MALAWI BUREAU OF STANDARDS

Promoting Standardization and Quality Assurance in Malawi

CATALOGUE OF MALAWI STANDARDS

2011

Malawi Bureau of Standards
Moirs Road
P.O Box 946
Blantyre
MALAWI

E-mail : mbs@mbsmw.org
Website : www.mbsmw.org

CONTENTS

Page

INTRODUCTION

The Malawi Bureau of Standards (MBS) is a statutory organization established by an Act of Parliament Chapter 51:02 in 1972. It is charged with the preparation and promulgation of national standards with a view of helping the local industry to produce quality products and services, hence enabling them to compete effectively in world markets. Its work in standards, testing, quality assurance, metrology and export guidance is geared to enable local companies to meet quality needs of buyers at home and abroad. The Malawi standards listed in this catalogue have been approved by the Malawi Standards Board and are ready for implementation by any interested parties. The entries are in two parts. In part one, standards are arranged according to their serial numbers and the second part is a listing of the standards according to subject based on the International Classification for Standards. A list of draft standards - which are still at Committee stage – is contained in a separate publication, the MBS STANDARDS WORK PROGRAMME which is published twice annually.

THE LIBRARY

The MBS Library holds a wide collection of national (Malawi), international and foreign national standards, and other publications related to standardization. The library is open for search and reference materials during normal working hours, Monday to Friday, exception public holidays.

The Library also operates Member Subscription Schemes for industries, institutions and individuals. Members of these schemes receive a variety of MBS publications which include MBS Newsletters, Annual Reports, Standards Catalogue, and Standards Work Programme in addition to being entitled to privileges which range from easy access to the library, to getting discounts on publications obtained from the MBS.

SALE OF MALAWI AND FOREIGN STANDARDS AND PUBLICATIONS

Malawi standards, foreign national and international standards and other publications may be obtained from the MBS Library on Moirs Road, in Blantyre. Mail orders may be sent to the Director-General, Malawi Bureau of Standards, P O Box 946, Blantyre or E-mail: ***mbs@mbsmw.org***. The MBS, being the sole local sales agent for members of the International Organization for Standardization (ISO), also accepts orders for all foreign standards.

MISSION OF THE MBS

THE MISSION OF MBS IS TO CONTRIBUTE, BY PROMOTING QUALITY AND STANDARDIZATION TOWARDS THE STRENGTHENING OF THE ECONOMY OF MALAWI AND TOWARDS ENHANCING THE QUALITY OF LIFE OF ALL ITS PEOPLE.

THE BUSINESS OF MBS

In carrying out its mission, the MBS offers the following:

1. **Standards preparation:**

   Standards are prepared and updated in collaboration with interested groups through Technical Committees and public comments.

2. **Certification services**

   Quality Certification Scheme in respect of products and services that comply with national standards is offered to the industry for local or international trade.

3. **Technical information**

   The MBS-DIS provides information on local and international standards including technical regulations.

4. **Testing services**

   Products are tested or analysed to specifications.

5. **Trade metrology services**

   Inspection and calibration of equipment used in trade and the monitoring of prepacked commodities for retail.

6. **Industrial research and consultancy**

   The service is provided to cater for quality improvement of products and services and product development.

7 **Quality systems certification**

   Certification Scheme for Quality Management Systems conforming to MBS-ISO 9000.

8. **International liaisons:**

   Fostering standardization activities through co-operation with African Regional Organization for Standardization, International Organization for Standardization and other standards bodies.

MBS STANDARDIZATION MARK

THE MBS QUALITY MARK

The Quality Mark is applied to a commodity that complies with a standard specification that comprehensively covers all the known characteristic requirements to ensure that the product is fit for its purpose.

Manufacturers wishing to apply the MBS quality mark on their commodities should contact:

The Director General
Malawi Bureau of Standards
Moirs Road
P. O. Box 946
Blantyre
Tel: +265 1870 488
Fax: +265 1870 756
E-mail: mbs@mbsmw.org

OBJECTIVES OF THE MBS

The MBS was established with the following objectives.

1. To promote standardization in industry and commerce;

2. To prepare, frame, modify or amend specifications and codes of practice;

3. To recommend the adoption in whole or in part with or without amendment, of any specification or code of practice;

4. To make arrangements or provide facilities for the testing and calibration of precision instruments, gauges and scientific apparatus for the determination of their degree of accuracy by comparison with standards approved by the Minister on the recommendation of the Board, and for issue of certificates in regard thereto;

5. To make arrangements or provide facilities for the examination and testing of commodities and any material or substance from or with which they may be manufactured, produced processed or treated, and of the manner in which this may be done;

6. To control, in accordance with provisions of the Act, the use of standardization marks and distinctive marks;

7. To encourage or undertake educational work in connection with standardization;

8. To provide for co-operation with any person, association or organization outside Malawi having objects similar to those of the Bureau;

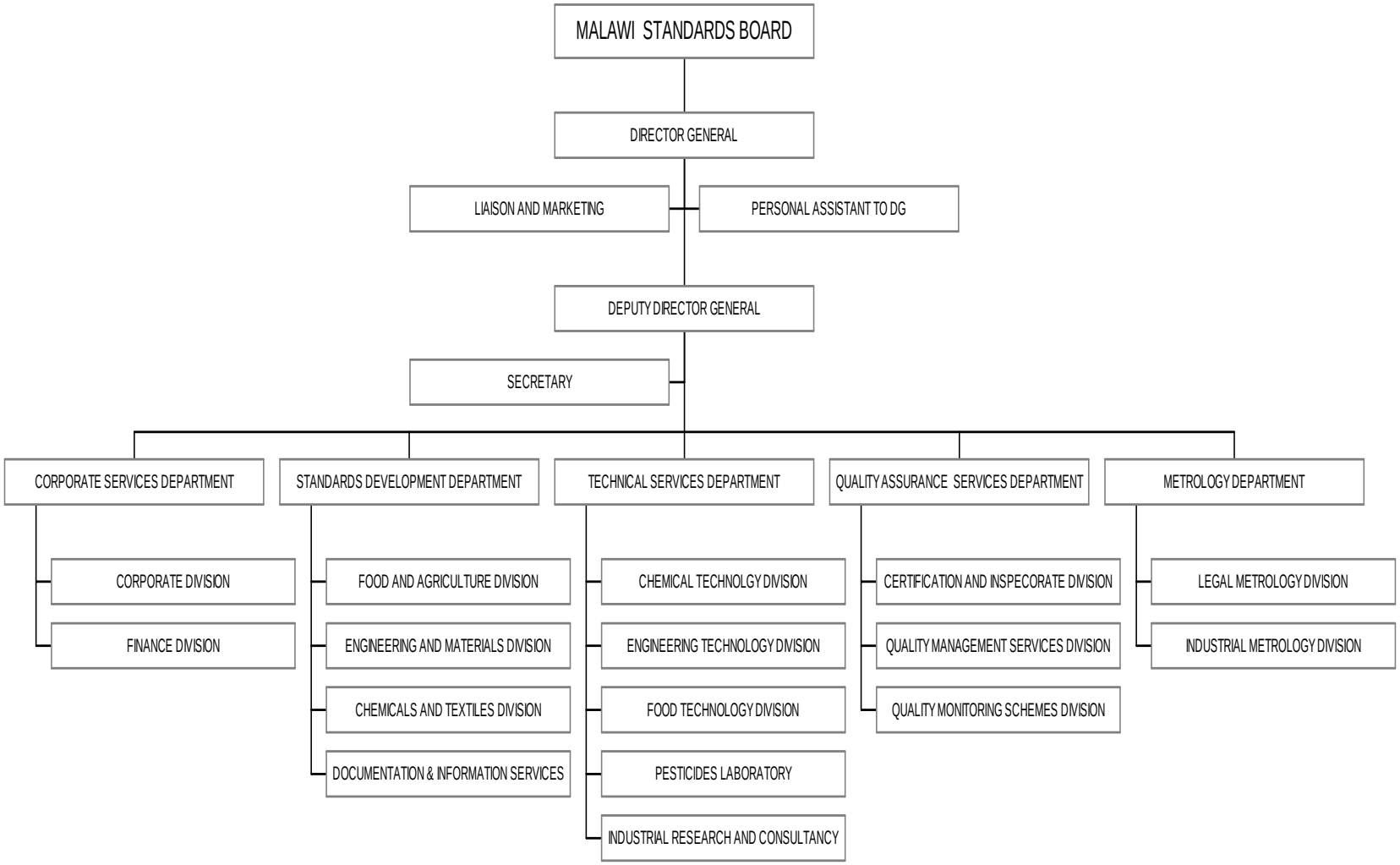
9. To frame, amend or substitute draft building regulations for the benefit of local authorities;

10 To provide for co-operation with the representatives of any branch of industry, ministry, government department, local authority or any statutory corporation or with any person with a view to bringing about standardization in connection with commodities;

11 To provide for the testing of locally manufactured or imported commodities with a view to determining whether such commodities comply with the provisions of the Standardization Act or any other law relating to Standards of Quality.

MALAWI BUREAU OF STANDARDS

ORGANISATION CHART



LIST OF TECHNICAL COMMITTEES

Formulation of Malawi standards is done through Technical Committees whose membership covers representatives from the industry, government, non-governmental organizations, professional bodies, consumers and other interested parties. Below is a list of the current Technical Committees:

TC 1 Basic standards

TC 2 Pipes and fittings

TC 3 Bricks and tiles

TC 4 Electrical and general safety standards

TC 6 Packaging

TC 7 National building regulations

TC 8 Spices and condiments

TC 9 Cement and limes

TC 10 Processed foods

TC 11 Beverages

TC 12 Paints and varnishes

TC 13 Chemicals and chemical laboratories

TC 14 Edible oils and fats

TC 15 Soaps and detergents

TC 16 Primary agricultural products

TC 17 Timber and timber products

TC 18 Tea

TC 19 Bread and confectioneries

TC 20 Petroleum products

TC 21 Coal, paraffin and solar Heaters

TC 22 Farm implements

TC 23 Milk and milk products

TC 24 Cells and batteries

TC 25 Leather and leather products

TC 26 Textiles and garments

TC 27 Fertilizers and Agricultural chemicals

TC 28 Cosmetics

TC 29 Fertilizers (combined with TC 27)

TC 30 Environmental protection and pollution Control

TC 32 Stationery and publications

TC 33 Iron and steel products

TC 34 Meat and meat products

TC 35 Kitchen and tableware

TC 36 Rubber and rubber products

TC 37 Pharmaceuticals and healthcare products

TC 38 Brush-ware and dusters

TC 39 Fish and fishery products

TC 40 Metrology

TC 41 Tobacco and tobacco products

CTDC Chemicals and Textiles Divisional Committee

EMDC Engineering and Materials Divisional Committee

FADC Food and Agriculture Divisional Committee

LIST OF WITHDRAWN STANDARDS

	Withdrawn Standard	Year withdrawn	Replaced by
1.	MBS 1:1973	1982	MS 18:1982
2.	MBS 3: 1976	2004	MS 3:2004
3.	MBS 4:1976	1993	MS 4:1993
4.	MBS 5:1976	1993	MS 5:1993
5.	MBS 6:1979	1994	MS 6:1994
6.	MBS 19:1982	2001	MS 19:2001
7	MBS 21:1984	2002	MS 21:2002
8.	MBS 29:1984	2001	MS 29:2001
9.	MBS 32:1985	1998	MS 32:1998
10.	MBS 34:1985	2001	MS 34:2001
11.	MBS 37:1995	2002	MS 37:2002
12.	MS 43: 1982	2008	MS 43:2008
13.	MBS 44:1996	2004	MS 44:2004
14.	MBS 48:1986	2006	MS 48:2006
15.	MBS 52:1986	2000	MS 52:2000
16.	MBS 84:1986	1991	MS 84:1991
17.	MBS 103:1988	1993	MS 103:1993
18.	MBS 105:1988	1995	MS 105:1995
19.	MBS 123:1988	1998	MS 123:1998
20.	MBS 187:1993	1999	MS 187:1999

21.	MBS 214:1990	2005	MS 214:2005
22.	MBS 251:1991	2002	MS 251:2002
23.	MBS 252:1991	2002	MS 252:2002
24.	MBS 253:1991	2002	MS 253:2002
25.	MBS 255:1991	1998	MS 255:1998
26.	MBS 258:1991	2000	MS 258:2000
27.	MBS 267:1991	2004	MS 267:2004
28.	MBS 272:1991	2000	MS 272:2000
29.	MBS 298:1991	2000	MS 298:2000
30.	MBS 315:1991	2003	MS 315:2003
31.	MBS 414:1992	2002	MS 414-1:2002
32.	MBS-ISO 8402:1994	2000	MS-ISO 9000:2000
33.	MBS-ISO 9000:1987	1994	MS-ISO 9000-1:1994
34.	MBS-ISO 9001:2000	2009	MS-ISO 9001:2008
35.	MBS-ISO 9002:1987	2000	MS-ISO 9002 1994
36.	MBS-ISO 9002:1994	1994	MS-ISO 9000:2000
37.	MBS-ISO 9003:1987	2000	MS-ISO 9003:1994
38.	MBS-ISO 9003:1994	1994	MS-ISO 9001:2000
39.	MBS-ISO 9004:1987	2000	MS-ISO 9004-1:1994
40.	MBS-ISO 9004-1:1994	2000	MS ISO 9001:2000

CERTIFIED FOR QUALITY

The Malawi Bureau of Standards offers assurances of quality of local products through third party certification. The ***Mark of Quality*** assures the consumers of quality, gives vendors product confidence, the country a high quality of living, and the MBS service satisfaction.

