 5090:2008

Textiles – Methods for the removal of non-fibrous matter prior to quantitative analysis of fibre mixtures

#### COMESA ZWS HS ISO 6989:2008

Textile fibres – Determination of length distribution of staple fibres (By measurement of single fibres)

#### COMESA ZWS HS ISO 12952:2008

Textiles – Burning behavior of bedding items

#### COMESA ZWS HS ISO 1130:2008

Textile fibres – Some methods of sampling for testing

### 59.060.01 Textile fibres in general

#### COMESA ZWS HS ISO 6741

Textiles – Fibres and Yarns – Determination of commercial mass of consignments

#### COMESA ZWS HS ISO 6938:2008

Textiles – Natural fibres – Generic names and definition

### 59.060.10 Natural fibres

#### COMESA ZWS HS ISO 8159:2009

Textiles – Morphology of fibres and yarns – Vocabulary

#### COMESA ZWS HS ISO 8115:2009

Cotton bales – Dimensions and density

#### COMESA ZWS HS ISO 3060:2009

Cotton fibres – Determination of breaking tenacity of flat bundles

#### COMESA ZWS HS ISO 2647:2009

Wool – Determination of percentage of medullated fibres by the projection microscope

#### COMESA ZWS HS ISO 1973:2008

Textiles fibres – Determination of linear density gravimetric methods and vibroscope method

#### COMESA ZWS HS ISO 2370:2008

Textiles – Determination of fineness of flax fibres permeametric methods

#### COMESA ZWS HS ISO 2646:2008

Wool – Measurement of the length of fibres processed on the worsted system using a fibre diagram machine

#### COMESA ZWS HS ISO 4913:2008

Textiles – Cotton fibres – Determination of length (span length) and uniformity index

#### COMESA ZWS HS ISO 5079:2008

Textile fibres – Determination of breaking force and elongation at break of individual fibres

#### COMESA ZWS HS ISO 5088:2008

Textiles – Ternary mixtures – Quantitative analysis

#### COMESA ZWS HS ISO 10306:2008

Textiles – Cotton fibres – evaluation of maturity by the air flow method

#### COMESA ZWS HS I:2009

Wool – Determination of fibre diameter – Projection microscope method

## 59.080 Products of the textile industry

### 59.080.01 Textiles in general

#### ZWS 840:2002

Conditioning of textiles and standard temperature atmospheres for determining their physical and mechanical properties (metric units)

#### ZWS ISO 3758:2000

Textile – care labeling code using symbols

### 59.080.30 Textiles fabrics

#### ZWS 107:1998

The assessment of defects in textile piece-goods and made-up articles

#### ZWS 1068:2023

Reusable menstrual cups

#### ZWS ARS 1573: Part 1:2024

Textiles woven cotton and similar household fabrics and articles  
**Part 1:2024:** Basic requirements for piece-goods and made-up articles

**Part 2: 2024:** Winter sheeting, sheets and pillowcases

**Part 3:** Cotton sheeting, sheets and pillowcases

**Part 4: 2024:** Polyester /cotton blend sheeting, sheets and pillowcases

**Part 5: 2024:** Terry towelling, towels, and other terry weave articles, sheets and pillowcases

**Part 6:** Cotton curtain fabrics, sheets and pillowcases

**Part 7:** Cotton curtain lining

#### COMESA ZWS HS ISO 1136:2009

Wool – Determination of mean diameter of fibres – Air permeability method

#### ZWS 234:1978

Terry toweling, towels and other terry weave articles

#### ZWS 247:1985

Cotton sailcloth, cotton jean and drill fabrics, cotton denim and cotton indigo denim

#### ZWS 709:1998

Bow and skewness in woven textile fabrics

#### ZWS 710:1999

Fluidity of cotton certain cellulosic man-made fibres with cuprammonium solution (modified method)

#### ZWS 730:2015

The manufacture of disposable pads

#### ZWS 855:1971

Loomstate cotton duck

**ZWS ISO 3801:1998**

Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area

**ZWS ISO 3932:1998**

Textiles – Woven fabrics – Measurement of width of pieces

**ZWS ISO 3933:1998**

Textiles – Woven fabrics – measurement of length of pieces

**ZWS ISO 5077:1998**

Textiles – Woven fabrics - Determination of dimensional change in washing and drying

**ZWS ISO 5081:1998**

Textiles – Woven fabrics – Determination of breaking strength and elongation (strip method)

**ZWS ISO 5082:1998**

Textiles – Woven fabrics – Determination of breaking strength – Grab

**ZWS ISO 7211:1998**

Textiles – Woven fabrics – Construction – Methods for analysis

**COMESA ZWS HS ISO 1136:2009**

Wool – Determination of mean diameter of fibres – Air permeability method

**59.080.40 Coated fabrics****ZWS174:1983**

Tarpaulins

**ZWS 854:1972**

Coated knitted fabrics for upholstered furniture (PVC) types

**59.080.50 Ropes****ZWS 286:1985**

Natural fibre ropes

**ZWS ISO 2307:2000**

Ropes – Determination of certain physical and mechanical

**ZWS ISO 3758:2000**

Textile – care labeling code using symbols

**59.080.99 Other products of the textile industry****ZWS 750:2002**

Absorbent cotton wool

**59.140 Leather technology****59.140.20 Raw skins, hides****ZWS 295:1989**

Salt cured and shade dried bovine hides

**59.140.30 leather and furs****ARS ZW HS 1555:2023**

Leather – gloves

**ARS ZW HS 1556:2023**

Leather – Chrome tanned bend outer sole

**ARS ZW HS 1557:2023**

Leather – Vegetable tanned bend outer sole

**COMESA ZWS HS ISO 5403:2007**

Leather – Physical and mechanical tests. Determination of water resistance of flexible  
Leather

**COMESA ZWS HS ISO 5433:2007**

Leather – Bovine wet blue – specification

**COMESA ZWS HS ISO 2419:2007**

Leather – Physical and mechanical tests – Sample preparation and conditioning

**COMESA ZWS HS ISO 3376:2007**

Leather – Physical and mechanical tests –Determination of tensile strength and percentage extension

**COMESA ZWS HS ISO 5431:2007**

Leather – Wet blue Goat skins – specification

**COMESA ZWS HS ISO 17186:2007**

Leather – Physical and mechanical tests – Determination of surface coating thickness

**COMESA ZWS HS ISO 17227:2007**

Leather – Physical and mechanical tests – Determination of dry heat resistance of leather

**COMESA ZWS HS ISO 5432:2007**

Leather – Wet blue sheep skins – Specification

**COMESA ZWS HS ISO 14931:2007**

Leather – Guide to the selection of leather for apparel (excluding furs)

**COMESA ZWS HS ISO 2418:2007**

Leather – Chemical, Physical and Mechanical and Fastness tests – Sampling location

**COMESA ZWS HS ISO 3377:2007**

Leather – Physical and mechanical tests – Determination of tear load

**COMESA ZWS HS ISO 9477:2007**

High strength cast steels for general engineering and structural purposes

**COMESA ZWS HS ISO 2588:2007**

Leather – Sampling – number of items for a gross sample

**61 Clothing industry****61.040 Headgear, clothing accessories, fastening of clothing****ZWS 324:1990**

Slide fasteners

**61.020 Clothes****ZWS 755:2002**

Knee – High stockings and ankle socks

**ZWS 756:2002**

Men's and women's hose for industrial use

**ZWS 828:2002**

Dimensions for hosiery

**ARS ZW HS 1568:13-2019**

School clothing –Athletic Wear

**ARS ZW HS 1568:12-2019**

School clothing –tracksuits

**ARS ZW HS 1568:10-2019**

School clothing –Jersey and cardigans

**ARS ZW HS 1568:9-2019**

School clothing –Knee highs and socks

**ARS ZW HS 1568:8-2019**

School clothing –Warp Knitted Fabrics

**ARS ZW HS 1568:7-2019**

School clothing – Slacks and skirts

**ARS ZW HS 1568:6-2019**

School clothing – Dresses, Tunics and Gyms

**ARS ZW HS 1568:4-2019**

School clothing –Shirts

**ARS ZW HS 1568:3-2019**

School clothing –Trousers and shorts

**ARS ZW HS 1568:2-2019**

School clothing –Blazers

**ARS ZW HS 1568:1-2019**

School clothing –General Requirements

**61.060 Footwear****ZWS Z1:1961**

Minimum requirements for youths' and men's footwear

**ZWS 1055:1986**

Men's quality shoes for town and office wear

**ZWS 1054:1971**

Tennis shoes for adults

**ZWS 1100:2023**

Men's heavy Oxford style shoes for services' use

**ZWS 1101:2023**

Men's military style service boots

**ZWS 1098:2023**

Boot and shoe laces

**ARS ZW HS 1554:2019**

Leather –Ladies fashion Handbags specification

**ARS ZW HS 1553:2019**

Leather –Mens and Women's belts specification

**ARS ZW HS 1558:2023**

Footwear – Children's school shoes with direct injection

**ARS ZW HS 1559:2023**

Footwear – men's open shoes

**ARS ZW HS 1561:2019**

Footwear – Women's open shoes – specification

**ARS ZW HS 1562:2019**

Footwear – Women's closed shoes – specification

**ARS ZW HS 1563:2023**

Footwear – Children's shoes (above 2 years and below)

**ARS ZW HS 1563:2023**

Footwear – Children's shoes (2 to 6years)

**ARS ZW HS 1565:2019**

Footwear – Sports shoes – specification

**ZWS ISO 17694:2016**

Footwear – Test methods for uppers and lining – Flex resistance

**ZWS ISO 17699:2003**

Footwear – Test methods for uppers and lining – Water vapour permeability and absorption

**ZWS ISO 17700:2019**

Footwear - Test methods for upper components and insoles - Colour fastness to rubbing and bleeding

**ZWS ISO 17707:2005**

Footwear -Test methods for outsoles - Flex resistance

**ZWS ISO 19574:2022**

Footwear and footwear components -Qualitative test method to assess antifungal activity (growth test)

**ZWS ISO 20150: 2019**

Footwear and footwear components — Quantitative challenge test method to assess antifungal activity

**ZWS ISO 24266:2020**

Footwear - Test methods for whole shoe - Flexing durability

**ZWS ISO 24267:2020**

Footwear - Determination of coefficient of friction for foot-wear and sole components

**65 Agriculture****ZWS 862:2004**

The production, processing, labelling and marketing of organically produced foods

**65.020 Farming and forestry****ZWS 915:2012**

Organic Farming

**ZWS 1019:2017**

Zimbabwe Horticulture – Good agricultural Practice (GAP)

**65.040.10 Farm buildings and installations in general****65.060 Agricultural machines, implements and equipment****65.060.20 Soil working equipment****ZWS N7:1971**