For details contact:

Director - General
MALAWI BUREAU OF STANDARDS
P. O. Box 946
Blantyre

Tel: +265 1 870 488
Fax: +265 1 870 756
E-mail: mbs@mbsmw.org

STANDARDIZATION AND QUALITY CONTROL

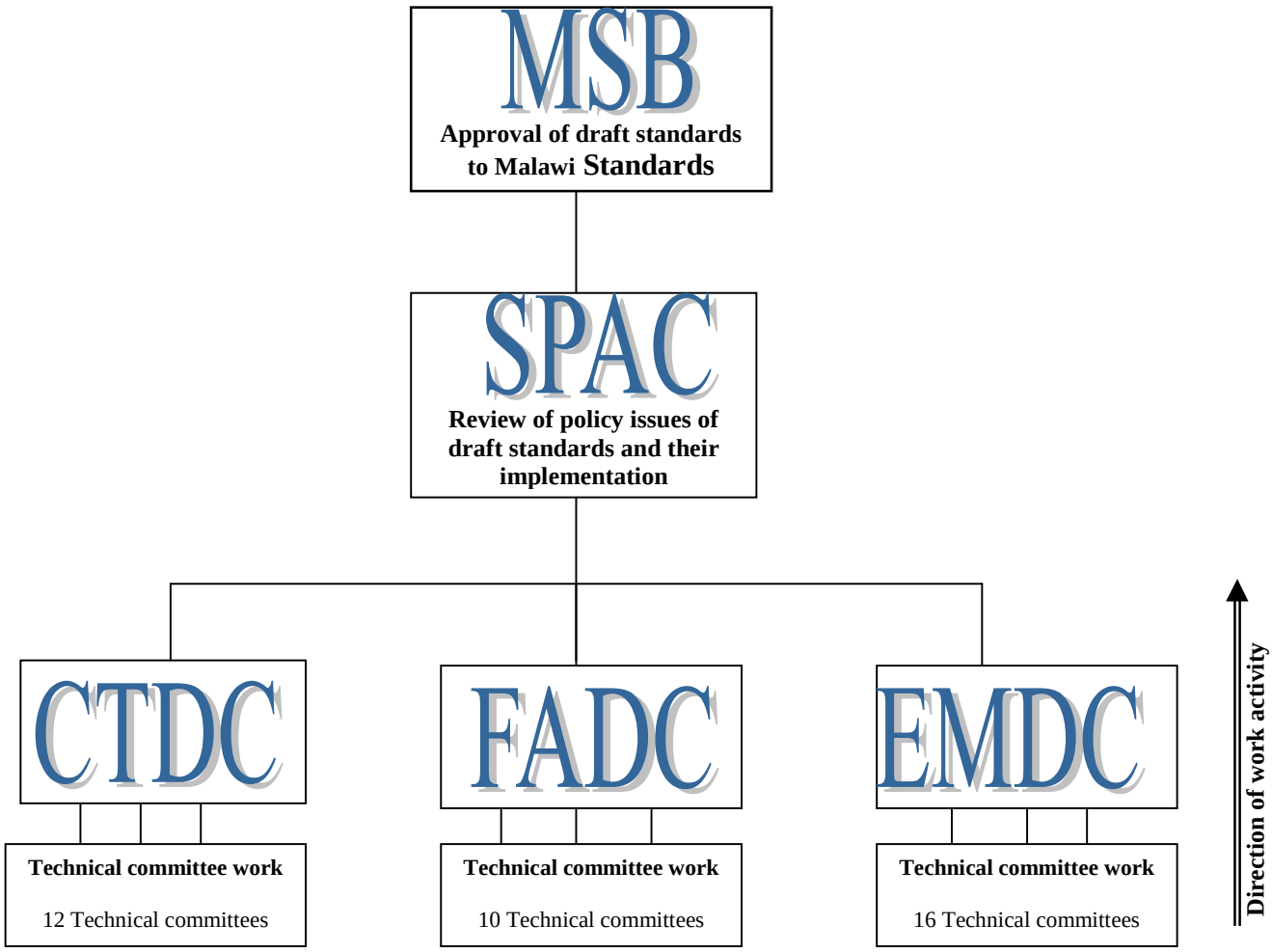
KEY TO INDUSTRIAL DEVELOPMENT

PRICE LIST FOR MALAWI STANDARDS

(Effective 1 July 2008)
The following is the price list for Malawi Standards categorized on page number

Category	Number of pages	Local Price (MK)	+ 16.5% Surtax (MK)	Total Price
A	1 – 2	500.00	82.50	582.50
B	3 – 4	600.00	99.00	699.00
C	5 – 6	700.00	115.50	815.50
D	7 – 8	800.00	132.00	932.00
E	9 – 10	900.00	148.50	1048.50
F	11 – 13	950.00	156.75	1106.75
G	14 – 16	1000.00	165.00	1165.00
H	17 – 19	1050.00	173.25	1223.25
I	20 – 22	1100.00	181.50	1281.50
J	23 – 25	1150.00	189.75	1339.75
K	26 – 28	1200.00	198.00	1398.00
L	29 – 30	1250.00	206.25	1456.25
M	31 – 35	1290.00	212.85	1502.85
N	36 – 40	1330.00	219.45	1549.45
O	41 – 45	1370.00	226.05	1596.05
P	46 – 50	1410.00	232.65	1642.65
Q	51 – 60	1460.00	240.90	1700.90
R	61 – 70	1510.00	249.15	1759.15
S	71 – 80	1560.00	257.40	1817.40
T	81 – 90	1610.00	265.65	1875.65
U	91 – 100	1660.00	273.90	1933.90
V	101 – 120	1710.00	282.15	1992.15
W	121 – 140	1760.00	290.40	2050.40
X	141 – 160	1810.00	298.65	2108.65
Y	161 – 180	1860.00	306.90	2166.90
Z	181 – 200	1910.00	315.15	2225.15
AA	201 – 225	1970.00	325.05	2295.05
AB	226 – 250	2030.00	334.95	2364.95
AC	251 – 275	2090.00	344.85	2434.85
AD	276 - 300	2150.00	354.75	2504.75

STANDARDS DEVELOPMENT PATHWAY



MSB MALAWI STANDARDS BOARD

SPAC STANDARDS POLICY ADVISORY COMMITTEE

CTDC CHEMICALS AND TEXTILES DIVISIONAL COMMITTEE

FADC FOOD AND AGRICULTURE DIVISIONAL COMMITTEE

EMDC ENGINEERING AND MATERIALS DIVISIONAL COMMITTEE

MALAWI STANDARDS

PART 1

NUMERICAL LIST OF MALAWI STANDARDS

MS 2:1976 NON-METALLIC CONDUIT AND FITTINGS (FOR ELECTRICAL WIRING) – SPECIFICATION *(1 p) M*

Covers conduits and fittings manufactured from non-metallic materials. It is basically for conduits and fittings of unplasticized polyvinyl chloride, but also applies to conduits which meet the requirements of the specification.

MS 3:2004 UNPLASTICIZED POLYVINYL CHLORIDE, (UPVC) SEWER AND DRAIN PIPES AND PIPE FITTINGS – SPECIFICATION (Third Edition) *(32 p) M*

This specification covers two duties (normal and heavy) of unplasticized poly(vinyl chloride) (PVC-U) pipes of nominal sizes 110-630 mm and one duty of PVC-U pipe fittings of nominal sizes 110 mm and 160 mm, intended for underground non-pressure applications in the construction of sewers and drains where temperatures continuously in excess of 60 ^{o}C are not encountered.

The specification covers fittings manufactured predominantly by the injection-moulding process, but does not cover fittings produced by fabrication only.

It also covers two methods of jointing, namely by means of solvent cement (for pipes of nominal size not exceeding 200 mm) and by means of rubber joint rings.

MS 4:1993 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) TYPE 1, PRESSURE PIPES AND FITTINGS (FOR COLD WATER SERVICES) – SPECIFICATION (Second edition) *(21 p) M*

Covers unplasticized polyvinyl chloride type 1 pipes and injection moulded fittings intended for cold water services under pressure at ambient temperature not below 25°C.

MS 5:1993 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) PIPES AND PIPE FITTINGS FOR USE ABOVE GROUND IN DRAINAGE INSTALLATIONS – SPECIFICATION (Second Edition) *(14 p)*

Covers unplasticized polyvinyl chloride pipes and injection moulded pipe fittings intended for use above-ground non-pressure applications (such as soil water, waste water and ventilating pipes) where continuous temperatures in excess of 60 °C are not encountered.

MS 6:1994 BURNT CLAY BRICKS – SPECIFICATION (Second edition) *(12 p) M*

Covers bricks made from clay, brick-earth or shale, and hardened by firing.

MS 7:1980 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) PIPES INSTALLATION – CODE OF PRACTICE *(30 p)*

Presents the comparative physical, chemical, and mechanical properties of unplasticized polyvinyl chloride pipes in common use, to provide guidance in their selection for applications and to define sound practice in fabrication and installation of such pipe work.

MS 8:1980 MANUALLY OPERATED AIR BREAK SWITCHES – SPECIFICATION *(24 p)*

Covers the following types of manually operated air-break switches rated at not more than 60 amperes and 250 volts to earth, or 30 amperes and 660 volts between poles.

MS 9:1980 PLUGS, SOCKET OUTLETS AND SOCKET OUTLET ADAPTORS – SPECIFICATION *(14 p) M*

Covers three-pin plugs, socket outlets and socket outlet adaptors intended for use at nominal statutory supply voltage to earth, and current not exceeding 15 amperes, and intended for use in household and similar purposes

MS 10:1981 TUNG OIL– SPECIFICATION *(8 p)M*

Defines the properties of and methods for testing tung oil of two types known in the trade as Type F and Type M derived respectively from *Aleurites fordit* Hemsley and from *Alcurites montana* Wilson. The standard is not intended for tung oils which are wholly or partly solidified as a result of isomerization. The tests given in this standard are devised to test the purity of the oil and not to test its technological properties.

MS 11:1981 ARTIFICIAL VINEGAR – SPECIFICATION *(2 p) M*

Applies to artificial vinegar produced from glacial acetic acid and water with or without caramel as a colouring matter and intended for use as a condiment.

MS 12:1981 VINEGAR – METHODS OF TEST *(2 p)*

Specifies methods of test for vinegar intended for use as condiments.

MS 13:1981 GLASS-REINFORCED POLYESTER (GRP) LAMINATED PRODUCTS – SPECIFICATION *(8 p)*

Covers requirements for products of the following two types manufactured from glass-reinforced polyester (GRP) laminated products by means of contact moulding at pressures not exceeding one bar: Types S and F.

MS 14:1981 GLASS-REINFORCED POLYSTER (GRP) LAMINATED SHEETS (PROFILE OR FLAT) – SPECIFICATION *(5 p) M*

Covers the requirements for two types of profile or flat sheets made of glass-reinforced (GRP) laminates. It does not cover moulded canopies or curved sheets.

MS 15:1984 FLEXIBLE CORDS FOR POWER AND LIGHTING APPLIANCES – SPECIFICATION *(11 p) M*

Covers flexible cords for use on domestic appliances requiring an electrical voltage not exceeding 300 V to earth, including non-domestic appliances available for operation by members of the public.

Flexible cords used for the internal wiring of electrical apparatus, pre-wired pendant cords for the static suspension of lighting fittings, cords with more than seven conductors, tinsel and screened flexible cords and cords for use in circuits not exceeding 40 V to earth, are excluded from the requirements of the specification.