Agricultural discs

**ZWS 861:2003**

Farm-animal drawn plough share

**65.060.30 Sowing and planting equipment****ZWS ISO 7256: 2000**

Sowing equipment – Test methods



## 65.060.35 Irrigation and drainage equipment

### ZWS 362:994

Aluminum tubes for irrigation purposes

### ZWS 363:1996

Irrigation equipment – Irrigation sprayers and rotating sprinklers

### ZWS 531:1996

Polyethylene (PE) pipes for irrigation laterals

### ZWS 620:1985

Flexible polyvinyl chloride garden hose (metric units)

## 65.060.40 Plant care equipment

### ZWS 849:1969

Knapsack sprayers

## 65.060.50 Harvesting equipment

### ZWS 209:1992

Sickles

## 65.060.70 Horticulture equipment

### ZWS 679:1999

Power lawn-mowers, lawn tractors, lawn and garden tractors, professional lawn-mowers and lawn and garden tractors with lawn-mowing attachments

## 65.060.99 Other agricultural machines and equipment

### ZWS 1092:2023

Requirements for power operated threshing and shelling equipment

### ZWS 1102:2023

Requirements for Agricultural/ General Purpose Tractors

## 65.080 Fertilizers

### ZWS 866:2003

Fertilizers – Magnesium nitrate

### ZWS 867:2015

Fertilizers – Potassium sulfate

### ZWS 868:2017

Fertilizers – Magnesium silicate anhydrous

### ZWS 869:2015

Fertilizers – Calcium Nitrate

### ZWS 870:2015

Fertilizers – Potassium nitrate (Nitrate of Potash)

### ZWS 871:2015

Fertilizers – Ammonium nitrate

### ZWS 872:2024

Fertilizers – Monoammonium phosphate (MAP)

### ZWS 873:2015

Fertilizers – Zinc sulfate monohydrate

### ZWS 874:2015

Fertilizers – Urea

### ZWS 875:2015

Potassium chloride (muriate of potash) Fertilizer

### ZWS 1021:2016

The safety of water treatment chemicals for use in the food industry

### ZWS 1039:2018

Solid Organic Fertilizers

### ZWS ISO 8157:2015

Fertilizers and soil conditions – Vocabulary

### ARSO ZW HS 72:2016

Fertilizers – Sampling from a conveyor stopping the belt

### ARSO ZW HS 73:2016

Fertilizers – Determination of nitrate nitrogen content

### ARSO ZW HS 74:2016

Fertilizers – Determination of bulk density (loose)

### ARSO ZW HS 212:2016

Fertilizers – Marking – Preservation and declaration

### ARSO ZW HS 213:2016

Fertilizers and solid conditioners – Final samples – practical arrangements

### ARSO ZW HS 500:2016

Solid fertilizers – Sampling

### ARSO ZW HS 501:2016

Compound fertilizers – method of test

### ARSO ZW HS 504:2016

Fertilizers – Ammonium sulphate – method of test

### ARSO ZW HS 505:2016

Fertilizers – Ammonium sulphate

### ZWS ISO 18644:2016

Fertilizers and soil conditioners – controlled release fertilizer – General requirements

### ZWS ISO 18788:2015

Management system for private security operations - Requirements with guidance for use.

## 65.100 Pesticides and other agrochemicals

### ZWS 158:1975

The use and disposal of acaricides (cattle dips)

### ZWS 224:1978

The handling, storage and disposal of pesticides and their containers

### ZWS 250:1980

Code of practice for the handling, storage and disposal of pesticides and used pesticides containers

### ZWS 345:1991

Pesticides in the form of five percent disulfoton granules

## 65.100.10 Insecticides

### ZWS 344:1991

Insecticides in the form of one percent or three percent trichlorfon granules

**ZWS 346:1991**  
Insecticides in the form of two and half percent trichlorfon granules

## **65.120 Animal feeding stuffs**

**ZWS 112:2023**  
Dog and cat food

**ZWS 142:2023**  
Pig feeds

**ZWS 517:2023**  
Poultry feeds

**ZWS 518:2022**  
Cattle feeds

**ZWS 530: 2022**  
Animal feeding stuffs – Sampling and preparation of test samples

**ZWS 542:1996**  
Animal feeding stuffs – Determination of available lysine

**ZWS 543:1996**  
Animal feeding stuffs – Determination of total nitrogen content and calculation of crude protein content

**ZWS 544:1996**  
Animal feeding stuffs – Determination of crude ash

**ZWS 545:1996**  
Animal feeding stuffs – Determination of calcium content – Titrimetric method

**ZWS 546:1997**  
Animal feeding stuffs – Determination of total phosphorus content – Spectrophotometric method

**ZWS 547:1996**  
Animal feeding stuffs – Determination of moisture content

**ZWS 548:1996**  
Animal feeding stuffs – Determination of aflatoxin B1 content

**ZWS 549:1996**  
Animal feeding stuffs – Determination of urea content

**ZWS 550:1996**  
Animal feeding stuffs – Determination of free and total gossypol

**ZWS 567:1996**  
Animal feeding stuffs – Determination of sodium chloride content

**ZWS 571:1997**  
Animal feeding stuffs – General directions for the determination of nitrogen by the Kjeldahl method

**ZWS 725:1999**  
Ostrich feed

**ZWS 847:1972**  
Limestone flour for use in animal feeding stuffs

**ZWS 1027:2017**  
Good Agricultural Practice For Animal Production Food Safety (ZSGAPAPFS)

**ZWS 1051:2022**  
Good Agricultural Practices For free range poultry production

**ZWS 1113:2024**  
Vitamin-mineral supplement licks

## **65.140 Beekeeping**

**ZWS 853:1974**  
Beehives

## **65.150 - Fishing and fish breeding**

**ARS ZWS 1106:2024**  
Tilapia production aquaculture farms - Good aquaculture practices

**ARS ZWS 1107:2024**  
Freshwater Aquatic Animal Production Farms - Good aquacultural Practices

**ZWS ARS ISO 12878:2012**  
Environmental monitoring of the impacts from marine finfish farms on soft bottom

## **65.160 Tobacco, tobacco products and related equipment**

**ZWS 823:1975**  
Underfeed stokers (ram or screw type)

**ZWS 846:1973**  
Tobacco tying twine

**ZWS 1121:2024**  
E-Vaping products

## **67 Food technology**

### **67.020 Processes in the food industry**

**ZWS 126:1997/1999/2001**  
Food hygiene

**ZWS 650:1997**  
Efficacy of cleaning plant, equipment and utensils – Swab technique

**ZWS 651:1997**  
Efficacy of cleaning plant, equipment and utensils – Strip technique

**ZWS 652:1997**  
Efficacy of cleaning plant, equipment and utensils – Agar sausage technique

**ZWS 676:1998**  
Code of practice for the application of pesticides in the food industry

**ZWS 749:2024**  
Requirements for a hazard analysis and critical control point (HACCP) Systems

**ZWS ISO 8086:2005**  
Dairy plant – Hygiene conditions – General guidance on inspection and sampling procedures

**ZWS ISO 15161:2003**  
Guidelines on the application of ISO 9000:2000 for the food and drink industry

**ZWS ISO 22000:2018**  
Food safety management systems requirements for organizations throughout the chain

**ZWS ISO/TS 22002:2009**

Technical specification – Prerequisite programmes on food safety

**Part 1: Food Manufacturing****ZWS ISO/TS 22002: Part 2:2013**

Technical specification – Prerequisite programmes on food safety

**Part 2: Catering****ZWS ISO/TS 22002: Part 3:2011**

Technical specification – Prerequisite programmes on food safety

**Part 3: Farming****ZWS ISO/TS 22002: Part 4:2013**

Technical specification – Prerequisite programmes on food safety

**Part 4: Food packaging manufacturing****ZWS ISO/TS 22002: Part 6:2016**

Technical specification – Prerequisite programmes on food safety

**Part 6: Feed and animal food production****67.040 Agricultural food products in general****ZWS 373:1993**

Agricultural food products – Determination of crude fibre content – General method

**ZWS 375:1993**

Agricultural food products – Determination of crude fibre content – Modified Scharrer method

**ZWS ARS AES 02:2017**

Fisheries – Sustainability and ecolabel ling Requirements

**ARS ZW HS 833:2020**

Fried banana chips

**ARS ZW HS 852:2020**

Fried potato chips

**ARS ZW HS 831:2020**

Fresh Bananas Specifications

**ARS ZW HS 1109:2020**

Good agriculture practices for food crops

**67.060 Cereals, pulses and derived products****ZWS 330:1991**

Storage of cereals and pulses

**ZWS 331:1991**

Storage of cereals and pulses

**ZWS 392:1995**

Sunflower seeds

**ZWS 390:1995**

Soya beans

**ZWS 391:1996**

Wheat grain

**ZWS 1050:2022**

Instant cereal and pulse based porridge

**ZWS ARS HS 461:2022**

Maize Grains (Corn)

**ARSO ZW HS 462:2023**

Sorghum Grains

**ARS ZW HS 463:2023**

Pearl Millet Grains

**ARSO ZW HS 464:2023**

Milled Rice

**ARSO ZW HS 465:2024**

Wheat grains - Specification

**ARSO ZW HS 466:2023**

Milled maize (corn) products

**ZWS ARS HS 468:2024**

Sorghum Flour

**ARSO ZW HS 469:2019**

Millet flour

**ARS ZWS HS 871:2024**

Dry split peas

**ZWS 500:1999**

Wheat flower

**ZWS 609:2000: Part 1**

Bread - White

**ZWS 609:2002: Part 2**

Bread - Brown

**ZWS 631:1998**

Bakery products – Determination of total solid content

**ZWS 632:1998**

Bakery products – Determination of pH

**ZWS 633:1998**

Bakery products – Determination of acid insoluble ash

**ZWS 634:1998**

Bakery products – Determination of crude fibre

**ZWS 636:1998**

Bakery products – Determination of fat content

**ZWS 637:1998**

Bakery products – Determination of volume/mass ratio

**ZWS 673:1998**

Cereals and cereal products – Determination of ash

**ZWS 675:1998**

Wheat flower – Determination of total carbon dioxide

**ZWS 677:1999**

Wheat flower – Determination of particle size

**ZWS 728:1999**

Wheat flour – Determination of colour

**ZWS 729:1999**

Wheat flour – Determination of bran mass fraction

**ZWS ISO 21415: Part 2:2015**

Wheat and wheat flour - Gluten content

**Part 2:2015:** Determination of wet gluten and gluten index by mechanical means

**67.020 Processes in the food industry****ZWS 806:2021**

Hazardous waste management

**ZWS ISO/TS 22002:2009**

Technical specification – Prerequisite programmes on food safety

**Part 1: Food Manufacturing****ZWS ISO/TS 22002: Part 2:2013**

Technical specification – Prerequisite programmes on food safety

**Part 2: Catering****ZWS ISO/TS 22002: Part 3:2011**

Technical specification – Prerequisite programmes on food safety

**Part 3: Farming****ZWS ISO/TS 22002: Part 4:2013**

Technical specification – Prerequisite programmes on food safety

**Part 4: Food packaging manufacturing****ZWS ISO/TS 22002: Part 6:2016**

Technical specification – Prerequisite programmes on food safety

**Part 6: Feed and animal food production****ZWS ISO /TS 22003: Part 1:2022**

Food safety

**Part 1** – Requirements for bodies providing audit and certification of food safety management

**ZWS ISO/TS 22003: Part 2:2022**

Food safety

**Part 2** – Requirements for bodies providing evaluation and certification of products, processes and services, including an audit of the food safety system