MS 16:1984 APPARATUS CONNECTOR FOR PORTABLE DOMESTIC APPLIANCES – SPECIFICATION *(6 p) M*

Covers apparatus connectors, inlet sockets and inlet plugs, intended to form detachable connectors between single-phase portable domestic electrical appliances and flexible cords for the operation of such appliances at voltage not exceeding 250 volts.

MS 17:1984 SAFETY OF ELECTRICAL APPLIANCES – SPECIFICATION *(48 p) M*

Covers the safety of electrical cooking, heating, motor-operated and magnetically controlled domestic appliances for use at voltage above 42 V and not exceeding 250 V to earth. It also covers other electrical appliances, for use in that voltage range, that are available to members of the public for use in circumstances not covered by specific safety legislation.

If any appliance falling within the scope of this specification contains any component covered by an individual compulsory standard specification, such component shall moreover comply with the requirements of that specification

It also covers general requirements applicable to all appliances.

MS 18:1982 CARBONATED SOFT DRINKS – SPECIFICATION *(5 p) M*

Covers the manufacture, product processing or treatment of carbonated soft drinks.

MS 19:2001 LABELLING OF PREPACKED FOODS – GENERAL STANDARD *(7 p)M*

Covers the general requirements for labeling of all pre-packed foods to be offered as such to the consumer. (Specific requirements for different foods are contained in respective food standards).

MS 20:1983 BLOW MOULDED PLASTIC CONTAINERS UP TO 5 LITRES CAPACITY – SPECIFICATION *(8 p) M*

Covers minimum requirements for plastic containers of nominal capacity up to 5 litres intended for storage of commodities other than explosives, compressed gases and radio-active materials.

MS 21:2002 FOOD AND FOOD PROCESSING UNITS – CODE OF HYGIENIC CONDITIONS *(17 p) M*

Provides a basis for establishing code of hygienic practice, which will ensure uniformity in the hygienic handling and maintaining of commodities and processing units.

MS 22:1984 CARBONATED SOFT DRINKS – METHODS OF TEST *(9 p)*

Specifies methods of test for carbonated soft drinks.

MS 23:1984 PROCESSED FRUITS AND VEGETABLES – METHODS OF TEST *(8 p)*

Prescribes the methods of sampling and test for processed fruits and vegetables.

MS 24:1984 CANNED PINEAPPLES – SPECIFICATION *(4 p) M*

Covers the manufacture, production, processing and treatment of canned pineapples.

MS 25:1984 TOMATO PUREE – SPECIFICATION *(2 p) M*

Gives specification for processed tomato concentrates which do not include products commonly known as tomato sauce, chilli sauce, and ketchup, or similar products which are highly seasoned products of varying concentrations containing characterizing ingredients such as pepper, onions, vinegar, sugar, etc., in quantities that materially alter the flavour, aroma and taste of the tomato components.

MS 26:1984 TOMATO JUICE – SPECIFICATION *(2 p) M*

Prescribes the requirements and the methods of test for tomato juices.

MS 27:1984 TOMATO SAUCE – SPECIFICATION *(2 p) M*

Prescribes the requirements and the methods of test for tomato sauce.

MS 28:1984 CANNED TOMATOES – SPECIFICATION *(3 p) M*

Prescribes the requirements and the methods of test for canned tomatoes.

MS 29:2001 CEMENT – SPECIFICATION (Second edition) *(25 p) M*

Defines and gives the specifications of 27 distinct common cement products 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 six strength classes.

MS 30:1985 WHEAT FLOUR – SPECIFICATION *(4 p) M*

Prescribes requirements and methods of test for wheat flour for human consumption prepared from common wheat.

MS 31:1985 COMMON BREAD – SPECIFICATION *(3 p) M*

Prescribes the requirements and methods of test for the product known as common bread.

MS 32:1998 MAIZE GRAIN – SPECIFICATION (Second edition) *(4 p) M*

Applies to maize grain for direct human consumption, i.e. ready for its intended use as human food, presented in package, or sold loose from the package directly to the consumer. This standard specifies the requirements for whole grain, shelled dent maize *(Zea mays* Indentata L) and/or shelled flint maize (*Zea mays* Induranta L) or their hybrids. It does not apply to processed maize.

MS 33:1985 CANDLES – SPECIFICATION *(2 p) M*

Prescribes the requirements and methods of test for candles.

MS 34:2002 MAIZE FLOUR *(UFA*) – SPECIFICATION (Second edition) *(3 p) M*

Prescribes requirements and methods of sampling and analysis for maize flour intended for human consumption.

MS 35:1986 PRIMARY DRY BATTERIES – SPECIFICATION *(8 p) M*

Lays down specifications, dimensions, tests and requirements of single cell leclanche type dry batteries and applies to batteries of designations R6, R14, and R20 for use in flashlights, transistor radio receivers, hearing-aids and other electronic appliances where high current is not desired.

MS 37:2002 PRESERVATIVE–TREATED TIMBER – SPECIFICATION *(15 p) M*

Specifies requirements of treated timber (other than the method of treatment) for preservative-treated timber and timber products (other than composite board products and timber products) at various levels of preservative treatment that are considered to be acceptable for a range of hazard conditions.

MS 38:1995 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) RIGID CONDUIT AND FITTINGS FOR USE IN ELECTRICAL INSTALLATIONS – METHODS OF TEST *(13 p)*

Outlines methods of test for assessing compliance of UPVC rigid conduit and fittings for electrical installations with relevant performance requirements.

MS 42:2003 BATHING BARS – SPECIFICATION (7p) M

This standard prescribes requirements and methods of sampling and test for bathing bars.

MS 43:2008 BLACK TEA – DEFINITION AND BASIC REQUIREMENTS *(2 p) M*

This Malawi standard specifies the parts of a named plant that are suitable for making black tea for consumption as a beverage and the chemical requirements for black tea that are used to indicate that tea from that source has been produced in accordance with acceptable practice.

It also specifies the packaging and marking requirements for black tea in containers.

It is not applicable to decaffeinated black tea.

MS 44:2004 TIMBER, THE PRESERVATIVE TREATMENT – CODE OF PRACTICE *(17 p) M*

This standard covers the classification of timber preservatives, hazard conditions for timber, the solvents used for timber preservatives, the preparation of timber for treatment and the various treatment processes for timber. Recommendations relating to the handling and safety of preservative-treated timber are also given.

This standard does not cover treatment with fire retardants.

MS 45:2001 LUBRICATING GREASE – SPECIFICATION *(9 p) M*

This standard covers the performance requirements of four classes of lubricating grease namely, industrial non-extreme pressure, industrial high performance extreme pressure, and automotive non-extreme pressure, each in four consistency grades, and all of which can contain suspended solid lubricants.

MS 46:1996 ADHESIVES FOR THE LAMINATING AND FINGER-JOINTING OF TIMBER FOR FURNITURE AND JOINERY, PHENOLIC AND AMINOPLASTIC RESIN – SPECIFICATION *(7 p) M*

The specification covers the chemical, physical and performance requirements for three exposure classes of resin adhesives for wood, supplied in liquid or powder form, and based on the chemical reaction with formaldehyde of melamine, urea, melamine-urea compounds, or phenolic compounds. The specification does not cover adhesives supplied in film form.

MS 48:2006 CARBOLIC SOAP – SPECIFICATION (Second edition)*(3 p) M*

Specifies requirements for carbolic soap for personal hygiene, which contains additions of phenolic substances such as cresylic acid.

MS 49:2006 TOILET SOAP – SPECIFICATION (Second edition) ***(4 p)***

Specifies the requirements for toilet soap for personal hygiene. It does not provide for speciality soaps, such as medicated soaps.

MS 50:1988 BEER – SPECIFICATION ***(1 p) M***

Prescribes the requirements for beer.

MS 51:2003 EDIBLE OILS– SPECIFICATION ***(5 p) M***

This standard outlines requirements for refined edible oils from oil seeds and oil bearing fruits. These oils are suitable for use as cooking oils and salad oils.

This standard excludes the use of crude oils i.e. crude oils shall not be sold for human consumption.

MS 52:2000 LIQUID TOILET SOAP – SPECIFICATION ***(2 p) M***

Prescribes the requirements of liquid toilet soap for personal hygiene.

MS 53:2001 CHILLI SAUCE – SPECIFICATION ***(2 p) M***

This Malawi Standards prescribes requirements for chilli sauce. The chilli sauce shall be manufactured from chillies (*Capsicum frutescens* L) or other small fruits of the genus *Capsicum*.

MS 55:1990 WHEAT GRAIN – SPECIFICATION ***(4 p) M***

The standard specifies requirements, methods of sampling and analysis for wheat belonging to the species *Triticum aestivum* and *T. durum*, which are intended for human consumption.

MS 56:1990 EDIBLE OILS AND FATS – METHODS OF ANALYSIS ***(8 p)***

Refers to methods of analysis that are applicable to fats and oils which are liquid and which do not deposit stearin at the temperature of determination

MS 57:1987 PINEAPPLE JUICE – SPECIFICATION ***(3 p) M***

Specifies requirements for pineapple juice.

MS 59:2002 SOLID WASTE – HANDLING, TRANSPORTATION AND DISPOSAL – CODE OF PRACTICE ***(12 p) M***

Prescribes the recommended procedure for the handling, transportation and disposal of solid waste to ensure safety of operatives, passers-by, animals and the environment.

MS 60:1989 SOAPS – METHODS OF ANALYSIS ***(17 p)***

Describes the methods of test for soaps and detergents

MS 62:1994 SOLAR WATER HEATERS – SPECIFICATION ***(13 p)***

Specifies construction and performance requirements of solar water heaters.

MS 63:1987 VEGETABLE GHEE – SPECIFICATION ***(1 p) M***

Applies to vegetable ghee which has been fully processed and made fit for human consumption

MS 64:1987 MIXED ANIMAL AND VEGETABLE GHEE – SPECIFICATION *(1 p) M*

Applies to any product described as mixed animal and vegetable ghee, fully processed and made fit for human consumption.

MS 65:2003 SOAP POWDER OR CHIPS – SPECIFICATION (*5 p) M*

This specification covers four types of soap for use in laundries. It does not cover non-soapy detergents

MS 66:2003 ANTIBACTERIAL LIQUID TOILET SOAP – SPECIFICATION *(6 p) M*

This specification covers two types of Antibacterial liquid toilet soap for medical use that are suitable for use in liquid dispensers.

MS 70:1987 INDUSTRIAL HEAVY-DUTY LEATHER BOOTS – SPECIFICATION *(4 p) M*

Applies to men's industrial heavy-duty boots made of leather uppers with soles made of injection moulded polyvinyl chloride or derived from vulcanized process.

MS 71:2000 CONCRETE BUILDING BLOCKS – SPECIFICATION *(7 p) M*

Applies to solid, hollow or cellular concrete building blocks including aerated blocks.

MS 73:1988 RAW COW'S MILK – SPECIFICATION *(1 p) M*

Specifies the requirements for raw milk obtained from cows.

MS 74:1988 PASTEURISED COW'S MILK – SPECIFICATION *(1 p) M*

Specifies requirements for pasteurised cow's milk.

MS 75-1:1988 MILK AND MILK PRODUCTS – METHODS OF SAMPLING AND ANALYSIS

Part 1: Chemical Analysis *(9 p)*

Prescribes the methods of sampling and chemical analysis for milk and milk products.

MS 75-2:1998 MILK AND MILK PRODUCTS

Part 2: Microbiological Examination *(9 p)*

Prescribes the methods of sampling and microbiological analysis of milk and milk products.

MS 76:1986 AGRICULTURAL HAND HOE – SPECIFICATION *(6 p) M*

Specifies materials and other requirements for the agricultural hand hoe.

MS 77:1988 GROUNDNUT OIL – SPECIFICATION *(2 p) M*

Specifies requirements for semi-refined and refined edible groundnut oil.

MS 78:1988 REFINED SUNFLOWER OIL – SPECIFICATION *(1 p) M*

Specifies requirements for edible sunflower oil.

MS 79:1988 REFINED COTTON SEED OIL – SPECIFICATION *(3 p) M*

Specifies requirements for edible cottonseed oil.

MS 80:1988 RAPE SEED OIL – SPECIFICATION *(2 p) M*

Applies to finally refined edible low erucic acid rapeseed oil suitable for human consumption.

MS 84:1991 WAX FLOOR POLISH – SPECIFICATION *(5 p)*

Applies to solvent based and emulsion type, both liquid and paste form wax polishes suitable for use on furniture and floors

MS 85:1986 LIMES FOR USE IN BUILDING – SPECIFICATION *(5 p)*

This specification applies to quicklime and hydrated limes for use in buildings. It does not cover limes for use in Laboratory or purification of water.