## 67.050 General methods of tests and analysis for food products

**ZWS 332:2015**

Labelling of food and feed that are and not products of genetic modification

## 67.060 Cereals, pulses and derived products

**ARSO ZW HS 857:2024**

Finger Millet Grains

**ARSO ZWS HS 859:2024**

Brown rice

**ARSO ZW HS 864:2024**

Dry beans

**ARSO ZW HS 865:2015**

Dry green grams

**ARSO ZW HS 866:2015**

Dry chickpeas

**ARSO ZW HS 867:2024**

Dry cowpeas

**ARSO ZW HS 868:2024**

Dry pigeon peas

**ARSO ZW HS 869:2024**

Dry whole peas

**ARSO ZW HS 870:2024**

Lentils

**ARSO ZW HS 873:2015**

Faba beans - Specification

**ARSO ZW HS 874:2015**

Dry lima beans – Specification

**ARSO ZW HS 858:2024**

Rough (Paddy) Rice – Specification

**ARSO ZW HS 935:2015**

Edible full fat soya flour

**ARSO ZW HS 936:2015**

Soy milk

**ARSO ZW HS 937:2015**

Soy protein products

**ARSO ZW HS 938:2015**

Textured soy protein products

**ZWS 887:1994**

Ready-to-eat breakfast cereals

**ZWS 989:2015**

Cereal legume blend

**ZWS ISO 712:1996**

Cereals and cereal products – Determination of moisture content (Routine reference method)

**ZWS ISO 2170:1998**

Cereals and pulses – Sampling of milled products

**ZWS ISO 2171:2002**

Cereals and milled cereal products – Determination of total ash

**ZWS ISO 3093:1996**

Cereals - Determination of falling number

**ZWS ISO 5531:1998**

Wheat flour – Determination of wet gluten

**ZWS ISO 6540:2021**

Maize – Determination of moisture content (on milled grains and on whole grains)

**ZWS ISO 7302:2003**

Cereals and cereal products – Determination of fat content

**ZWS ISO 7971:1996**

Cereals – Determination of bulk density, called “mass per hecto-litre” (reference method)

**COMESA ZWS HS 358:2004**

Certain pulses

**COMESA ZWS HS 402:2004**

Sorghum grains

**COMESA ZWS HS 403:2004**

Whole and decorticated pearl millet grains

**COMESA ZWS HS 404:2004**

Rice

**COMESA ZWS HS 716:2006**

Sorghum flour

## 67.080 Fruits, vegetables

### 67.080.01 Fruits, vegetables and derived products in general

#### ZWS ISO 750:1998

Fruit and vegetable products – Determination of titratable acidity

#### ZWS ISO 751:1998

Fruit and vegetable products – Determination of water in soluble solids

#### ZWS ISO 762:2003

Fruit and vegetable products – Determination of mineral impurities content

#### ZWS ISO 763:1982

Fruit and vegetable products – Determination of ash insoluble in hydrochloric acid

#### ZWS ISO 1026:1982

Fruit and vegetable products – Determination of dry matter content by drying under reduced pressure and of water content by Azeotropic distillation

#### ZWS ISO 1842:1991

Fruit and vegetable products – Determination of pH

#### ZWS ISO 1955:1982

Citrus fruits and derived products – Determination of essential oil content (Reference Method)

#### ZWS ISO 2173:2003

Fruit and vegetable products – Determination of soluble solids – Refractometric method

#### ZWS ISO 5517:1978

Fruits, vegetables and derived products – Determination of iron content – 1,10 – Phenanthroline photometric method

#### ZWS ISO 5518:2007

Fruits, vegetables and derived products – Determination of benzoic acid content – Spectrophotometric method

#### ZWS ISO 5519:2008

Fruits, vegetables and derived products – Determination of sorbic acid content

#### ZWS ISO 5520:1981

Fruits, vegetables and derived products – Determination of alkalinity of total ash and of water-soluble ash

#### ZWS ISO 5522:1981

Fruits, vegetables and derived products – Determination of total Sulphur dioxide content

#### ZWS ISO 7447:1998

Fruit and vegetable products – Determination of tin content

### 67.080.10 Fruits and derived products

#### ZWS 458:1994

Wax emulsion for coating citrus fruits

#### ZWS 746:2004

Fruit jams, jellies and marmalades

#### ZWS 747:1971

Canned fruits

#### COMESA ZWS HS 364:2004

Peanuts

#### COMESA ZWS HS 452:2005

Recommended code of practice for packaging and transport of tropical fresh fruits and vegetables

#### COMESA ZWS HS 453:2005

Avocados

#### COMESA ZWS HS 454:2005

Fresh mangoes

#### COMESA ZWS HS 455:2005

Fresh papaya

#### COMESA ZWS HS 456:2005

Dried apricots

#### COMESA ZWS HS 460:2005

Dehydrated fruits and vegetables including edible fungi

#### COMESA ZWS HS 476:2005

Desiccated coconut

#### COMESA ZWS HS 501:2005

Canned mangoes

#### COMESA ZWS HS 516:2005

Canned strawberry

### 67.080.20 Vegetables and derived products

#### ZWS S18:1968

Worcestershire sauce

#### ZWS S19:1968

Cucumber pickles

#### ZWS S25:1970

Canned soups

#### ZWS 1013:2017

Tomatoes

#### ZWS 1040:2021

Leafy vegetables

#### ZWS 1073:2001

Canned vegetables

#### ZWS 1075:1999

Quick frozen vegetables

#### ZWS 1117:2024

Chili Sauce

#### ZWS 1118:2024

Processed Tomato Concentrates

#### ZWS 1133:2024

Potato crisps

#### COMESA ZWS HS 427:2005

Babycorn

#### COMESA ZWS HS 566:2005

Quick frozen broccoli

#### COMESA ZWS HS 635:2005

Canned sweet corn

**COMESA ZWS HS 638:2005**

Canned carrots

**COMESA ZWS HS 644:2005**

Canned tomatoes

## **67.100.01 Milk and milk products in general**

**ZWS ISO 17997:2014**

Milk – Determination of nitrogen Content

**ZWS ISO 3890:2009**

Milk and milk products – Determination of residues of organochlorine compound (Pesticides)

**ZWS ISO 5536:2009**

Milk fat products – Determination of water content – Karl Fischer Method

**ZWS ISO 8070:2007**

Milk fat products – Determination of calcium, sodium, potassium and magnesium contents-atomic absorption Spectrometric Method

**ZWS ISO 8260:2008**

Milk and milk products – Determination of organochlorine pesticides and colichlobypheny - method using capillary gas – liquid chromatography with electron capture detection

**ZWS ISO 13082:2011**

Milk and milk products – Determination of the lipase activity of pregastric lipase preparation

**ZWS ISO 15163:2012**

Milk and milk products – Calf rennet and adult bovine rennet – Determination by chromatography of chymosin and bovin pepsin contents

**ZWS ISO 15174:2012**

Milk and milk products – Microbial coagulants – Determination of total milk-clotting activity

**ZWS ISO/TS 17193:2012**

Milk – Determination of the lactoperoxidase activity – Photometric method (Reference Method)

**ZWS ISO 17792:2006**

Milk, milk products and mesophilic starter cultures – Enumeration of citrate-fermenting lactic acid bacteria – Colony count technique at 25°C

**ZWS ISO 18252:2009**

Anhydrous milk fat – Determination of sterol composition by gas liquid chromatography (Routine Method)

**ZWS ISO 20541:2011**

Milk and milk products – Determination of nitrate content – Method by enzymatic reduction and molecular absorption spectrometry after Griess reaction

**ZWS ISO 22662:2009**

Milk and milk products – Determination of lactose content by high-performance liquid chromatograph (Reference Method)

**ZWS ISO 22935.3:2009**

Milk and milk products – Sensory analysis – Guidance on a method for evaluation of compliance with products specifications for sensory properties by scoring

**ZWS ISO 27105:2016**

Milk and cheese – Determination of hen's egg white lysozyme content by high performance liquid chromatography

## **67.100.10 Milk and processed milk products**

**ZWS ISO 450:2005**

Milk fat products

**ZWS ISO 707:2008**

Milk and milk products – Guidance on sampling

**ZWS 782:2003**

Pasteurized milk and pasteurized homogenized milk

**ZWS 787:2003**

Skimmed milk powder

**ZWS 788:2003**

Whole milk powder

**ZWS 789:2003**

Sterilized milk

**ZWS 790:2003**

Ultra-high temperature milk

**ZWS 792:2003**

Yoghurt and sweetened yoghurt

**ZWS 793:2003**

Flavoured yoghurt and products heat-treated after fermentation

**ZWS794:2004**

Cultured milk

**ZWS 831:2003**

Cream powder

**ZWS 988:2015**

Milk fat products

**ZWS ISO 1211:2002**

Milk – Determination of fat content – Gravimetric method (reference method)

**ZWS ISO 1736:2009**

Dried milk and dried milk products – Determination of fat content – Gravimetric method (reference method)

**ZWS ISO 1737:2002**

Evaporated milk and sweetened condensed milk – Determination of fat content

**ZWS ISO 1740:2005**

Milkfat products and butter – Determination of fat acidity (Reference method)

**ZWS ISO 2450:2001**

Cream – Determination of fat content – Gravimetric method (Reference method)

**ZWS ISO 2911:2005**

Sweetened and condensed milk – Determination of sucrose content – Polarimetric method

**ZWS ISO 3356:2001**

Milk and dried milk, buttermilk and buttermilk powder, whey and whey powder – Determination of phosphatase activity (reference method)

**ZWS ISO 5534:2002**

Cheese and processed cheese – Determination of total solids content (reference method)

**ZWS ISO 488:2008**

Milk determination of fat content – Gerber butyrometers

**ZWS ISO 2446:2008**

Milk determination of fat content

**ZWS ISO 9231:2008**

Milk and milk products – Determination of benzoic and forbic acid contents

**ZWS ISO 5542:2002**

Milk – Determination of protein content – Amino black (dye binding method) (Routine method)

**ZWS ISO 5739:2005**

Caseins caseinates – Determination of scorched particles content and extraneous matter

**ZWS ISO 6091:2001**

Dried milk – Determination of tritatable acidity (reference method)

**ZWS ISO 6610:2001**Milk and milk products – Enumeration of colony-forming units of micro-organisms – Colony count technique at 30<sup>o</sup> C**ZWS ISO 6611:2005**

Milk and milk products – Enumeration of yeast and moulds – Colony count technique

**ZWS ISO 6730:2006**Milk enumeration of colony forming units of psychrotrophic microorganisms – colony – count technique of 6.5<sup>o</sup>C**ZWS ISO 6731:2002**

Milk, cream and evaporated milk – Determination of total solids content (Routine method)

**ZWS ISO 6734:2005**

Sweetened condensed milk – Determination of total solids content (Reference method)

**ZWS ISO 6785:2005**

Milk and milk products – Detection of salmonella spp

**ZWS ISO 8069:2006**

Dried milk – Determination of content of lactic acid and lactates

**ZWS ISO 8156:2005**

Dried milk and dried milk products – Determination of insolubility index

**ZWS ISO 8196:2009**

Milk – Definition and evaluation of the overall accuracy of alternative methods of milk analysis

**ZWS ISO 1857:2007**

Milk – Determination of total milk – clotting activity of Bovine Rennets

**ZWS ISO 11816:2007**

Milk and milk Products – Determination of Alkaline phosphatase activity

**ZWS ISO 8870:2009**

Milk and milk based products – Detection of thermonuclease produced by coagulase positive staphylococci

**ZWS ISO 8967:2006**

Dried milk and dried milk products – Determination of bulk density

**ZWS ISO 9874:2009**

Milk – Determination of total phosphorus content – Method using molecular absorption spectrometry

**ZWS ISO 11816**

Milk and milk products – Determination of alkaline phosphatase activity. Part 1:2013 Fluorimetric method for milk and milk based drinks.

**ZWS ISO 11816**

Milk and milk products – Determination of alkaline phosphatase activity. Part 2:2016 Fluorimetric method for cheese

**ZWS ISO 11866:2006**Milk and milk products – Enumeration of presumptive *escherichia coli***ZWS ISO 12078:2007**

Anhydrous milk fat – Determination of sterol composition by gas liquid chromatography (reference method)

**ZWS ISO 13366:2009**

Milk – enumeration of somatic cells

**ZWS ISO/TS 17758:2014**

Instant dried milk – Determination of the dispersibility and wet-tability

**ZWS ISO 19344| IDF 232:2015**

Milk and milk products – Starter cultures, probiotics and fermented products – Quantification of lactic acid bacteria by flow cytometry

**ZWS ISO 22160:2007**

Milk and milk based drinks – Determination of alkaline phosphate activity – enzymatic photo – activated system (EPAS) method

**ZWS ISO 20128:2006**Milk products – Enumeration of presumptive lactobacillus acidophilus on a selective medium – Colony count technique at 37<sup>o</sup>C**ZWS ISO 21187:2005**

Milk – Quantitative determination of bacteriological quality – Guidance for establishing and verifying a conversion relationship between routine method results and anchor method results

**ZWS ISO 22935:2009**

Milk and milk products – Sensory analysis – General guidance for the recruitment, selection, training and monitoring of assessors

**ZWS ISO 26462:2011**

Milk – Determination of lactose content – Enzymatic method using difference in pH

**ZWS ISO 23058:2006**

Milk and milk products – Ovine caprine rennets – Determination of total milk – clotting activity

**ZWS ISO 27205:2010**

Fermented milk products – Bacterial starter cultures – Standard of identity

**COMESA ZWS HS 349:2004**

Sweetened condensed milks

**67.100.20 Butter****ZWS 798:2003**

Butter

**ZWS ISO 1738:2001**

Butter – Determination of salt content

**ZWS ISO 3727:2005**

Butter – Determination of moisture non-fat solids and fat contents

**ZWS ISO 7238:2005**

Butter – determination of pH of the serum potentiometric method

**ZWS ISO 27205:2010**  
Fermented milk products – Bacterial starter cultures – Standard of identity

**COMESA ZWS HS 714:2006**  
Use of dairy terms

## **67.100.30 Cheese**

**ZWS 800:2003**  
Cheese

**ZWS 802:2004**  
Edam Cheese

**ZWS 803:2004**  
Parmesan cheese

**ZWS 804:2003**  
Cottage cheese and cream

**ZWS 805:2004**  
Hard cheese

**ZWS ISO 1854:2009**  
Whey cheese – Determination of fat content – Gravimetric method

**ZWS ISO 3432:2008**  
Cheese – determination of fat content butyrometer for Van Gulik method

**ZWS ISO 3433:2008**  
Cheese – Determination of fat content – Van Gulik method

**ZWS ISO 9233:2008**  
Cheese, cheese rind and processed cheese – Determination of natamycin content Hard cheese

**ZWS ISO 1735:2002**  
Cheese and processed cheese products – Determination of fat content – Gravimetric method (Reference method)

**ZWS ISO 5534:2002**  
Cheese and processed cheese – Determination of total solids content (reference method)

**ZWS ISO 27871:2011**  
Cheese and processed cheese – Determination of the nitrogenous fractions

## **67.100.40 Ice cream and ice cream confectionary**

**ZWS 796:2003**  
Ice cream and ice cream mixes

**ZWS 797:2003**  
Cream for direct consumption

**ZWS ISO 3728:2001**  
Ice-cream and milk ice – Determination of total solids content (Reference method)

**ZWS ISO 7328:2009**  
Milk based ices and ice mixes – Determination of fat – Gravimetric method (Reference method)

## **67.100.99 Other milk products**

**ZWS ISO 2450:2011**  
Cream – Determination of fat content – Gravimetric method (Reference Method)

**ZWS ISO 5550:2006**  
Caseins and caseinates – Determination of moisture content

**ZWS ISO 5547:2009**  
Caseins – Determination of fine acidity (reference method)

**ZWS ISO 8381:2009**  
Milk – based infant foods – Determination of fat content – gravimetric method (reference method)

**ZWS ISO/TS 11869:2012**  
Fermented milks - Determination of titratable acidity – Potentiometric method

**ZWS ISO 12779:2011**  
Lactose – Determination of water content – Karl fischer method

## **67.120 Meat, meat products and other animal produce**

### **67.120.10 Meat and meat products**

**ARSO ZW HS 1245:2023**  
Bovine (beef) meat – Carcasses and cuts  
**ARSO ZW HS 1246:2023**  
Bovine (veal) meat – Carcasses and cuts

**ARSO ZW HS 1247:2023**  
Caprine (goat) meat – Carcasses and cuts

**ARSO ZW HS 1250:2023**  
Rabbit meat – Carcasses and cuts

**ZWS 111:1974**  
Canned meat products

**ZWS 265:1993**  
Open pack meat products

**ZWS 706:2001**  
Canned ox tongue in gelatine and stewed steak in gravy

**ZWS 720:2003**  
Meat and meat products – Determination of nitrates and nitrites – Xylenol method

**ZWS 721:2001**  
Meat and meat products – Determination of nitrogen and protein – Block digestion method

**ZWS ISO 1442:1998**  
Meat and meat products – Determination of moisture content

**ZWS ISO 1443:1998**  
Meat and meat products – Determination of total fat content

**ZWS ISO 1841:1998**  
Meat and meat products – Determination of chloride content

**ZWS ISO 2294:1998**  
Meat and meat products – Determination of total phosphorus content (reference method)

**ZWS ISO 5554:1998**  
Meat and meat products – Determination of starch content (reference method)



## 67.120.20 Poultry and eggs

### ARSO ZW HS 1199:2023

Edible hen eggs-in-shell

### ARSO ZW HS 1200:2023

Eggs-in-shell for processing – Specification

### ARSO ZW HS 1203:2023

Hen egg products — Specification

### ARSO ZW HS 1205:2023

Egg powder

### ARSO ZW HS 1216:2023

Chicken essence

### ARSO ZW HS 1217:2023

Ante-mortem and post-mortem inspection of poultry

### ARSO ZW HS 1218:2023

Handling, processing, quality evaluation, storage, and transportation of poultry and poultry products

### ARS ZW HS 1219:2024

Poultry — Glossary of terms

### ARSO ZW HS 1224:2023

Chicken meat – Carcasses and cuts

### ARSO ZW HS 1226:2023

Duck meat – Carcasses and cuts

### ARSO ZW HS 1242:2023

Goose meat – Carcasses and cuts

### COMESA ZWS HS 640:2005

Processed meat and poultry products

## 67.120.30 Fish and fishery products

### SADC ZW HS 80:2017

Farmed tilapia (bream)

### SADC ZW HS 87:2017

Crackers from marine and fresh fish, crustacean and molluscan shellfish

### SADC ZW HS 81:2017

Fresh and frozen whole fin fish

### SADC ZW HS 83:2017

General standards for quick frozen fish fillets

### SADC ZW HS 78:2017

Canned sardines and sardine –type products

### ZWS 759:2001

Dried-salted fish

### ZWS ARS HS 82:2017

Fresh and Chilled Fish

### ZWS ARS HS 84:2017

Smoked Finfish, Smoke-Flavored Finfish and Smoke-Dried Finfish

### ZWS ARS HS 86:2017

Fish Sausages

### ZWS ARS HS 88:2017

Good Aquaculture Practices – Bream Farm

### ARS ZWS HT 1110: Part 1:2024

Dried small sardine and sardine-type pelagic fish

Part 1:2024: Freshwater

### ARS ZWS HT 1110: Part 2:2024

Dried small sardine and sardine-type pelagic fish

Part 2: 2024: Dried anchovies

### ARS ZWS HT 1110: Part 3:2024

Dried small sardine and sardine-type pelagic fish

Part 3: 2024: Boiled, salted, and dried anchovies

### ZWS ARS ISO 12875:2011

Traceability of finfish products — Specification on the information to be recorded in captured finfish distribution chains

### ZWS ARS ISO 12877:2011

Traceability of finfish products - Specification on the information to be recorded in farmed finfish distribution chains

### ZWS ARS ISO 16488:2015

Marine finfish Farms - Open net cage — Design and operation

### ZWS ARS ISO 16541:2015

Methods for sea lice surveillance on marine finfish farms

### ZWS ARS ISO 16741:2015

Traceability of crustacean products — Specifications on the information to be recorded in farmed Crustacean distribution chains

### ZWS ARS ISO 18537:2015

Traceability of crustacean products — Specifications on the information to be recorded in captured crustacean distribution chains

### ZWS ARS ISO 18538:2015

Traceability of molluscan products — Specifications on the information to be recorded in farmed molluscan distribution chains

### ZWS ARS ISO 18539:2015

Traceability of Molluscan products — Specifications on the information to be recorded in captured molluscan distribution chains

### ZWS ARS ISO 22948:2020

Carbon footprint for seafood — Product category rules (CFP-PCR) for finfish

### COMESA ZWS HS 412:2004

Quick frozen fish fillets

### COMESA ZWS HS 413:2004

Quick frozen sticks (fish fingers), fish portions and fish fillets – Breaded or in batter

### COMESA ZWS HS 415:2004

Quick frozen blocks of fish fillets, minced fish flesh and mixtures of fillets and minced fish flesh