MS 88:1986 SOLVENT CEMENT FOR ASSEMBLY OF UPVC PIPE FITTINGS – SPECIFICATION *(13 p)*

Specifies the requirements for solvent cement, supplied in cans, for joining unplasticized polyvinyl chloride pressure pipes complying with the requirements of MS 4:1993.

MS 89:1991 PESTICIDES – HANDLING, STORAGE AND DISPOSAL – CODE OF PRACTICE *(7 p) M*

Covers the handling, storage and disposal of pesticides and their containers used in commercial, industrial and public health pest control operations.

MS 90:1988 HIGH-PROTEIN BABY FOOD – SPECIFICATION *(1 p M)*

Prescribes the requirements for high-protein baby food.

MS 91:1986 LIMES FOR WATER TREATMENT – SPECIFICATION *(5 p)*

Lays down requirements for hydrated limes intended for treatment of water.

MS 92:1986 LIMES – METHODS OF TEST *(17 p)*

Covers methods of test for the determination of chemical requirements, residue on slaking, fineness, expansion and pat soundness of limes.

MS 93:1986 HIGH PROTEIN BABY FOOD – METHODS OF ANALYSIS *(15 p)*

Describes the methods of test for the high protein baby foods.

MS 94:1988 INDUSTRIAL AND SAFETY RUBBER BOOTS – SPECIFICATION *(22 p) M*

Prescribes the requirements and methods of test of industrial and safety rubber boots of knee height for men and women.

MS 96:1988 CHILLIES AND CAPSICUMS, WHOLE OR GROUND – SPECIFICATION *(4 p) M*

Specifies requirements for chillies and capsicums in whole or ground (powdered) form.

MS 97:1988 CURRY POWDER – SPECIFICATION *(3 p) M*

Specifies minimum requirements for curry powder which is used as a flavouring material in the preparation of foods and commercialized in bulk for wholesale trade.

MS 99-2:1995 PACKAGING SACKS – VOCABULARY

Part 2 - Sacks made from thermoplastic flexible film *(10 p)*

This part defines terms commonly used in plastic sack manufacture. It refers to single ply and multi-ply sacks made from thermoplastic flexible film; it does not refer to bags for the retail trade.

MS 100-1:1995 SACKS, PACKAGING – DESCRIPTION AND METHOD OF MEASUREMENT

Part 1: Empty paper sacks *(10 p)*

This part of MS 100 fixes the description and the dimensional designation of empty paper sacks and specifies the method of measuring those dimensions.

MS 101:1995 FREIGHT CONTAINERS – TERMINOLOGY *(15 p)*

This standard presents definitions of terms relating to freight containers.

MS 102:1995 FREIGHT CONTAINERS (SERIES I): CLASSIFICATION, DIMENSIONS AND RATING – SPECIFICATION *(7 p)*

Establishes a classification of series 1 freight containers based on external dimensions, and specifies the associated ratings, and, where appropriate, the minimum internal and door opening dimensions for certain types of containers.

MS 103:1993 PACKAGING – PICTORIAL MARKING FOR HANDLING OF GOODS *(6 p)*

Specifies a set of symbols conventionally used for marking of transport packages to convey handling instructions.

MS 105:1995 TRANSPORT PACKAGES, DIMENSION OF RIGID RECTANGULAR PACKAGES – SPECIFICATION *(3 p)*

The standard sets a series of dimensions for rigid rectangular transport packages, based on the standard plan dimension (module) of 600 mm x 400 mm (23.62 in x 15.5 in).

MS 106:2005 WELDING HELMETS SHIELDS, GOGGLES AND WELDING SPECTACLES – SPECIFICATION *(8 p) M*

The standard specifies the requirements for the materials, design and manufacture of welding helmets, hand shields, goggles and welding spectacles that are intended to be used with protective filters, filter covers and backing lenses that comply with the appropriate transmittance requirements. The standard does not cover eye protection devices for use in welding with lasers.

MS 107:1988 ALCOHOLIC BEVERAGES – METHODS OF TEST *(16 p)*

Specifies methods of test for alcoholic beverages.

MS 108:1989 PETROLEUM JELLY FOR COSMETIC INDUSTRY – SPECIFICATION *(4 p) M*

Prescribes the requirements and methods of sampling and test for white and yellow petroleum jelly for cosmetic industry.

MS 109:1987 CASUAL AND FASHION PLASTIC SHOES – SPECIFICATION *(2 p) M*

Specifies requirements for fashion shoes made of polyvinyl chloride compound using the 44 injection-moulded principle.

MS 110:1997 SINGLE FURROW ANIMAL DRAWN PLOUGH SHARES – SPECIFICATION *(6 p)*

Specifies the material and dimensions of both upset and straight shares used in animal drawn ploughs.

MS 111:1988 DAIRY FARMING – CODE OF HYGIENIC CONDITIONS FOR MILKING *(3 p)*

Prescribes guidelines to be followed by dairy farmers in the milking, handling and transportation of raw milk to selling points.

MS 112:1987 TOOTHPASTE – SPECIFICATION *(9 p) M*

Covers the requirements for toothpastes (fluoridated and non-fluoridated) intended for use with a brush in cleaning of natural teeth.

MS 115:2002 FROZEN FISH – SPECIFICATION (*3 p) M*

Outlines requirements for fresh, whole fish that is frozen and glazed.

MS 116:2002 SALTED FISH – SPECIFICATION (*3 p) M*

Specifies requirements for all species of fish, which are wet salted, sold while fresh or dry.

MS 117:2002 SMOKED FISH – SPECIFICATION (*3 p) M*

Specifies requirements for smoked fish and fishery products.

MS 118:2007 CANNED FISH, CANNED FISH PRODUCTS AND CANNED MARINE MOLLUSCS – SPECIFICATION (SADC HARMONIZED)

Covers the requirements for the manufacture, production, processing, or treatment and methods of tests for canned fish, canned fish products, and canned molluscs and their methods of tests.

MS 119:2004 SMALL INCINERATORS – SPECIFICATION *(8 p) M*

This standard specifies requirements for a range of incinerators using fuel gases or electricity. The range of sizes included is based upon the number of test samples which can be destroyed in accordance with the conditions of test prescribed in appendix A.

In general, these appliances are suitable for the destruction of combustible materials (see Note 1) such as sanitary towels, bandages, dressings and paper.

MS 120:1988 GENERAL REQUIREMENTS FOR PESTICIDES – SPECIFICATION *(10 p)*

Covers the general requirements for pesticides.

MS 123:1998 INDUSTRIAL AND SAFETY POLY (VINYL CHLORIDE) BOOTS – SPECIFICATION *(11 p) M*

Specifies requirements for boots moulded from poly (vinyl chloride) compounds, for general industrial use. The boots may be either fabric-lined or unlined and any style from ankle boots to full thigh height inclusive.

MS 125:1987 CHEMICAL LABORATORIES – CODE OF SAFETY *(19 p)*

Outlines a code of safety in chemical laboratories.

MS 132:1991 FISHING NETS – DESIGNATION OF NETTING YARNS IN THE TEX SYSTEM *(4 p)*

Specifies a method for the designation of netting yarns for fishing nets by the use of the nominal linear densities of the single yarn components or, of their resultant linear density, expressed in text.

MS 134:1991 TEXTILES – WOVEN FABRIC DESCRIPTIONS (2*P*)

Gives a number of characteristic parameters for woven fabrics and their constituents at various stages of manufacture and processing for the purpose of fabric designation. It is applicable to all woven fabrics except textile floor coverings.

MS 137:1991 FISHING NETS, HANGING OF NETTING – BASIC TERMS AND DEFINITIONS (2*p*)

Gives the principle terms relating to the hanging of netting for fishing nets, together with their definitions.

MS 140:1987 SPICES AND CONDIMENTS – METHODS OF SAMPLING *(5 p)*

Specifies methods of sampling for spices and condiments

MS 141:1987 SPICES AND CONDIMENTS - DETERMINATION OF TOTAL ASH *(3 p)*

Specifies methods for the determination of total ash from spices and condiments

MS 144:2007 AGRICULTURAL FOOD PRODUCTS – DETERMINATION OF CRUDE FIBRE CONTENT GENERAL METHOD

Specifies a conventional method for the determination of the crude fibre content of agricultural food products.

MS 145:1987 CEREALS AND PULSES – METHODS OF SAMPLING AS MILLED PRODUCTS *(9 p)*

Specifies general conditions relating to sampling for the assessment of the quality and condition of milled products from cereals or pulses intended for human or animal consumption, in powder, particulate or agglomerated form.

MS 146:1988 CEREALS – METHODS OF SAMPLING AS GRAIN *(9 p)*

Specifies general conditions relating to the sampling for assessment of quality of cereal grains. It does not apply to seed grains.

MS 148:1987 CEREALS AND CEREAL PRODUCTS – DETERMINATION OF FAT CONTENT *(3 p)*

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.

MS 150:1987 WHEAT FLOUR – DETERMINATION OF WET GLUTEN *(4 p)*

Specifies a method for the determination of wet gluten in wheat flour.

MS 151:1988 CEREALS AND CEREAL PRODUCTS – DETERMINATION OF ALPHA-AMYLASE ACTIVITY - COLORIMETRIC METHOD *(8 p)*

Specifies a colorimetric method for the determination of alpha-amylase activity of cereal products, ranging from very low to very high in alpha-amylase activity. The method may also be used for estimating the alpha - amylase activity of additives of fungal and bacterial origin.

MS 152:1988 TURMERIC, WHOLE OR GROUND – SPECIFICATION *(3 p) M*

Specifies requirements for turmeric *(Curcuma longa* Linnaeus), whole or ground (powdered)

MS 153:1988 CORIANDER, WHOLE OR GROUND – SPECIFICATION *(3 p) M*

Specifies requirements for whole or ground (powdered) coriander *(Coriandrum sativum* Linnaeus).

MS 154:1988 REFINED SOYA BEAN OIL – SPECIFICATION *(2 p) M*

Specifies requirements for fully refined edible soya bean oil.

MS 155:2000 SOLID FUEL COOK STOVE – TYPE II – SPECIFICATION *(3 p)*

Specifies the requirements for the solid fuel cook stoves with a pottery liner intended for cooking.

MS 156:1995 IRONS, SOLIDFUEL PRESSING – SPECIFICATION *(6 p)*

Lays down the specifications for portable pressing irons for ironing textile materials using charcoal or coal as fuel.

MS 157:1995 COOKSTOVE, LIQUID FUEL NON PRESSURE – SPECIFICATION *(8 p)*

Specifies requirements for materials and performance of Liquid fuel non pressure cook stoves which use paraffin as fuel.

MS 158:1995 COOKSTOVE, SOLID FUEL (TYPE 1) – SPECIFICATION *(8 p)*

Specifies requirements for solid fuel cook stove, which incorporates one or more ovens and has a cooking surface which includes at least one simmering area of sufficient size to accommodate the number of utensils required and operates with minimum smoke emission.

MS 159:1996 COOLER BLOCKS – SPECIFICATION *(4 p) M*

Lays down requirements for raw materials, manufacture, dimensions, strength and other physical properties of cooler blocks.

MS 161:1988 CEMENT ROOFING PRODUCTS – SPECIFICATION *(7 p) M*

Lays down the requirements for raw materials, manufacture, dimensions of cement roofing tiles, sheets and fittings.

MS 167:1988 FERTILIZERS AND SOIL CONDITIONERS – VOCABULARY *(6 p)*

Defines terms relating to fertilizers and soil conditioners.

MS 169:1993 SAMPLING OF CHEMICAL PRODUCTS FOR INDUSTRIAL USE – SAFETY IN SAMPLING *(11 p)*

The standard gives recommendations relating to safety in the sampling of chemical products for industrial use.

MS 170:2004 UNLEADED PETROL (SECOND EDITION) – SPECIFICATION *(10 p) M*

Specifies the requirements for unleaded petrol retailed in the country for use as fuel in petrol engine vehicles.

MS 173:2005 ACOUSTICS – NOISE POLLUTION – TOLERANCE LIMITS *(2 p) M*

This Malawi standard prescribes maximum allowable noise limits in industrial, commercial, residential and silence zone areas. It also lays down sound level requirements fro indoors of non-industrial buildings.

MS 174:1995 RULERS FOR GENERAL PURPOSE – SPECIFICATION *(8 p)*

Prescribes the requirements for rigid and foldable rulers made of wood, plastic or metallic materials, intended for general purposes. It covers end as well as edge measuring scales.

MS 175:1987 BURNT CLAY BRICKS – CODE OF PRACTICE FOR MOULDING AND FIRING *(9 p)*

Lays down the procedures to be followed in the selection of raw materials, moulding and firing of hand-made burnt clay bricks.