### COMESA ZWS HS 416:2004

Quick frozen shrimps and prawns

### COMESA ZWS HS 419:2004

Canned tuna and bonito

### SADC ZWS HS 911:2003

Frozen lobster and frozen lobster products

### SADC ZWS HS 912:2003

Frozen shrimps (prawns) langoustines and crabs

## 67.140.10 Tea

### ZWS ISO 3103:2003

Tea – Preparation of liquor for use in sensory tests

### ZWS ISO 3720:2003

Tea – Definitions and basic requirements

### ZWS ISO 1572:2003

Tea – Preparation of ground sample of unknown dry matter content

### ZWS ISO 1573:2003

Tea – determination of loss in mass at 103° C

### ZWS ISO 1575:2003

Tea – Determination of total ash

### ZWS ISO 1576:2003

Tea – Determination of water-soluble ash and water-insoluble ash

### ZWS ISO 1577:2003

Tea – Determination of acid insoluble ash

### ZWS ISO 1578:2003

Tea – Determination of alkalinity of water – soluble ash

### ZWS ISO 1839:2003

Tea – Sampling

### ZWS ISO 6078:2003

Black tea – vocabulary

### ZWS ISO 6079:2003

Instant tea in solid form

### ZWS ISO 6770:2003

Instant tea – Determination of free-flow and compacted bulk densities

### ZWS ISO 7513:2003

Instant tea in solid form – Determination of moisture content (loss in mass at 103 C

### ZWS ISO 7514:2003

Instant tea in solid form – Determination of total ash

### ZWS ISO 7516:2003

Instant tea in solid form – Sampling

### ZWS ISO 9768:2003

Tea – Determination of water extract

### ZWS ISO 9884:2003

Tea sacks

### ZWS ISO 10727:2003

Tea and instant tea in solid form – Determination of caffeine content – Method using high performance liquid chromatography

### ZWS ISO 11286:2003

Tea – Classification of grades by particle size analysis

### ZWS ISO 15598:2003

Tea – Determination of crude fibre content

### ARS ZW HS 1000: Part 1:2021

Sustainable cocoa — **Part 1:** Requirements for Cocoa Farmer as an Entity/Farmer Group/ Farmer Cooperative — Management systems and Performance

### ARS ZW HS: Part 2:2021

Sustainable cocoa —

**Part 2:** Requirements for Cocoa Quality and Traceability

### ARS ZW HS: Part 3:2021

Sustainable Cocoa –

**Part 3:** Requirements for Cocoa Certification Schemes

## 67.160 Beverages

### 67.160.10 Alcoholic beverages

#### ZWS 851:2002

Can spirit and vodka

#### ZWS 1108:2023

London dry gin

#### ZWS1122:2024

Kombucha

### 67.160.20 Non-alcoholic beverages

#### ZWS 1069:1994

Canned tomato juice, canned tomato juice cocktail and canned tomato cocktail

#### ZWS 1070:1999

Canned orange juice and canned grapefruit juice

#### ZWS 348:2007

Soft drinks

#### ZWS 352:2002

Fruit squashes and fruit cordials (fruit syrups) and their bases

#### ZWS 396:1994

Orange juice preserved exclusively by physical means

#### ZWS 397:1994

Pineapple juice preserved exclusively by physical means

#### ZWS 398:1994

Apple juice preserved exclusively by physical means

#### ZWS 399:1994

Grape juice preserved exclusively by physical means

#### ZWS 470:1994

Guava nectar preserved exclusively by physical means

#### ZWS 471:1994

Grapefruit juice preserved exclusively by physical means

#### ZWS 472:1994

Lemon juice preserved exclusively by physical means

#### ZWS 475:1994

Granadilla juice preserved exclusively by physical means

#### ZWS 999:2023

Mahewu

## 67.180 Sugar, sugar products. Starch

### 67.180.10 Sugar and sugar products

#### ZWS 394:1993

Golden syrup, flavoured syrup and treacle

**ZWS 559:1999**  
Refined sugar for household use

**ZWS 647:1999**  
Refined sugar – Determination of polarization by polarimetry

**ZWS 707:1999**  
Refined sugar – Determination of colour and turbidity

**ZWS 708:1999**  
Refined sugar – Determination of grain size

**ZWS 1088:1985**  
Jelly powders

**ZWS 1090:1999**  
Icing sugar

**SADC ZWS HT 108:2022**  
Honey

## **67.180.20 Starch and derived products**

**ZWS 244:1994**  
Corn starches

**ZWS 461:1994**  
Starches – Determination of moisture content – Oven-drying method

**ZWS 462:1994**  
Starches – Determination of ash

**ZWS 463:1994**  
Starches – native (unmodified) or modified – Determination of total fat content

**ZWS 466:1994**  
Starches and derived products – Determination of nitrogen and protein content by the Kjeldahl method – Titrimetric method

## **67.200 Edible oils and fats, oil seeds**

**ZWS 763:2000**  
Peanut butter

**ZWS 748:2021**  
Vegetable Oils

**COMESA ZWS HS 876:2005**  
Margarine

## **67.220 Spices and condiments, food additives**

**ZWS 888:1972**  
Mayonnaise, salad cream or dressing and sandwich spread

### **67.220.10 Spices and condiments**

**ZWS 152:1975**  
Pepper sauce

**ZWS 365:1993**  
Whole spices – Determination of extraneous matter content

**ZWS 366:1993**  
Spices and condiments – Determination of total ash

**ZWS 367:1993**  
Spices and condiments – Determination of water-insoluble ash

**ZWS 368:1993**  
Spices and condiments – Determination of moisture content (En-trainment method)

**ZWS 369:1993**  
Spices and condiments – Determination of alcohol-soluble extract

**ZWS 370:1993**  
Spices and condiments – Determination of cold water-soluble extract

**ZWS 371:1993**  
Method of sampling spices and condiments

**ZWS 372:1993**  
Spices and condiments – Preparation of a ground sample for analysis

**ZWS 374:1993**  
Black pepper and white pepper, whole or ground- Determination of piperine content – Spectrophotometric method

**ZWS 376:1993**  
Nomenclature for spices and condiments – First list

**ZWS 377:1993**  
Curry powder

**ZWS 378:1993**  
Spices and condiments – Determination of acid-insoluble ash

**ZWS 379:1995**  
Ginger – Whole, in pieces or ground

**ZWS 380:1995**  
Dehydrated garlic

**ZWS 381:1996**  
Black pepper/White pepper

**ZWS 382:1993**  
Spices and condiments – Determination of filth

**ZWS 383:1993**  
Spices and condiments – Determination of non-volatile ether extract

**ZWS 384:1993**  
Spices and condiments – Determination of volatile oil content

**ZWS 385:1993**  
Spices and condiments – Determination of volatile organic sulfur compounds

**ZWS 985:2015**  
Paprika

### **67.220.20 Food additives**

**ZWS 532:1997**  
Salt

**ZWS 610:1997**  
Salt – Determination of sodium chloride content

**ZWS 611:1997**  
Salt – determination of cadmium content

**ZWS 612:1997**  
Salt – Determination of copper content

**ZWS 613:1997**  
Salt – determination of lead content

**ZWS 614:1997**  
Salt – Determination of mercury content

**ZWS 615:1997**  
Salt – Determination of pH and total alkalinity

**ZWS 616:1997**  
Salt – determination of iron content

**ZWS 617:1997**  
Salt – Determination of anti-caking additives content of salt for food use

**ZWS 618:1997**  
Salt – Determination of arsenic – silver diethyldithiocarbamate photometric method

**ZWS 619:1997**  
Salt – Determination of total iodine – Titrimetric method with sodium thiosulfate

**ZWS 622:1997**  
Salt – Determination of matter insoluble in water or in acid and preparation of principal solutions for other determinations

**ZWS 623:1997**  
Salt – Determination of sulfate content – Barium sulfate gravimetric method

**ZWS 624:1997**  
Salt – determination of calcium and magnesium contents – EDTA complexometric methods

**ZWS 625:1997**  
Salt – Determination of moisture content

**ZWS 1074:1972**  
Vinegar

**ZWS 1089:1999**  
Baking powder

**ZWS 1093:1974**  
Gravy Powder

**ZWS 1094:1973**  
Chutney

## 67.230 Prepackaged and prepared foods

**ZWS 905:2003**  
Ready-to-eat samoosas

**COMESA ZWS HS 713:2005**  
Processed cereal-based foods for infants and children

**ARS ZW HS 1713:2023**  
Nutritional labelling – Requirements

**ARS ZW HS 1714:2023**  
Claims on food - General requirements

**ARS ZW HS 1715:2023**  
Use of nutrition and health claims – Requirements

## 71 Chemical technology

### 71.040 Analytical chemistry

**ZWS 886:1969**  
Laboratory glassware

### 71.040.10 Chemical laboratories, laboratory equipment

**ZWS 837:1972**  
Electrically-heated laboratory drying ovens

**ZWS 984:2015**  
Breath alcohol testing devices other than those used for forensic law enforcement

### 71.060 Inorganic chemicals

**ZWS 207:1977**  
Calcium hypochlorite and chlorinated lime

### 71.100 Products of the chemical industry

#### 71.100.20 Gases for industrial application

**ZWS K18:1969**  
Solid carbon dioxide

**ZWS 296:1987**  
Liquid carbon dioxide (industrial)

**ZWS 1128:2024**  
Acetylene - Code of Safety

**ZWS 1129:2024**  
Dissolved Acetylene (Gas)

**ZWS 1130:2024**  
Nitrogen Gas

**ZWS 1131:2024**  
Compressed and Liquid Oxygen for industrial use

#### 71.100.35 Chemicals for industrial and domestic disinfection purposes

**ARS ZW 1698:2024**  
Disinfectants / sanitizers

**ARS ZW 1699:2024**  
Disinfectants/sanitizers based on iodophors – Specification

**ZWS ARS HS 1700:2024**  
Disinfectants/sanitizers based on glutaraldehyde for general use – Specification

**ZWS 292:1993**  
Detergent-disinfectants (iodophors)

**ZWS 298:1988**  
Detergent-disinfectants based on quaternary ammonium compounds

**ZWS 865:1966**  
Black and white disinfectant fluids

**ZWS 1096:2023**  
Laundry detergent (for use in non – automatic domestic washing machines)

**ZWS 1103:2023**  
Redeposition index of laundry detergents

**ZWS 1104:2023**  
Fluorescent whitening agent content of laundry detergents

**ZWS 1105:2023**  
Chemical damage to cotton fibres by laundry detergents

**ZWS 1106:2023**  
Water-insoluble matter content of laundry detergents

**ZWS 1107:2023**  
Cleaning efficiency of high-foam laundry detergents

**ZWS 1111:2023**  
Cleaning efficiency of low-foam laundry detergents

### **71.100.40 Surface active agents**

**ARS ZW HS 1465 :2023**  
Liquid detergents – hand dishwashing and light duty

**ARS ZW HS 1468:2024**  
Anti-bacterial liquid toilet soap

**ZWS ARS HS 1474:2024**  
Anti-bacterial bathing bars

**ZWS 777:2001**  
The safety of water treatment chemicals for use in the food industry

**ZWS 778:2001**  
Cleaning chemicals for use in the food industry

**ZWS ISO 607:1980**  
Surface active agents and detergents – methods of sample division

**ZWS ISO 697:1981**  
Surface active agents — Washing powders — Determination of apparent density — Method by measuring the mass of a given volume