MS 176:1988 JAMS, JELLIES AND MARMALADES – SPECIFICATION *(3 p) M*

Specifies the requirements for jams, jellies and marmalades.

MS 177:1988 FRUIT SQUASHES – SPECIFICATION *(2 p) M*

Specifies the requirements for fruit squashes

MS 178:1988 COUNTRY WINES – SPECIFICATION *(3 p) M*

Specifies requirements for country wines.

MS 179:1988 RICE – SPECIFICATION *(4 p) M*

Lays down specifications for rice *(Oryza sativa* L) of the following types: husked rice, husked parboiled rice, milled rice suitable for human consumption, directly or after reconditioning.

MS 180:1988 LEAD-ACID STARTER BATTERIES – SPECIFICATION *(8 p)*

Specifies requirements for materials, design, construction and testing of lead-acid starter batteries with a rated voltage of 6 or 12 volts supplied in the wet-charged or dry charged condition for starting lighting and ignition services in automobiles.

MS 181:1988 LEAD-ACID STARTER BATTERIES – METHODS OF TEST *(6 p)*

Covers methods of test for lead-acid starter batteries.

MS 183:1988 AXES AND HATCHETS – SPECIFICATION *(8 p)*

Specifies the requirements on materials, dimensions, mass and performance for axes and hatchets.

MS 185:1995 COOKSTOVE, LIQUID FUEL NON-PRESSURE – METHODS OF TEST *(4 p)*

Covers methods of test for liquid fuel non-pressure cook stoves which use paraffin as the fuel.

MS 186:1988 BALLPOINT PENS – SPECIFICATION *(11 p) M*

Specifies the requirements for single-cartridge ballpoint pens, replacement refills and direct–fill ballpoint pens, which have black, blue, green or red ink.

MS 187:1999 SCHOOL CHALK – SPECIFICATION *(3 p) M*

Prescribes the requirements, methods of sampling and test for white and coloured chalks made from gypsum, calcium sulphate hemihydrate ($CaSO_4.^1/_2H_2O$), intended for writing on chalkboards. It does not apply to calcium carbonate type of chalks.

MS 188:1988 SALT – SPECIFICATION *(23 p)*

Specifies six technical and commercial types of salt as well as table salt, free-running table salt and household salt.

MS 190:1994 CHEESE – METHODS FOR CHEMICAL ANALYSIS *(14 p)*

Provides methods for the analysis of cheese and processed cheese made from milk with the addition of emulsifying salts only.

MS 191:1988 YOGHURTS – SPECIFICATION *(3 p) M*

Part 1: Yoghurt and Sweetened yoghurt

This standard specifies the requirements for yoghurt and sweetened yoghurt**.**

Part 2: Flavoured yoghurt

Specifies the requirements for flavoured yoghurts.

MS 192:2009 BUTTER – SPECIFICATION

This Malawi standard specifies requirements and methods of sampling and test for butter intended for direct consumption or for further processing.

MS 193:1988 DAIRY CREAM FOR DIRECT CONSUMPTION – SPECIFICATION *(3 p) M*

Applies to dairy cream which has been pasteurized, sterilized or ultra-heat treated.

MS 194:2009 DAIRY ICES AND DAIRY ICE CREAM – SPECIFICATION

This Malawi standard specifies the requirements, methods of sampling and test for dairy ices and dairy ice cream.

MS 195:1991 FRESH GREEN BEANS – SPECIFICATION *(3 p)*

Prescribes requirements for fresh green beans from *Phaseolus vulgaris L* commonly known as *French beans.*

MS 196:1989 MILK – DETERMINATION OF TITRATABLE ACIDITY *2 p)*

Describes a method for determination of titratable acidity in milk.

MS 197:1988 MILK – DETERMINATION OF FREEZING POINT *(4 p)*

Describes a method for the determination of freezing point of milk.

MS 198:1993 CREAM – DETERMINATION OF FAT CONTENT *(3 p)*

The standard describes a reference method for the determination of fat content of cream.

MS 199:1988 PORK AND BEEF SAUSAGES – SPECIFICATION *(5 p)*

Prescribes requirements for fresh pork and beef sausages, barbeque, borewoers (farm sausages) bratwurst, frankfurter, french polony, ham and liver sausages

MS 200:1989 MEAT ANIMALS FOR ANTE-MORTERM SLAUGHTER AND POST MORTERM – TRANSPORTATION, HANDLING AND INSPECTION – CODE OF PRACTICE *(10 p)*

Prescribes the procedures for transportation and handling of slaughter animals and for the ante-mortem and post-mortem inspection of meat and meat products.

MS 201:1989 BISCUITS – SPECIFICATION *(5 p)*

Prescribes the essential requirements and methods of sampling and tests for biscuits.

MS 202:1989 SUGAR, WHITE – SPECIFICATION *(2 p) M*

Prescribes the requirements for granulated white sugar intended for human consumption.

MS 206:1989 MEAT GRADING – CODE OF PRACTICE *(9 p)*

Classifies cattle, sheep, goats and pigs and prescribes requirements for grading meat derived from cattle sheep, goat and pigs.

MS 207:1989 TEA SACKS – SPECIFICATION *(10 p)*

Specifies the materials, construction and dimensions of sacks for the palletized and containerized transport of tea.

MS 208:1990 OPAQUE BEER – SPECIFICATION *(2 p) M*

Specifies requirements for opaque beer.

MS 209:1990 SUGAR, RAW – SPECIFICATION *(2 p)*

Specifies the requirements for raw sugar.

MS 210:1990 SPIRITS – SPECIFICATION *(2 p) M*

Specifies requirements for spirits intended for use as beverages.

MS 212:1995 POULTRY FEEDS – SPECIFICATION *(14 p)*

Specifies requirements for poultry feeds.

MS 213:1990 GROUNDNUTS –SPECIFICATION *(6 p)*

Specifies requirements for groundnuts *(Arachis hypogaea* - Linnaeus) also known as peanuts or monkey nuts or earthnuts in the shell or kernel for direct human consumption. It does not apply to processed groundnuts.

MS 214:2005 DRINKING WATER – SPECIFICATION (FIRST REVISION) *(7 p) M*

Specifies the physical, bacteriological and chemical requirements for drinking water. It also includes general requirements for sampling and surveillance of water supplies.

MS 218:1990 POLYURETHANE FOAM CORES – SPECIFICATION *(3 p)*

Covers the requirements and methods of sampling for interior foam cores consisting of flexible polyurethane foam for use in mattresses, furniture and other similar uses.

MS 221:1994 BLACK LEAD PENCIL – SPECIFICATION *(9 p)*

Specifies the requirements for black lead pencils for general writing purposes in grades HB and 2B.

MS 223:1990 POLYURETHANE FOAMS – METHODS OF TEST *(12 p)*

Prescribes methods of test for flexible polyurethane foams.

MS 224:1990 PASTA PRODUCTS – SPECIFICATION *(6 p) M*

Prescribes the requirements, methods of sampling and test for pasta products.

MS 225:1995 MARGARINE – SPECIFICATION *(6 p)*

Prescribes requirements for margarine which contains not less than 80 % fat

MS 226:1990 GARLIC – SPECIFICATION *(5 p)*

Prescribes requirements for garlic (*Allium sativum* L).

MS 227:1990 SUGAR CONFECTIONERY – SPECIFICATION *(19 p) M*

Specifies the requirements and methods of sampling and test for high boiled sweets and low boiled toffees and caramels.

MS 228:1990 MACADAMIA KERNELS – SPECIFICATION *(19 p) M*

Specifies requirements and methods of test for shelled macadamia nuts belonging to the species *Macadamia tetraphylla* and *Macadamia intgergrifolia* and/or their hybrids.

MS 230:1990 TOMATOES – SPECIFICATION *(3 p) M*

Prescribes the requirements for tomatoes *Lycopersicon esculentum* Mill

MS 231:1990 FRESH PINEAPPLES – SPECIFICATION *(2 p) M*

Specifies the requirements for fresh pineapples (*Ananas comosus* L). Also stipulates requirements for handling, grading, packing and marking.

MS 232:1990 CHEWING GUM AND BUBBLE GUM – SPECIFICATION *(3 p)*

Prescribes requirements and methods of test for chewing gum and bubble gums.

MS 234:1993 BUN – SPECIFICATION *(6 p) M*

Specifies the requirements and methods of test and sampling for bun.

MS 240:1995 PIG FEED – SPECIFICATION *(8 p)*

Prescribes the requirements and methods of sampling and test for pig feed.

MS 242:1991 COW PEAS – SPECIFICATION *(4 p)*

Specifies requirements for shelled dry cow peas, *Vigna ungiculatum,* suitable for human consumption.

MS 243:1991 DRY GARDEN PEAS – SPECIFICATION *(4 p)*

Specifies requirements for dry garden peas, *Pisum sativum* (locally known as nsawawa) and are intended for human consumption.

MS 244:1991 SOYA BEANS – SPECIFICATION *(5 p)*

Specifies requirements for shelled dry soya beans, *Glycine max* L. (Merill), suitable for human consumption.

MS 245:1991 BEAN – SPECIFICATION *(3 p)*

Specifies requirements for shelled beans, *Phaseolus vulgaris* L. suitable for human consumption.

MS 246:1990 GINGER-WHOLE, IN PIECES OR GROUND – SPECIFICATION *(6 p)*

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

MS 248:1991 ORANGE JUICE – SPECIFICATION *(4 p) M*

Specifies requirements for orange juice obtained from oranges *(Citrus sinensis* (L) *Osbeck)*

MS 250:1991 LAUNDRY SOAP – SPECIFICATION *(8 p) M*

Prescribes requirements and methods of sampling and test for laundry soaps.

MS 251:2002 SAFETY WOOD MATCHES – SPECIFICATION *(4 p) M*

Specifies functional requirements for safety wood matches in boxes. It defines the performance characteristics of the splints, matches head composition, match box and friction surface.

MS 252:2002 SAFETY WOOD MATCHES – METHODS OF TEST *(6 p)*

Describes the methods of test for safety wood matches in boxes. It does not cover book matches.

MS 253:2002 SYNTHETIC DETERGENT POWDERS FOR HOUSEHOLD USE – SPECIFICATION *(2 p) M*

The standard specifies requirements for synthetic detergent powders for household use based predominantly on the use of alkyl aryl sulphonates. It does not cover synthetic powders for use with washing machines.

MS 254:2003 SYNTHETIC DETERGENT POWDERS FOR HOUSEHOLD USE – METHODS OF TEST *(5 p)*

This Malawi Standard specifies the requirements for methods of tests for synthetic detergent powders for household use.

MS 255:1998 COMPOUND FERTILIZERS – SPECIFICATION *(7 p) M*

Specifies requirements, sampling and tests methods for compound fertilizers.

MS 258:2000 FERTILIZERS – AMMONIUM SULPHATE – SPECIFICATION *(5 p) M*

This Malawi Standard specifies requirements and methods of test for ammonium sulphate fertilizers, also known as sulphate of ammonia.

MS 263:1991 TARPAULINS – SPECIFICATION *(5 p) M*

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

MS 264:1991 LOOMSTATE COTTON DUCK – SPECIFICATION *(13 p) M*

Covers twelve qualities of plain woven cotton fabric in the loomstate suitable for tents, tarpaulins and equipage. The fabric may be suitably processed, as required.

MS 265:1991 BAGGED FERTILIZERS, HANDLING AND STORAGE – CODE OF PRACTICE *(3 p)*

Lays down recommended practices to be followed for storage of fertilizers packed in suitable bags.

MS 267:2004 CALCIUM CARBONATE (PRECIPITATED) FOR COSMETIC INDUSTRY – SPECIFICATION *(9 p) M*

This standard prescribes the requirements, methods of sampling and tests for precipitated calcium carbonate for the cosmetic industry.

MS 272:2000 FERTILIZERS – CALCIUM AMMONIUM NITRATE – SPECIFICATION *(7 p) M*

This standard specifies requirements and methods of test for Calcium ammonium nitrate fertilizer (CAN).

MS 278:1991 ROAD MARKING PAINT – SPECIFICATION *(20 p) M*

Covers quick-drying road -marking paint for use on bituminous and concrete road surfaces. It makes provision for yellow, white and black paint but does not cover reflectorized paint.

MS 279:1991 EMULSION PAINT FOR NEW GALVANIZED IRON – SPECIFICATION *(14 p) M*

Covers one type of emulsion paint for use on clean unpainted new galvanized iron.

MS 280:1991 EMULSION PAINTS FOR INTERIOR DECORATIVE PURPOSES – SPECIFICATION *(13 p) M*

Covers two grades of synthetic polymer emulsion paints for interior use.