**ZWS ISO 862:1984**  
Surface active agents – vocabulary

**ZWS ISO 4198:1984**  
Surface active agents – Detergents for washing fabrics – guide for comparative testing of performance

**ZWS ISO 4312:1989**  
Surface active agents - Evaluation of certain effects of laundering - Methods of analysis and test for unsoiled cotton control cloth

**ZWS ISO 4317:2009**  
Surface active agents and detergents – determination of water content – Karl Fischer methods

**ZWS ISO 4319:1977**  
Surface active agents - Detergents for washing fabrics - Guide for comparative testing of performance

**ZWS ISO 6835:1981**  
Surface active agents – Washing Powders – Determination of total boron content – Titrimetric Method

**ZWS ISO 7535:1984**  
Surface active agents — Detergents for domestic machine dishwashing — Guide for comparative testing of performance

**ZWS ISO 8212:1986**  
Soaps and detergents — Techniques of sampling during Manufacture

**ZWS ISO 8214:1985**  
Surface active agents - Washing powders - Determination of inorganic sulfates - Gravimetric method

**ZWS ISO 8215:1985**  
Surface active agents — Washing powders — Determination of total silica content — Gravimetric method

**ZWS ISO 21703: 2019**  
Surface active agents — Microbiology — Microbiological test methods for liquid hand dishwashing

### **71.100.50 Wood processing chemicals**

**ZWS 514:2019**  
High-temperature wood-preserving creosote

### **71.100.70 Cosmetics**

**ZWS 795:1970**  
Genuine pure soap

**ZWS 795:1970**  
Carbolic soap

### **71.100.80 Chemicals for purification of water**

**ZWS 1120:2023**  
Aluminium sulphate for use in water treatment intended for human consumption

## **73 Mining and minerals**

### **73.020 Mining and quarrying**

**ZWS 1000:2017**  
Cyanide use, storage and disposal in small mining – requirements

**ZWS 1001:2017**  
Small scale mining mineral ore processing

**ZWS 1005:2017**  
Small scale surface mining

**ZWS 1010:2016**  
Mercury use, storage and disposal in small scale mining

**ZWS 1011:2016**  
Design, dewatering support of mining shafts in small scale mining

### **73.120 Equipment for processing of minerals**

**ZWS 297:2000**  
Mill balls

## **75 Petroleum and related technologies**

### **75.080 Petroleum products in general**

**ZWS ISO/IEC 1523:2002**  
Determination of flash point – Closed cup equilibrium method

**ZWS ISO 3679:2004**  
Determination of flash point – Rapid equilibrium closed cup method

## **75.100 Lubricants, industrial oils and related products**

### **ZWS 133:1975**

Internal combustion engine lubricating oil

### **ZWS 134:1975**

Sodium-base lubricating grease

### **ZWS 135:1975**

Chassis lubricating grease

### **ZWS 136:1975**

Lithium-base lubricating grease

### **ZWS 140:1975**

Calcium-base lubricating grease

## **75.120 Hydraulic fluids**

### **ZWS 189:2002**

Hydraulic brake fluids

### **ZWS 925:2012**

Cationic bitumen road emulsions

### **ZWS 928:2012**

Cold mix premix

## **75.140 Waxes, bituminous materials and other petroleum products**

### **ZWS 1078:1974**

Test methods for bitumen

### **ZWS 467:1995**

Bitumens for roads, industrial and other purposes

### **ZWS 674:1998**

Petroleum products – Determination of inorganic acidity – Colour indicator titration method

### **ZWS 684:1998**

Petroleum jelly (petrolatum)

### **ZWS 685:1998**

Petroleum jelly – Determination of pH value

### **ZWS 686:1998**

Petroleum jelly – Determination of evaporation loss

### **ZWS 687:1998**

Petroleum jelly – Determination of arsenic content – Gutzeit method

### **ZWS 688:1998**

Petroleum jelly – Determination of oil dissociation

### **ZWS689:1998**

Petroleum products – Determination of drop melting point

### **ZWS690:1998**

Petroleum products – Determination of cone penetration

### **ZWS 691:1998**

Petroleum products – Determination of acidity and metallic materials – Hardness test – Rockwell test (Scales A-B-C-D-E-F-H-K)

### **ZWS 692:1998**

Petroleum products – Determination of sulfated ash

### **ZWS 693:1998**

Petroleum products – Determination of matter insoluble in toluene by membrane filtration method

### **ZWS 694:1998**

Petroleum products – Determination of lead – Dithizone extraction colorimetric method

### **ZWS 695:1998**

Petroleum products – Determination of saponification number – Titration method

### **ZWS 696:1998**

Petroleum Jelly – Determination of light absorption of a 0.05% (by mass fraction) solution in trimethylpentane or iso0octane at 290nm maximum

### **ZWS 697:1998**

Petroleum products – Determination of polycyclic aromatic hydrocarbons (PCAs)

### **ZWS 698:1998**

Petroleum products – Determination of colour – Lovibond tintometer method

### **ZWS 924:2012**

Invert bitumen emulsions

### **ZWS 926:2012**

Anionic bitumen road emulsions

## **75.160.20 Liquid fuels**

### **ARSO ZW HS 1362:2022**

Automotive fuels – unleaded petrol – requirements and test methods

### **ARSO ZW HS 1363:2022**

Automotive fuels – diesel – requirements and test methods

### **ZWS 719:2012**

Biodiesel fuel blend stock (B100) for middle distillate

### **ZWS 734:2000**

Leaded petrol

### **ZWS 751:2024**

Automotive diesel fuel

### **ZWS 962:2022**

Denatured fuel ethanol for blending with gasolines for use as automotive spark-ignition engine fuel

### **ZWS 963:2012**

Illuminating paraffin

### **ZWS 964:2012**

Ethanol blend

### **ZWS 965:2012**

Liquefied petroleum gases

### **ZWS 967:2013**

Quality management systems for fuel quality in the petroleum industry – Guidelines and requirements

### **ZWS 968:2014**

Diesel fuel oil, biodiesel blend (B5 TO B20)

### **ZWS 970:2017**

Guidelines for retail service stations for liquid fuels

### **ZWS 973:2013**

Fuel wholesalers – Guidelines and requirements

**ZWS ISO 3837**

Liquid petroleum products – Determination of hydrocarbon types – Fluorescent indicator absorption method

## 75.180.30 Volumetric equipment and measurements

**ZWS ISO 91:2017**

Petroleum and related products — Temperature and pressure volume correction factors and standard reference conditions

## 75.200 Petroleum

**ZWS 913:2010**

Petroleum Industry – The installation of underground tanks, pumps/dispensers and pipework at service stations and consumer installations.

**ZWS 960:2012**

The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations

**ZWS 994:2016**

Transportation of liquid fuels – Operational requirements for road tank vehicles

**ZWS 995:2016**

Road tank vehicles for transportation of liquid fuels – Requirements

**ZWS 1020:2017**

**Part 1:** Biogas Systems - Design, Installation, Operation and Maintenance of Biogas Systems.

**ZWS 1020: 2018**

**Part 2:** Biogas Systems-Micro grids

**ZWS 1047 :2021**

Re-qualification of Liquefied Petroleum Gas (LPG) cylinders

**ZWS 1119:2024**

Requirements and Guidance for Establishing Containerized/Portable Fuel Retail Stations in Rural and Remote Areas

**ZWS ISO 16923:2016**

Natural gas fuelling stations — CNG stations for fuelling vehicles

**ZWS ISO 16924:2016**

LNG stations for fuelling vehicles

## 77 Metallurgy

### 77.040 Testing of materials

#### 77.040.10 Mechanical testing of metals

**ZWS ISO 6506:1995**

Metallic Materials – Hardness test – Brinell test

**ZWS ISO 6507:1996**

Metallic Materials – Hardness test – Vickers test

**ZWS ISO 6508:1996**

Metallic Materials – Hardness test – Rockwell test (Scales A-B-C-D-E-F-H-K)

**ZWS ISO 6892:1996**

Metallic Materials – Tensile testing

### 77.060 Corrosion of metals

**ZWS ISO 9227:2022**

Corrosion tests in artificial atmospheres – Salt sprays tests

### 77.080 Ferrous metals

#### 77.080.01 Ferrous metals in general

**COMESA ZWS HS ISO 14284:2007**

Steel and iron – Sampling and preparation of samples for the determination of chemical composition

#### 77.080.20 Steels

**COMESA ZWS HS ISO/TR 6306:2006**

Chemical analysis of steel-order of listing elements

#### 77.120 Non-ferrous metals

**ZWS 883:1970**

White metal bearing alloy ingots

#### 77.140 Iron and steel products

##### 77.140.01 Iron and steel products in general

**COMESA ZWS HS ISO 404:2006**

Steel and other steel products – General technical delivery requirements

**COMESA ZWS HS ISO 10474:2007**

Steel and steel products – Inspection documents

**COMESA ZWS HS ISO 7900:2007**

Zinc – Coated steel wire for fencing

**ZWS ISO 629:1982**

Steel and cast iron – Determination of manganese content – Spectrophotometric method

##### 77.140.15 Steels for reinforcement of concrete

**COMESA ZWS HS ISO 10144:2007**

Certification scheme for steel bars and wires for the reinforcement of concrete structures

##### 77.140.20 Stainless steels

**COMESA ZWS HS ISO 16143:2007**

Stainless steel for general purposes – Flat products

**COMESA ZWS HS ISO 16143:2007**

Stainless steels for general purposes – Semi – Finished products bars, rods and sections

**ZWS 521:1996**

Welded steel fabric for the reinforcement of concrete and masonry

**ZWS 541:1997**

Carbon steel bars for the reinforcement of concrete

**COMESA ZWS HS ISO 6934:2006**

Steel for the prestressing of concrete

**COMESA ZWS HS ISO 6935:2006**

Steel for reinforcement of concrete

**COMESA ZWS HS ISO 16020:2006**

Steel for reinforcement and prestressing of concrete – vocabulary

**77.140.50 Flat steel products and semi-products****COMESA ZWS HS ISO 4995:2006**

Hot-rolled steel sheets of structural quality

**COMESA ZWS HS ISO 4997:2006**

Cold-reduced steel sheet of structural quality

**COMESA ZWS HS ISO 4998:2006**

Continuous hot-dip zinc-coated carbon steel sheet of structural quality

**COMESA ZWS HS ISO 5954:2006**

Cold-reduced carbon steel sheet according to hardness requirements

**COMESA ZWS HS ISO 6316:2006**

Hot-rolled steel strip of structural quality

**COMESA ZWS HS ISO 3574:2007**

Cold-Reduced carbon steel sheet of commercial and drawing qualities

**COMESA ZWS HS ISO 9444:2007**

Continuously hot-rolled stainless steel strip plate/ sheet and cut lengths – Tolerances on dimension and form

**77.140.60 Steel bars and rods****ZWS 825:1971**

Steel tubes for general engineering purposes

**77.140.65 Steel wire, wire ropes and link chains****COMESA ZWS HS ISO 2408:2006**

Steel-wire ropes for general purposes – Minimum requirements

**COMESA ZWS HS ISO 2701:2006**

Drawn wire for general purpose non-alloy steel wire-ropes – Terms of acceptance

**COMESA ZWS HS ISO 4344:2006**

Steel wire ropes for lifts – Minimum Requirements

**COMESA ZWS HS ISO 6984:2007**

Rounded non-alloy steel wires for stranded wire ropes for mine hoisting – Specifications

**77.140.75 Steel pipes and tubes for specific use****COMESA ZWS HS ISO 559:2006**

Steel tubes for water and sewage

**COMESA ZWS HS ISO 4019:2006**

Structural steels – cold – formed welded, structural hollow sections – Dimensions and sectional properties

**77.140.80 Iron and steel castings****ZWS EN 1561:2003**

Founding – Grey cast iron

**77.150 Copper products****ZWS 820:1968**

Silver-plated copperware

**ZWS 850:1969**

Solid copperware

**79 Wood technology****79.020 Wood technology processes****ZWS 208:2010**

The manufacture of finger-jointed structural timber

**ZWS 218:1992**

The mechanical stress grading of softwood timber – Flexural method

**ZWS 1060: Part 1:2022**Adhesives for wood  
Part 1: Terminology**ZWS 1060: Part 2:2022**Adhesives for wood  
Part 2: Requirements for structural application**ZWS 1061:2022**

Health, safety and environmental guidelines for the construction and operation of timber treatment plants

**ZWS 1062:2022**

The preservative treatment of timber

**79.040 Wood, saw logs and sawn timber****ZWS 114:1974**

Softwood flooring boards (metric units)

**ZWS 203:2000**

Solid and laminated softwood timber scaffold planks

**ZWS 253:1981**

Softwood studs for timber frames in buildings

**ZWS 257:2010**

Sawn softwood timber

**ZWS 257:Part 5-1:2022**Structural timber  
Part 5-1: Stress-grade (Assessment)**ZWS 257:Part 5-1:2022**Structural timber  
Part 5-2: Quality assurance of stress grading**ZWS 553:2023**

Hardwood poles, droppers, laths, guardrail posts and spacer blocks

**COMESA ZWS HS ISO 4860:2008**

Wood – Determination of volumetric swelling

**COMESA ZWS HS ISO 8375:2008**

Solid timber in structural sizes – Determination of some physical and mechanical properties

**COMESA HS ZWS ISO 8903:2008**

Broadleaved sawn timber – nominal sizes



**COMESA ZWS HS ISO 8904:2008**

Broadleaved sawn timber – sizes – methods of measurement

**COMESA ZWS HS ISO 9086:2008**

Wood – Methods of physical and mechanical testing – Vocabulary

**COMESA ZWS HS ISO 8905:2008**

Sawn timber – test methods – Determination of ultimate strength in shearing parallel to grain

**COMESA ZWS HS ISO 13912:2008**

Structural timber – Machine – Strength grading – Basic principles

**COMESA ZWS HS ISO 9709:2008**

Structural timber – Visual strength grading – Basic principles

**COMESA ZWS HS ISO 2299:2008**

Sawn timber of broadleaved species – Defects – Measurement

**COMESA ZWS HS ISO 2300:2008**

Sawn timber of broadleaved species – Defects – Terms and Definitions

**COMESA ZWS HS ISO 2301:2008**

Sawn timber of broadleaved species – Defects – Measurement

**COMESA ZWS HS ISO 3129:2008**

Wood – Sampling method and General requirements for physical and mechanical tests

**COMESA ZWS HS ISO 3133:2008**

Wood – Determination of ultimate strength in static bending

**COMESA ZWS HS ISO 4858:2008**

Wood – Determination of volumetric shrinkage

**79.060 Wood-based panels****ZWS 214:1977**

Wooden ceiling and paneling boards (metric units)

**ZWS 929:2012**

Fibreboard products – Uncoated fibreboards

**79.060.01 Wood based panels in general****ZW 130:2010**

Plywood and composite board

**ZWS 935:2012**

Edge straightness of wooden board products

**ZWS 936:2012**

Flatness of wooden board products

**ZWS 937:2012**

Timber based board products – Squareness

**ZWS 939:2012**

Fibreboard – Determination of lateral nail holding strength

**ZWS 958:2012**

Fibreboard – Determination of transverse internal bond strength

**79.060.10 Plywood****ZWS 130:1999**

Plywood and composite board

**79.060.20 Fibre and particle boards****ZWS O13:1969**

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**ZWS 929:2012**

Fibreboard products – Coated fibreboards

**ZWS 930:2012**

Fibreboard – Measurement of dimensions of test specimens

**ZWS 931:2012**

Insulation board – Determination of bitumen content

**ZWS 932:2012**

Thickness swelling and water absorption of fibre boards on immersion in water

**ZWS 933:2012**

Modulus of elasticity and modulus of rupture in static bending of fibreboards

**ZWS 933:2012**

Fibreboard – Determination of density

**ZWS 938:2012**

Screw holding strength of wood based panels

**ZWS 940:2012**

Fibreboard – Preparation of test specimens

**ZWS 941:2012**

Fibreboard – Determination of linear expansion as a result of water absorption

**ZWS 950:2012**

Dimensional and mass stability of fibre boards with varying humidity

**ZWS 952:2012**

Coated fibreboard – Determination of resistance to steam

**ZWS 953:2012**

Coated fibreboard – Determination of resistance of coating to scraping

**79.080 Semi-manufacture of timber****ZWS 118:1974**

Hardwood block and strip flooring

**ZWS 120:2022**

Eucalyptus poles, cross-arms and spacers for power distribution and communications systems

**ZWS 169:2010**

Laminated timber (glulam)

**ZWS 197:1976**

Wooden handles for tools and implements

**ZWS 208:2010**

The manufacture of finger-jointed structural timber

**ZWS 218:2012**

The mechanical stress grading of softwood timber – Flexural method

**ZWS 553:2023**

Hard woodpoles, droppers, laths, guardrail posts and spacer blocks

**ZWS 569:1997**

Wood mosaic flooring

**ZWS 969:2017**  
Mixtures of CCA compounds for timber preservatives

**ZWS 1014:2023**  
Preservative-treated timber

## **81 Glass and ceramics industry**

### **81.040 Glass**

**ZWS 181:1992**  
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#### **81.040.20 Glass in building**

**ZWS 423:2005**  
Code of practice for glazing in buildings

### **81.080 Refractories/ Bricks**

**ZWS 190:1997**  
Methods for sampling and testing of processed mineral aggregates, sands and fillers

**ZWS 233:1978**  
Aggregates from natural sources for concrete

**ZWS 319:1989**  
Sandlime bricks

**ZWS 761:200**  
Burnt clay paving units

**ZWS 733:2000**  
Shaped refractory bricks

**ZWS 735:2001**  
Refractory bricks – Determination of dimensions

**ZWS 736:2000**  
Refractory bricks – Determination of warpage and squareness

**ZWS 737:2000**  
Refractory bricks - Determination of relative density

**ZWS 738:2000**  
Refractory bricks – Determination of bulk density, bulk volume, apparent porosity and apparent density

**ZWS 739:2000**  
Refractory bricks – Determination of the pyrometric cone equivalent (refractoriness)

**ZWS 740:2000**  
Shaped refractory bricks – Determination of permanent change in dimensions on heating

**ZWS 741:2000**  
Shaped refractory bricks – Determination of cold crushing strength

## **83 Rubber and plastics industries**

### **83.060 Rubber**

**ZWS ISO 188:2008**  
Rubber, vulcanized or thermoplastic – accelerated ageing and heat resistance tests

### **83.080 Plastics**

**ZWS ISO 1133:2000**  
Plastics – Determination of the mass-flow rate (MFR) and the melt-flow rate (MVR) of thermoplastics

**ZWS ISO 4593:2000**  
Plastic – Film sheeting - Determination of thickness by mechanical scanning

**ZWS ISO 6252:2000**  
Plastics – determination of environmental stress cracking (ESC) – Constant-tensile-stress method

#### **83.140 Rubber and plastics products**

**ZWS ISO 527:1997**  
Plastics – Determination of tensile properties

**ZWS 194:1976**  
Hard rubber chopping blocks

#### **83.160 Road vehicle tyres**

**ZWS 150:1975**  
Matrices for tyre reconditioning

**ZWS 255:1982**  
Tyre reconditioning

**ZWS 305:1991**  
Pneumatic tyre valves

**SADC ZWS HS 318:2003**  
Uniform provisions concerning the approval of pneumatic tyres for commercial vehicles and their trailers

**SADC ZWS HS 328:2003**  
Uniform provisions concerning the approval of pneumatic tyres for motor vehicles and their trailers

#### **83.160.10 Road vehicle tyres**

**SADC ZW HS 979:2014**  
Uniform provisions concerning the approval of retro-reflecting devices for power driven vehicles and their trailers

**ZWS 1038**  
Motor vehicles, tyres and rims-dimensions and loads.  
**Part 1:2018**  
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**Part 2:2018**  
Passenger car tyres

**Part 3:2018**  
Commercial vehicle tyre

**Part 4:2018**  
Motorcycles and scooter tyres

**Part 5: 2019**  
Off-the-road vehicle tyres

**Part 6: 2019**  
Agricultural vehicle tyres

**Part 7: 2019**  
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**Part 10:2019**  
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**ZWS 1081:2022**

Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train

**ZWS 1082:2022**

Uniform provisions concerning the approval of passenger cars powered by an internal combustion engine only, or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or measurement of electric energy consumption and electric range, and or categories M1 and N1 vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range

**ZWS 1083:2023**

Uniform provisions concerning the approval of:

**I.** Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system

**II.** Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion System

**ZWS 1085:2022**

Uniform provisions concerning the approval of specific LPG (liquefied petroleum gases) retrofit systems to be installed in motor vehicles for the use of LPG in their propulsion system and specific CNG (compressed natural gas) retrofit systems to be installed in motor vehicles for the use of CNG in their propulsion system

**83.180 Adhesives****ZWS 808:2002**

Methods of testing materials for resistance to fungal growth – Resistance of dried or cured adhesives and glues to fungal growth

**ZWS 809:2002**

Adhesives – glossary of terms used in the adhesives industry

**ZWS 810:2002**

Ceramic floor and wall tiles – Determination of water absorption

**85 Paper technology****85.040 Pulp****ZWS ISO 5263:2001**

Pulps – Laboratory wet disintegration

**85.060 Paper and board****ZWS 507:1995**

Paper and board – Determination of water absorptiveness – Cobb method

**ZWS 508:1995**

Paper, board and pulps – Standard atmosphere for conditioning and testing and procedures for monitoring the atmosphere and conditioning of samples