MS 282:1991 HIGH GLOSS SYNTHETIC ENAMEL PAINT (ALKYD TYPE) – SPECIFICATION *(5 p) M*

Lays down requirements for interior and exterior high gloss (alkyd) type synthetic enamel paints as a finishing coat for use on correctly prepared surfaces of metal, wood, plaster, walls, composition board etc.

MS 284:1991 EMULSION PAINTS FOR EXTERIOR USE – SPECIFICATION *(5 p) M*

Gives the requirements, testing, packing and marking of emulsion paints based on synthetic polymers primarily intended for brush or roller application for exterior use on plaster, asbestos cement or other porous surfaces.

MS 287:1991 PAINTS, PRIMING PAINT FOR STEEL – SPECIFICATION *(9 p) M*

Covers requirements for zinc phosphate primer for use on suitably prepared steel surfaces.

MS 288:1991 PAINTS, PRIMERS FOR WOOD – SPECIFICATION *(7 p) M*

Lays down requirements for lead-free wood primer and aluminium-base wood primer for interior and exterior use.

MS 289-1:1991 ANIMAL FEEDS AND FEEDING STUFFS – METHODS OF SAMPLING AND TESTS

This malawi standard specifies methods of sampling animal feeding stuff, including fish feeds, for quality control for commercial, technical and legal purposes.

MS 289-4:1991 ANIMAL FEEDS AND FEEDING STUFFS – METHODS OF TEST – MICROBIOLOGICAL METHOD

Prescribes the microbiological methods for testing animal feeds and feeding staffs.

MS 290:1991 HIDES AND SKINS, RAW – GUIDELINES FOR GRADING *(7 p)*

Prescribes guidelines for grading of raw hides and skins of cattle, calves, sheep and goats in the fresh or preserved state intended for tanning.

MS 292:1991 MILK AND MILK PRODUCTS – METHODS OF TEST – MICROBIOLOGICAL EXAMINATION *(9 p)*

Part 1: Total plate count

Describes a method of testing the total plate count of micro-organisms in unprocessed milk, pasteurized milk, uncultured liquid milk products, ghee and cream.

Part 2: Coliform count

Describes a method of determining the number of coliform bacteria in milk and milk products.

Part 3: Yeasts and moulds

Describes a method of testing the total plate count of micro-organism in unprocessed milk, pasteurized milk, uncultured liquid milk products, cheese, dried milk products, ghee and cream.

Part 4: Swab test

Deals with the test intended for checking sanitization of the surface of containers and equipment with which milk and milk products can come in direct contact.

MS 293:1991 RAW HIDES AND SKINS – TERMINOLOGY OF DEFECTS (6p)

This standard shall apply to principal terms used to describe the defects most frequently seen on raw hides and skins in the fresh or preserved state and intended for tanning

MS 294:1991 FRUIT NECTARS – SPECIFICATION *(4 p) M*

A general standard applying to pulpy and non-pulpy fruit nectars made from fruit of a single species. The standard does not apply to any nectar which is subject to a specific Malawi Standard.

MS 295:1991 LEMON JUICE – SPECIFICATION *(2 p) M*

Prescribes the requirements for lemon juice intended for direct consumption. The juice shall be obtained from lemons (*citrus limon* Burn .f).

MS 296:1991 PASSION FRUIT JUICE – SPECIFICATION *(4 p) M*

Specifies requirements for passion fruit juice obtained from sound and ripe passion fruit *Passiflora edulis*, preserved exclusively by physical means.

MS 297:1991 MANGO JUICE – SPECIFICATION *(4 p) M*

Prescribes the requirements for mango juice obtained from ripe mangoes (*Mangifera indica* L) diluted by the use of syrup and acid preserved exclusively by physical means.

MS 298:2000 GUAVA NECTAR – SPECIFICATION *(2 p) M*

Prescribes the requirements for guava nectar. *The nectar shall be obtained from guavas (Psidium guajavas*).

MS 300:2004 GENERAL GUIDELINES FOR ESTABLISHING A HAZARD ANALYSIS CRITICAL CONTROL POINT (HACCP) SYSTEM IN FOOD ESTABLISHMENT – CODE OF PRACTICE *(10 p)*

The standard lays down the basic requirements for the implementation of the Hazard Analysis Critical Control Point (HACCP) system in a food establishment to ensure food safety. It also provides general guidance for its practical operation.

MS 302:2008 CONTAMINANTS AND TOXINS IN FOOD

This standard contains the main principles and procedures which are used and recommended by the Codex Alimentarius in dealing with contaminants and toxins in foods and feeds, and lists the maximum levels of contaminants and natural toxicants in foods and natural toxicants in foods and feed which are recommended by the CAC to be applied to commodities moving in international trade.

MS 303:1991 MINT, DRIED – SPECIFICATION *(5 p) M*

Specifies the requirements for leaves of dried mint (spear mint) in whole, broken or rubbed form. 'Dried mint' includes dehydrated mint ie. artificially dried mint.

MS 304:1991 CINNAMON – WHOLE OR GROUND (POWDERED) – SPECIFICATION *(8 p) M*

Specifies requirements for whole or ground (powdered) cinnamon constituted by the bark of Cinnamon Beylanicum Blume.

MS 305:1991 THYME, WHOLE – SPECIFICATION *(4 p) M*

Specifies requirements for whole thyme (*Thymes vulgaris*) in processed or semi processed form for purposes of transactions.

MS 306:1991 CELERY SEED, WHOLE – SPECIFICATION *(5 p) M*

Specifies requirements for whole celery seed (*Apium graveculens* Linnaeus) for use as a spice.

MS 307:2002 NATURAL LATEX RUBBER CONDOMS – REQUIREMENTS AND TEST METHODS *(43 p) M*

This Malawi Standard specifies requirements for male condoms from compounded natural rubber latex, supplied to consumers and designed for contraceptive purposes and to assist in the prevention of sexually transmitted diseases.

This Malawi Standard does not contain requirements for tensile properties of condoms. If determination of tensile properties is desired, the test method in Annex J can be used.

MS 308:2002 REUSABLE RUBBER CONTRACEPTIVE DIAPHRAGMS – SPECIFICATION *(13 p) M*

This Malawi Standard specifies requirements and methods of test for reusable rubber diaphragms (hereafter called diaphragms) supplied in consumer packages for contraceptive use and for protection against sexually transmitted diseases.

This Malawi Standard does not cover other vaginal contraceptives barriers, such as those known cervical caps, vaginal sponges and vaginal sheaths.

MS 309:1991 CONCRETE FLOOR AND WALL TILES – SPECIFICATION *(5 p) M*

Specifies the requirements for dimensions, strength and workmanship of floor and wall tiles made with cement and aggregates. The tiles may be plain or coloured.

MS 310:1991 PROTECTION OF BUILDING AGAINST LIGHTNING – CODE OF PRACTICE *(123 p) M*

Covers the protection of dwelling homes, farm buildings and small huts by means of conductors and/or masts; the use of metal roofs and gutters as part of the protection; the protection of thatched roofs; recommended materials and dimension of conductors and masts, the various methods of earthing, and the protection of electrical installations and radio and television aerials. Contains 14 drawings of typical examples of protection.

MS 312-1:1991 MEN'S SHOES WITH STUCK-ON OUTER SOLES – SPECIFICATION

Part 1: Flat lasted construction *(40 p)*

Covers requirements for materials and construction for men's shoes with stuck-on outer soles, made in accordance with the flat lasted principle.

MS 312-2:1991 MEN'S SHOES WITH STUCK-ON OUTER SOLES – SPECIFICATION

Part 2: California type construction *(17 p) M*

Covers requirements for materials and construction for men's shoes with stuck-on outer soles made in accordance with California type principle.

MS 312-3:1991 MEN'S SHOES WITH STUCK-ON OUTER SOLES – SPECIFICATION

Part 3: Moccasin type construction *(18 p) M*

Covers requirements for materials and construction for men's shoes with stuck-on outer soles, made in accordance with moccasin type principle, with or without reinforcing stitching.

MS 313:1991 INFANTS AND CHILDREN'S SHOES (STUCK-ON AND STITCH-DOWN CONSTRUCTIONS) – SPECIFICATION *(38 p) M*

Covers children's shoes made according to the stuck-on and stitch-down constructions and supplied in one or both of size ranges 105-145 and 150 - 205.

MS 314:1991 FOOTWEAR SIDE UPPER LEATHER – SPECIFICATION *(5 p) M*

Covers chrome-tanned bovine leather with a corrected grain and smooth finish and intended for use as an upper material for footwear.

MS 315:2003 FABRIC LININGS FOR FOOTWEAR – SPECIFICATION *(7 p) M*

This specification covers the requirements for 15 types of woven cotton fabric suitable for use as linings for footwear. Three of the types are fabrics combined by adhesive bonding.

MS 316:1991 THREADS FOR FOOTWEAR – SPECIFICATION *(8 p) M*

Covers cotton linen polyamide and polyamide threads and blended threads that consist of polyamide (or polyester) and cotton suitable for use in the manufacture of footwear.

MS 317:1991 CAST IRON MANHOLE COVERS, INSPECTION COVERS AND FRAMES – SPECIFICATION *(11 p) M*

Specifies requirement for cast iron manhole covers, inspection covers and frames.

MS 318:1991 CAST IRON BRACKETS AND SUPPORTS FOR WASH BASINS AND SINKS – SPECIFICATION *(10 p) M*

Covers requirements regarding materials construction, workmanship, dimensions, weights and finish of cast iron brackets and supports for wash basins and sinks.

MS 319:2006 STEEL DOOR FRAMES – SPECIFICATION *(16P) M*

This Malawi Standard covers sizes and general requirements for door frames (with or without fan light frames) fabricated from mild steel sheet, for walk-through doors.

MS 320:2006 WINDOWS AND DOORS MADE FROM ROLLED MILD STEEL SECTIONS – SPECIFICATION *(20P) M*

This Malawi Standard covers windows, doors, sidelights and fanlights fabricated from rolled mild steel sections, complete with fittings and ancillary components.

MS 321:1991 ZINC-COATED FENCING WIRE (PLAIN AND BARBED) – SPECIFICATION *(10 p) M*

Specifies the requirements for the dimensions and quality of plain fencing wire and barbed (single strand and double strand) fencing wire made from 3 grades of zinc coated steel wire.

MS 322:2007 MILD STEEL NAILS - SPECIFICATION (FIRST EDITION)(21) M

This specification covers the requirements for wire and mild steel nails and tacks for general use and eight nails for pneumatic gun nailers.

MS 326:2004 INCINERATORS−STANDARD PERFORMANCE REQUIREMENTS FOR INCINERATION PLANT FOR THE DESTRUCTION OF HOSPITAL WASTE – SPECIFICATION *(2p) M*

This specification specifies the standard performance requirements for incineration plant, assisted by auxiliary fuel if required, suitable for the destruction of hospital waste.

It does not cover devices which utilize intensities of combustion exceeding an average heat release rate of 350 kW/m^3.

MS 329:1991 TEXTILES – TERNARY FIBRE MIXTURES – QUANTITATIVE ANALYSIS *(18 p)*

Specifies methods of quantitative analysis of various ternary mixtures of fibres.

MS 330:1991 SIZE DESIGNATION OF CLOTHES (MEN'S AND BOYS' OUTERWEAR GARMENTS) *(5 p)*

Establishes a system of designating sizes of men's and boys' outerwear garments (including knitwear and swimwear) that are classified as, covering the upper or whole body or lower body only.

MS 331:1991 SIZE DESIGNATION OF CLOTHES (WOMEN'S AND GIRLS' OUTERWEAR GARMENTS *(7 p)*

Establishes a system of designating the sizes of women's and girls' outerwear garments (including knitwear and swimwear) that are classified as covering the upper or the whole body, or covering the lower body only.

MS 332:1991 SIZE DESIGNATION OF CLOTHES (INFANTS' GARMENTS) *(4 p)*

Establishes a system of designating the sizes of infants' garments. Both the control dimension on which the size designation system is based, and the method of indicating the size designation on garment labels, are laid down.

MS 333:1991 SIZE DESIGNATION OF CLOTHES (DEFINITIONS AND BODY MEASUREMENT PROCEDURE) *(7 p)*

Defines dimensions and specifies a standard procedure for measuring the body.

MS 334:1991 SKIN CARE PRODUCTS – SPECIFICATION *(5 p)*

Prescribed the basic requirements for general purpose creams, lotions and gels for skin care as products intended either for lightening or conditioning the skin.

MS 346:2005 INCINERATORS – METHODS OF SPECIFYING PURCHASERS REQUIREMENTS FOR INCINERATION PLANT FOR THE DESTRUCTION OF HOSPITAL WASTE *(6 p) M*

This standard details a method for specifying purchaser's requirements for incinerators for the destruction of hospital waste manufactured to specific' requirements. It does not cover other items of plant such as charging machines, chimneys, flues, etc.

MS 348:1991 AFRIDEV DEEP-WELL HANDPUMP – SPECIFICATION *(56 p)*

Covers requirements for Afridev deepwell handpump suitable for lifting water from depth of 10m to 45m. It applies to boreholes with casing sizes of nominal 100 mm, 115 mm, 127 mm, 150 mm or 200 mm internal diameter.

MS 349:2002 EDIBLE CASSAVA FLOUR – SPECIFICATION *(2 p) M*

Applies to cassava flour intended for human consumption.

MS 351:2000 FERTILIZERS, UREA – SPECIFICATION *(2 p) M*

Specifies the requirements for urea fertilizer.

MS 352:2000 FERTILIZERS, NITRATE OF SODA – SPECIFICATION

This Malawi standard specifies the requirements for nitrate of soda fertilizer, also known as Sodium nitrate ($NaNO_3$).

MS 353:2000 FERTILIZERS – AMMONIUM NITRATE – SPECIFICATION *(2 p) M*

This Malawi Standard specifies requirements for Ammonium nitrate fertilizers (NH_4NO_3), also called Nitrate of ammonia.

MS 354:2000 FERTILIZERS, MURIATE OF POTASH – SPECIFICATION *(5 p) M*

Specifies requirements for muriate of potash fertilizer, also called potassium chloride (KCl).

MS 355:2000 FERTILISERS, SULPHATE OF POTASH – SPECIFICATION *(1 p) M*

Specifies requirements and methods of test for sulphate of potash fertilizer, also called potassium sulphate (K_2SO_4).

MS 356:2004 DESIGN, SPECIFICATION, INSTALLATION AND COMMISSIONING OF INCINERATION PLANT FOR THE DESTRUCTION OF HOSPITAL WASTE – CODE OF PRACTICE *(15 p*) M

This standard gives guidance on the design, specification, installation and commissioning of incineration plant for the destruction of hospital waste. It also gives information on training of staff and maintenance of plant, on collection and transportation of hospital waste.

MS 357: 1998 THREADS FOR FOOTWEAR – METHODS OF TEST *(8 p)*

Covers methods of test for threads for footwear.

MS 358:1991 HIDES AND SKINS, RAW – RULES FOR PRESERVATION *(6 p)*

Prescribes the rules for preservation of raw hides and skins and applies to methods of preservation by air-drying stack salting, dry salting and pickling of raw hides and skins intended for tanning.

MS 359:2004 INCINERATORS – PERFORMANCE OF INCINERATION PLANT FOR THE DESTRUCTION OF HOSPITAL WASTE – METHODS OF TEST AND CALCULATION *(18 p)*

This standard lays down the tolerance limits for industrial effluents discharged into inland surface waters, sampling guidelines and test methods.

Effluents discharged on land or into ground water or air are not covered by this standard.

MS 360:2002 PAPER – DETERMINATION OF BURSTING STRENGTH *(9 p)*

This standard specifies a method for measuring bursting strength of paper submitted to increasing hydraulic pressure. It is applicable to paper having bursting strengths within the range 70 kPa to 1 400 kPa. It is not intended to be used for the components (such as fluting medium or linerboard) of a combined board, for which the method given in ISO 2759 is suitable.

MS 363-1:2002 PACKAGING SACKS – DROP TEST

Part 1: Paper sack *(9 p)*

This standard specifies a method of vertical impact testing on a filled paper sack by dropping. It may be performed either as a single test to investigate the effects of vertical impact or as part of a sequence of tests designed to measure the ability of a sack to withstand a distribution system that includes a vertical impact hazard.

This standard specifies the testing procedure and how the results of tests should be presented. It is based on ISO 2248, but is specifically related to paper sacks.

MS 363-2:2002 PACKAGING SACKS – DROP TEST

Part 2: Sacks made from thermoplastic flexible film ***(9 p)***

This part of standard MS 363 specifies a method of vertical impact testing on a filled sack made from thermoplastic flexible film by dropping. It may be performed either as a single test to investigate the effects of vertical impact or as part of a sequence of tests designed to measure the ability of a sack to withstand a distribution system that includes a vertical impact hazard.

This part of standard MS 363 specifies the testing procedure and how the results of tests should be presented. It is based on ISO 2248, but is specifically related to sacks made from thermoplastic flexible film.

MS 364-1:2002 PAPER AND BOARD – DETERMINATION OF TENSILE PROPERTIES

Part 1: Constant rate of loading method ***(6.p)***

This part of MS 364 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 (constant rate of loading) which causes failure of the test piece in a mean time of 20 ± 5 s. It also specifies methods for calculating the breaking length and tensile index.

MS 364-2:2002 PAPER AND BOARD – DETERMINATION OF TENSILE PROPERTIES

Part 2: Constant rate of elongation method ***(7.p)***

This part of SM 364 specifies a method of measuring the tensile strength, stretch at break, and the tensile energy absorption of paper and board using a test instrument operating with a constant rate of elongation. It also specifies methods for calculating the tensile energy absorption index and the breaking length.

MS 368:1991 METHYLATED SPIRITS – SPECIFICATION ***(5 p)***

Specifies requirements for industrial methylated spirits.

MS 370:1991 METHYLATED SPIRITS - METHODS OF TEST ***(9 p)***

Prescribes methods to be used for ascertaining conformity with specification of methylated spirits.

MS 372:1991 HAND DISH WASHING LIQUIDS – SPECIFICATION ***(9 p)***

Specifies liquid detergents for use in soft or hard water for hand dishwashing and for cleaning of hard surfaces.

MS 373:1991 SCOURING POWDER – SPECIFICATION ***(3 p)***

Covers scouring powders for the removal of tenacious soil from hard surfaces.

MS 374-1:1992 BLACK POLYETHYLENE PIPES FOR THE CONVEYANCE OF LIQUIDS - SPECIFICATION

Part 1: Low Density Polyethylene Pressure Pipes *(10 p) M*

Covers two types of plain unthreaded, black low density polyethylene (LDPE) pipes intended for applications above and below ground for the conveyance of water under pressure when prolonged exposure to elevated temperatures (above 40 ^{0}C) is not likely to be encountered.

MS 374-2:1992 BLACK POLYETHYLENE PIPES FOR THE CONVEYANCE OF LIQUIDS - SPECIFICATION

Part 2: High Density Polyethylene Pressure Pipes *(14p) M*

Covers two types of plain unthreaded, black high density polyethylene (HDPE) pipes intended for applications above and below ground for the conveyance of water under pressure when prolonged exposure to elevated temperatures up to 60 degrees are encountered.

MS 374-3:1992 BLACK POLYETHYLENE PIPES FOR THE CONVEYANCE OF LIQUIDS - SPECIFICATION

Part 3: High Density Polyethylene PE 80 Pressure Pipes *(14p) M*

This part of MS 374 covers plain, unthreaded, high-density black polyethylene (PE-HD) pipes (including pipes with integral fittings) that have a design stress rating of 6,3 MPa. They are intended for applications above and below ground, for the drainage and conveyance of water under pressure where temperatures of up to 40 ºC are encountered.

MS 375:1992 METHYL DIBROMIDE INSECTICIDE FUMIGANT – SPECIFICATION

This standard covers insecticidal liquefied gas fumigants intended for use in soil, food storage premises and containing methyl bromide and chloropicrin.

MS 376:1992 ETHYLENE-DIBROMIDE INSECTICIDE – SPECIFICATION *(6 p)*

Covers insecticidal emulsifiable concentrates containing ethylene dibromide and intended for use as a soil fumigant in plant protection and for use in food storage premises.

MS 378:1991 MINERAL TURPENTINE – SPECIFICATION *(2 p)*

Covers the requirements for mineral turpentine (white spirit) for use in thinning paints and varnishes and for other uses.

MS 384:1992 WOOD PRESERVATIVES – SPECIFICATION *(8 p)*

Covers metallic nephthenate concentrates and solutions of metallic nephthenate suitable for the preservation of timber.

MS 386:1992 BITUMINOUS PAINTS – SPECIFICATION *(6 p)*

Specifies performance and marking requirements for a range of bitumen-based solvent-borne paints. It covers paints for cold application by brushing, spraying, rolling or dipping processes intended to give a coat for the corrosion protection and water-proofing of substrates including iron and steel.

MS 388:1992 OIL GLOSS PAINT FOR INTERIOR AND EXTERIOR USE – SPECIFICATION *(7 p)*

Covers ready mixed decorative oil gloss paint (other than emulsion paints) for interior and exterior use as a finishing coat on metal, wood, sealed plaster walls etc.

MS 389:1992 PLASTER PRIMER (ALKALI-RESISTANT, LATEX TYPE) – SPECIFICATION *(12 p)*

Covers a latex-type alkali-resistant plaster primer for interior and exterior use on dry cement plaster and concrete, unglazed brick, gypsum plasterboard, fibre-cement boards and other compressed fibre wallboard compositions, but not for use on gypsum plaster surfaces.

MS 391:1992 VARNISH FOR INTERIOR USE – SPECIFICATION *(12 p)*

Covers two types of varnish for interior use on wooden surfaces, other than floors and laboratory benches.

MS 392:1992 VARNISH FOR WOOD FLOORS – SPECIFICATION *(9 p)*

Covers two types of varnish for use on interior wooden floors.

MS 393:1992 PAINT UNDERCOAT – SPECIFICATION *(12 p)*

Covers undercoats for air-drying protective and decorative paints for use on primed steel and timbers and on sealed and primed masonry wall boards, compressed fibre and other materials used in the construction and framing of buildings.

MS 394:1992 ALUMINIUM FINISHING PAINT – SPECIFICATION *(6 p)*

Covers two grades of aluminium paint for use as a finishing coat on primed surfaces for exterior and interior exposure.

MS 396:1992 MINERAL SOLVENTS FOR PAINT (WHITE SPIRIT AND RELATED HYDROCARBONS SOLVENTS) – SPECIFICATION *(7 p)*

Specifies the requirements for two categories of mineral solvents for use in paints and varnishes and for other purposes.

MS 397:1992 GLAZED CERAMIC SANITARYWARE – SPECIFICATION *(17 p)*

This standard covers wash-hand basins, pedestal sinks water-closet pans, bidets, urinals and flushing cisterns made of fireclay and of vitreous china, ceramic materials.

MS 398:1992 PAINT REMOVERS – SPECIFICATION *(6 p)*

Covers the requirements for two types of paint removers, each available in two classes, on non flammable, water rinsable, solvent based paint removers.

MS 400:1995 PIGEON PEAS – SPECIFICATION *(2 p) M*

Specifies requirements for shelled dry peas, *Cajanus cajan* L, intended for human consumption.

MS 407:1992 BLACK POLYETHYLENE PIPES FOR THE CONVEYANCE OF LIQUIDS – METHODS OF TEST *(20 p)*

Prescribes methods of test for black polyethylene pipes for the conveyance of liquid.

MS 408:1992 CREOSOTE FOR WOOD PRESERVATION – SPECIFICATION *(6 p)*

Specifies requirements for three types of coal tar creosote for wood preservation.

MS 410:1994 BLACK TEA METHODS OF TEST (6P)

This standard specifies methods of test for black tea.

MS 412-1:1994 BLACK TEA – METHODS OF SAMPLING

Part 1: Sampling from large containers *(2 p)*

Applies to sampling of black tea from large containers, i.e containing more than 20 Kg of loose tea, for example tea chests.

MS 412-2:1994 BLACK TEA – METHODS OF SAMPLING

Part 2: Sampling from small containers *(2 p)*

Applies to sampling of black tea from small containers, i.e those containing not more than 1 kg of loose tea.

MS 414-1:2002 MASONRY CEMENT – SPECIFICATION *(10 p) M*

Specifies requirements for the composition, manufacture, sampling and testing of masonry cement (without air entrainment agents).

MS 417:1995 MEAT MEAL AND MEAT AND BONE MEAL AS LIVESTOCK FEED - SPECIFICATION *(2 p) M*

Prescribes requirements for meat meal and meat and bone meal meat for livestock feeding.

MS 420:1992 LEAD ACID STARTER BATTERIES – CODE OF PRACTICE FOR HANDLING AND - OPERATION *(24 p)*

Covers the operation and maintenance of lead acid starter batteries (type of batteries used in cars, lorries, tractors and motor cycles). It describes how batteries should be maintained in order to get a longer life from them.