**ZWS 509:1995**

Paper and board – Determination of grammage

**ZWS 510:1995**

Paper and board – Determination of tearing resistance (Elmendorf method)

**ZWS 511:1995**

Paper and board – Measurement of diffuse blue reflectance factor (ISO brightness)

**ZWS 512:1995**

Paper and board – Determination of opacity (paper backing) – Diffuse reflectance method

**ZWS 513:1996**

Paper – Determination of bursting strength

**ZWS 534:1996**

Paper, board and pulps – Determination of pH of aqueous extracts

**ZWS 743: 2000**

Paper and board – Determination of thickness and apparent bulk density

**ZWS 929:2012**

Fibreboard products – Uncoated fibreboards

**ZWS 951:2012**

Coated fibreboard – Determination of resistance to staining

**ZWS ISO 186: 1999**

Paper and board – Sampling to determine average quality

**ZWS ISO 2469:2000**

Paper, board and pulps – Measurement of diffuse reflection factor

**ZWS ISO 1924:1999**

Paper and board – Determination of tensile properties

**ZWS ISO 3781:2000**

Paper and board - Determination of tensile strength after immersion in water

**ZWS ISO 8791:1999**

Paper and board - Determination of roughness/smoothness (air leak methods)

**ZWS ISO 11093:2000**

Paper and board – Testing of cores

**85.080 Paper products****ZWS 317:1995**

Lever arch files for stationery

**ZWS 361:1968**

Carbon paper

**ZWS 502:1995**

Mailing envelopes

**ZWS 503:1995**

Bond paper

**ZWS 504:1995**

Toilet tissue

**ZWS 515:1996**

Scholastic stationery

**ZWS 561:1998**

Diaries

**ZWS 712:1999**

Newsprint

**ZWS 786:1973**

Sizes of paper

**ZWS ISO 186:1999**  
Paper and board - Sampling to determine average quality

**ZWS ISO 1924:1999**  
Paper and board - Determination of tensile properties

## **85.080.20**

ZWS ISO 12625:2009  
Tissue paper and tissue products

## **85.080.30**

**ARS ZW HS 1709:2023**  
Corrugated fibre boards

## **87 Paint and colour industries**

### **87.040 Paints and varnishes**

**ZWS 355:1993**  
Universal undercoating: white

**ZWS 356:1995**  
High gloss synthetic enamel paint

**ZWS 357:1993**  
Emulsion paints for exterior use

**ZWS 401:1993**  
Paints – Determination of volatile content

**ZWS 406:1993**  
Paints: Determination of day light 45°,0° luminous directional reflectance of surface coatings and pigments

**ZWS 407:1993**  
Paints: Coarse skins and particles in emulsion paints

**ZWS 408:1993**  
Paints: Determination of flexibility of paint films

**ZWS 410:1993**  
Paints: Resistance to wet abrasion of emulsion paints

**ZWS 411:1993**  
Paints: Light fastness and resistance to exposure

**ZWS 417:1996**  
Paints – Determination of leafing value of aluminium paint

**ZWS 418:1996**  
Paints and varnishes – Determination of viscosity by means of an efflux cup

**ZWS 420:1993**  
Paints: Pre-treatment of metal test panels – Abrading

**ZWS 421:1993**  
Paints: Consistency of paints measured by means of a Krebs-Stormer viscometer (without stroboscope)

**ZWS 422:1993**  
Paints: Consistency of paints measured by means of Krebs-Stormier viscometer (with stroboscope)

**ZWS 424:1993**  
Paints: Determination of mass per litter and specific gravity

**ZWS 425:1993**  
Paints: Wet hiding power

**ZWS 426:1993**  
Paints: Brushing properties of paints

**ZWS 428:1996**  
Paints: Spraying properties of paints

**ZWS 429:1993**  
Paints: Fineness of grind of paints and pastes

**ZWS 430:1993**  
Paints: Drying time of paint films

**ZWS 431:1993**  
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**ZWS 437:1993**  
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**ZWS 438:1993**  
Paints: Resistance of paint films to laboratory artificial weathering

**ZWS 440:1993**  
Paints: Application of paint by doctor blade

**ZWS 441:1993**  
Paints: Wet film thickness of paints

**ZWS 443:1994**  
Primer for wood for interior and exterior use

**ZWS 444:1993**  
Red oxide primer for iron and steel

**ZWS 445:1993**  
Zinc phosphate primer

**ZWS 447:1993**  
Paints: Resistance of paints and varnish films to cold water

**ZWS 469:1995**  
Paints: Resistance of paint films to laboratory artificial weathering using fluorescent lamps

**ZWS 448:1995**  
Road and runway marking paint

**ZWS 356:1995**  
High gloss synthetic enamel paint

**ZWS 417:1993**  
Paints: Determination of leafing value of aluminium paint

**ZWS 418:1996**  
Paints and varnishes – Determination for viscosity by means of an efflux cup

**ZWS 540:1996**  
Ready-mixed aluminium finishing paint

**ZWS ISO 1516:2002**  
Determination of flash/no flash – Closed cup equilibrium method

**ZWS ISO 1523:2002**  
Determination of flash point – Closed cup equilibrium method

**ZWS ISO 3679:2004**  
Determination of flash point rapid equilibrium closed cup method

**ZWS ISO 3680:2004**  
Determination of flash/no flash – rapid equilibrium closed cup method

## 87.060 Paint ingredients

### ZWS 405:1993

Paints: Lieberman-Storch test for rosin derivatives in paint

### ZWS 414:1996

Paints – Determination of aluminium metal content of aluminium paint

### ZWS 433:1993

Paints: Relative density of pigments and extenders

### ZWS 434:1993

Paints: Pigment content of paints with a non-aqueous solvent base

### ZWS 435:1993

Paints: Pigment volume concentration of paints with a non-aqueous solvent base

### ZWS 439:1993

Paints: Titanium dioxide content of white emulsion paint pigment

### ZWS 446:1993

Paints: Determination of total iron, expressed as iron (III) oxide

## 91 Construction materials and buildings

### 91.010 Construction industry

#### 91.010.20 Contractual aspects

### ZWS ISO 10845:2010

Construction procurement

#### 91.040 Buildings

##### 91.040.20 Building for commerce and industry

### ZWS 519:2000

Measurement of lettable and tenancy areas of a building

#### 91.060 Elements of buildings

##### 91.060.10 Walls

### ZWS 204:1977

External rendered finishes

##### 91.060.20 Roofs

### ZWS 187:1984

Concrete roofing tiles

### ZWS 198:2019

Fibre-cement sheets: corrugated and flat

### ZWS 287:1985

Asbestos-cement-cellulose sheets

### ZWS 863:2003

Micro-concrete roofing tiles

#### 91.060.30 Ceilings, floors

### ZWS 114:2010

Softwood flooring boards

### ZWS 842:1971

Flexible vinyl flooring

### ZWS 272:1987

Semi-flexible vinyl floor tiles

### ZWS 826:1973

Industrial open type metal flooring and stair treads

### ZWS 1053:2022

Ceramic wall and floor tiles

#### 91.060.50 Doors and windows

### ZWS 184:2024

Wooden doors

### ZWS 423:2005

The installation of glazing in buildings

### ZWS 525:2007

Windows, doors, sidelights and fanlights made from rolled mild steel sections

### ZWS 528:1996

Pressed steel door frames

### ZWS 754:2000

Windows sills and copings

#### 91.080 Structures of buildings

### ZWS 160:1977

Basic data for the design of buildings: loads and forces

### ZWS 171:1975

Flexible urethane foam for loadbearing applications

### ZWS ISO 11697:1995

Bases for design of structures – Loads due to bulk materials

##### 91.080.10 Metal structures

### ZWS 157:1975

The use of structural steel in building

##### 91.080.20 Timber structures

### ZWS 162:2000

The use of structural timber in building

### ZWS 173:1990

Code of practice for timber buildings

### ZWS 717:2008

The manufacture and election of timber trusses

### ZWS 1087:2022

Structural timber – characteristic values of strength-graded timber – sampling, full-size testing and evaluation

##### 91.080.30 Masonry

### ZWS 758:2008

Use of masonry structural use of unreinforced masonry

## 91.080.40 Concrete structures

**COMESA ZWS HS ISO 6934:2006**  
Steel for prestressing of concrete

**COMESA ZWS HS ISO 6935:2006**  
Steel for reinforcement of concrete

## 91.090 External structures

**ZWS 284:1984**  
Steel fencing materials

**ZWS 359:1995**  
Domestic and industrial security grill swing-type gates

## 91.100 Construction materials

### 91.100.10 Cement, gypsum, lime, mortars

**ZWS 288:1994**  
Ground granulated blast furnace slag for use with Portland cement

**ZWS 343:1991**  
Supersulfated cement

**ZWS 639:1999**  
Plastering cement

**ZWS 812:1972**  
Gypsum plasterboard (Metric units)

**ZWS 815:1964**  
Materials for soil stabilization

**ZWS 818:1964**  
Building limes

**ZWS EN 196:200**  
Cement (various test methods)

**ZWS EN 197: Part 1:2011**  
Cement  
**Part 1:** Composition, specifications and conformity criteria for common cements

**ZWS EN 197: Part 2:20**  
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**Part 2:** Conformity evaluation

**ZWS EN 197: Part 5:2021**  
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**Part 5:** Portland-composite cement CEM II/C-M and composite cement CEM VI

**ZWS EN 413: Part 1:2001**  
Masonry cement  
**Part 1:** Composition, specifications and conformity criteria

**SADC ZW HS 981:2014**  
Burnt clay masonry units – Specification

**SADC ZW HS 983:2014**  
Rammed earth structures – Code of practice

**ZWS EN 12390: Part 1:2009**  
Testing hardened concrete  
**Part 1:** Shape, dimensions and other requirements for specimens and moulds

**ZWS EN 12390: Part 2:2009**  
Testing hardened concrete:  
**Part 2:2009:** Making and curing specimens for strength tests

**ZWS EN 12390: Part 3:2009**  
Testing hardened concrete:  
**Part 3:2009:** Compressive strength of test specimens

**ZWS EN 12390: Part 4:2019**  
**Part 4:2019** Compressive strength – Specification for testing machines

**ZWS EN 12390: Part 7:2019**  
Testing hardened concrete:  
**Part 7:2019:** Density of hardened concrete

## 91.100.15 Mineral materials and products

**ZWS 115:1974**  
Terrazzo tiles

**ZWS 167:1975**  
Earthenware aeration tiles

### 91.10 0.25 Ceramic building products

**ZWS 103:1974**  
Glazed ceramic tiles and tile fittings for internal walls

### 91.100.30 Concrete and concrete products

**ZWS 164:1975**  
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