MS 422:1997 FISHMEAL AS LIVESTOCK FEED –SPECIFICATION *(2 p) M*

Prescribes requirements for fish meal for livestock feeding.

MS 423:1995 BONE MEAL AS LIVESTOCK FEED – SPECIFICATION *(2 p) M*

Prescribes requirements for bone meal to be used as a mineral supplement in livestock feeds.

MS 424:1997 BLOOD MEAL AS LIVESTOCK FEED – SPECIFICATION *(1 p) M*

Prescribes requirements for blood meal as livestock feed.

MS 456:1993 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) PIPES AND FITTINGS – METHODS OF TEST *(19 p)*

Covers methods of test for unplastisized polyvinyl chloride (UPVC) pressure pipes and fittings for conveyance of potable water, pipes and fittings for use in drainage installations above ground and sewer and drain pipes and fittings.

MS 458:2002 RUBBER SEALS – JOINT RINGS FOR WATER SUPPLY, DRAINAGE AND SEWERAGE PIPELINES MATERIAL – SPECIFICATION *(13.p) M*

This Malawi Standard specifies requirements for materials used in vulcanized rubber seals for

a) cold drinking-water supplies (up to 50 ^{o}C);

b) drainage, sewerage and rainwater systems (continuous flow up to 45 ^{o}C and intermittent flow up to 95 ^{o}C).

MS 459:1994 BLACK TEA – VOCABULARY *(8p)*

This standard provides a list of terms and definitions, applicable to the techniques of processing and assessing black tea for commerce.

MS 460:2008 BLACK TEA – PREPARATION OF LIQUOR FOR USE IN SENSORY TESTS

This Malawi standard specifies a method for the preparation of a liquor tea for use in sensory tests, by means of infusing the leaf.

MS 461:1993 CASHEW KERNELS – SPECIFICATION *(5 p) M*

Specifies requirements and methods of sampling and test for kernels obtained from cashew nuts *(Anacardium occidentale* L*).*

MS 468:1993 MOSQUITO COILS – SPECIFICATION *(6 p)*

Prescribes the physical and active ingredients for mosquito coils.

MS 469:1993 MOSQUITO COILS – METHODS OF TEST *(11 p)*

Lays down the methods of testing mosquito coils for their physical, chemical and biological efficacy.

MS 470:1993 HAIR CREAMS – SPECIFICATION *(2 p) M*

Prescribes requirements for creams and other oil-based emulsion preparations for the hair. These include water-in-oil and oil-in-water emulsions. It does not cover hair oils, brilliantines and pomades.

MS 471:1993 HAIR OILS – SPECIFICATION *(3 p) M*

Prescribes requirements for hair oils and other oil-based cosmetic preparations for hair. This includes hair tonics and hair oil concentrates.

MS 475:1993 HAIR SHAMPOO, SOAP BASED – SPECIFICATION *(3 p) M*

Prescribes the requirements for soap-based hair shampoo. Also applies to shampoo with possible medical effect on the skin, but excludes special shampoos that are only meant for neutralizing purposes.

Hair creams which contain ingredients that have an effect on the physiological functions of the body or scalp or the hair or for which medical functions (theurapeutical) claims are made are not covered by this standard.

MS 477:1997 FOOD FOR INFANTS AND CHILDREN – CODE OF HYGIENIC PRACTICE *(10 p) M*

This Malawi Standard provides a code of hygienic practice for all pre-packed foods intended to be for special use for infants and/or children. It contains the minimum hygienic requirements for the handling (including production, processing, packaging, storage, transportation, distribution and sale) of such foods to ensure a safe, sound and wholesome product.

MS 479:1997 AVOCADO – SPECIFICATION *(2 p) M*

Specifies requirements for fresh avocados to be supplied in export and local specified markets. The standard stipulates requirements for handling, grading and packaging of the produce up to dispatching stage.

MS 480:1995 COOKSTOVES, SOLID FUEL – TYPE 1 – METHODS OF TEST *(6 p)*

Covers methods of test for solid fuel cookstoves – (Type 1) for the purpose of verification and ascertaining of relevant performance and construction.

MS 488:2004 WOODEN CEILING AND PANELING BOARDS - SPECIFICATION(10p) M

This specification covers three grades of profiled boards (planed and sanded) manufactured from hardwood or softwood timber and intended for use in ceilings or paneling.

MS 489:1995 WOODEN POLES AND CROSS-ARMS FOR POWER TRANSMISSION, LOW VOLTAGE RETICULATION AND TELEPHONE SYSTEMS

Covers wooden poles impregnated with creosote or with wood preservative with a creosote base intended to be used as upright supports for low voltage reticulation and telephone lines, and as upright supports and cross-arms for power transmission lines.

MS 493:1995 TIMBER, HARDWOOD FURNITURE – SPECIFICATION *(18 p)*

Covers three basic grades of rough-sawn hardwood timber derived from trees of the *Podocarpus spp*, intended for use in the manufacture of furniture.

MS 494:1995 BOARDS, SOFTWOOD FLOORING – SPECIFICATION *(15 p)*

Covers the requirements for three grades of softwood flooring boards obtained from timber derived from trees of the general Pinus, Cedrus, Podocarpus and Cupressus grown in Southern Africa.

MS 495:1995 BOARDS, FIBRE-CEMENT – SPECIFICATION *(8 p)*

Covers flat and flat-pressed boards manufactured from fibre cement.

MS 498:2008 ILLUMINATING PARAFFIN – SPECIFICATION *(3 p) M*

This Malawi standard covers a hydrocarbon fuel suitable for use in wick-fed, pressure vapourising and other paraffin burning appliances for the purposes of illumination.

MS 499:1995 TIMBER, STRESS GRADED SOFTWOOD GENERAL STRUCTURAL – SPECIFICATION *(17 p)*

Covers one stress of visually or mechanically structural timber (including finer jointed timber) derived from trees of the general coniferae grown in Southern Africa.

MS 502:1995 SOFTWOOD FURNITURE TIMBER – SPECIFICATION *(10 p) M*

Covers two grades of rough-sawn timber derived from trees of general of the coniferae grown in Southern Africa and intended for use in furniture manufacture.

MS 503:1995 SOFTWOOD JOINERY TIMBER – SPECIFICATION *(11 p)*

Covers one grade of rough - sawn timber derived from trees of the general coniferae grown in Malawi and intended for use in joinery work.

MS 509:1995 IRON SHEETS, GALVANISED – SPECIFICATION *(11 p)*

Specifies requirements for materials, profile and dimensions of galvanised corrugated and troughed iron sheets for roofing, cladding and other general uses.

MS 510:1997 FISH MEAL – VOCABULARY

This Malawi standard defines terms relating to fish meal.

MS 512:2009 ANIMAL FEEDING STUFFS-DETERMINATION OF FREE AND TOTAL GOSSYPOL

This Malawi Standard specifies a method for the determination of the content of free and total gossypol and chemically related substances in animal feeding stuffs.

The method is applicable to cotton seed and cotton seed meals and cakes, and to compound feeding stuffs containing these substances.

The detection limit for free gossypol is 20 mg/kg and that for total gossypol is 50 mg/kg.

MS 517:2008 PULSES- DETERMINATION OF GLYCOSIDIC HYDROCYANIC ACID

This Malawi Standard specifies a method for the determination of glycosidic hydrocyanic acid in pulses.

The method is generally applicable but may require modification if sulphides or certain other sulphur compounds are present. Conversely, if no such compounds are present, a mercurimetric titration procedure may be used, details of which are given in the annex.

MS 519:2000 THOBWA POWDER – SPECIFICATION (4 p) M

This Malawi Standard covers the physical, chemical and microbiological requirements, and methods of sampling and testing for thobwa powder.

MS 520:2000 ELECTRICITY APPLIANCES FOR HEATING LIQUIDS – SPECIFICATION *(5 p) M*

Specifies constructional and performance requirements for electrical appliances of rated capacity not exceeding 80 litres for heating liquids for household and similar use and intended for operation on a.c supply voltages not exceeding 250 V to earth and at current ratings not exceeding 16A.

MS 521:2002 CO_2 GAS CARTRIDGES (STEEL) – SPECIFICATION *(5 p) M*

This Malawi standard specifies the characteristics of refillable, co_2 gas cartridges (steel) of capacities up to 500 g.

MS 522:2000 PACKAGING SACKS – METHODS OF SAMPLING EMPTY SACKS FOR TESTING *(2 p)*

This Malawi Standard specifies a method of obtaining a representative sample of empty sacks for testing.

The standard is applicable when sampling in order to assess the average quality of a consignment of empty sacks. The method is not suitable to sampling for production control. The method applies to all types of empty sacks.

MS 523:2000 PAPER – DETERMINATION OF TEARING STRENGTH *(7 p)*

Specifies a method for determining the tearing resistance of paper. It can also be used for light boards if the tearing resistance is within the range of the instrument.

MS 524:2003 PAPER AND BOARD – DETERMINATION OF BURSTING STRENGTH AFTER IMMERSION IN WATER *(2 p)*

This Malawi Standard specifies a method for the determination of the wet strength of paper and board by measuring its bursting strength after it has been immersed in water for a specified period.

In principle, the method is applicable to most kinds of paper and board, provided that an appropriate immersion time is agreed between the interested parties.

Different results may be found if the sample is re-tested after a period of time.

MS 526:1997 VEGETABLE – TANNED OUTERSOLE LEATHER – SPECIFICATION *(3 p) M*

Covers outer-sole leather tanned with vegetable tanning materials only.

MS 528:2000 PVC-INSULATED CABLES FOR ELECTRICITY SUPPLY – SPECIFICATION *(44 p) M*

This standard specifies requirements dimensions for PVC-insulated cables for operation at nominal voltages up to and including 1900 V to armour or earth and 3300 V between conductors.

The standard covers cables intended for general use where the combination of the ambient temperature and temperature rise due to the loading current results in a conductor temperature not exceeding 70 ^{o}C.

MS 529-1:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 1: DEFINITIONS (*3p)*

This part of the specification defines the terms used in the production of reconditioned tyres and includes a diagram illustrating the cross-section of a typical tyre.

MS 529-3:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 3: REPAIRS *(5P) M*

This specification covers the requirements for repairs of permissible defects in tyres that are to be reconditioned in accordance with the relevant part of the specification The method of repair, the materials, and the equipment to be used are also covered.

MS 529-4:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 4: PASSENGER CAR TYRES – SPECIFICATION *(10p) M*

This part of the specification covers the requirements for tyres for passenger cars, station wagons, and caravans, that are to be reconditioned (by the use of a hot moulding process) by remoulding or retreading or top-capping, and for the methods of reconditioning and the equipment to be used.

MS 529-5:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 5: LIGHT TRUCK CROSS-PLY TYRES *(9p) M*

This part of the specification covers the requirements for two classes of cross-ply tyres for light trucks that are to be reconditioned (by the use of a hot moulding process) by remoulding,

retreading, or top-capping, and for the methods of reconditioning and the equipment to be used.

MS 529-6:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 6: BUS AND TRUCK CROSS-PLLY TYRES *(13p) M*

This part of the specification covers the requirements for five classes of cross-ply tyres for buses, trucks, and trailers that are to be reconditioned (by the use of a hot mounding process) by retreading or top-capping, and for the methods of reconditioning and the equipment to be used.

MS 529-7:2005 REPRODUCTION OF RECONDITIONED TYRES

PART 7: TYRES RECONDITIONED BY THE PROCURED TREAD PROCESS *(14p) M*

This part of the specification covers the reconditioning, by the use of a pre-cured tread process, of tyres for passenger cars, station wagons, caravans, light trucks, trucks, and buses. Requirements are laid down for the casings, the methods of reconditioning, and the equipment to be used as well as for the finished product.

MS 530:1997 FARM IMPLEMENTS – METHODS OF SAMPLING *(3 p)*

Prescribes the recommended procedures for sampling of agricultural equipment and their components.

MS 532:1999 BOREHOLE CONSTRUCTION – CODE OF PRACTICE *(5 p) M*

Covers boring method, drilling diameters and depth, borehole cleaning, alignment and verticality, casing and screens for hand pumps installation and headwork's construction, testing and test methods, sampling and record of strata.

MS 538:1999 DIESEL – SPECIFICATION *(5 p) M*

Prescribes requirements and methods of sampling and test for diesel fuels suitable for various types of diesel engines.

MS 539:2002 INDUSTRIAL EFFLUENTS – TOLERANCE LIMITS FOR DISCHARGE INTO INLAND SURFACE WATERS *(18 p) M*

The standard lays down the tolerance limits for industrial effluents discharged into inland surface waters, as well as sampling guidelines and test methods

MS 542:2008 SORGHUM GRAINS - SPECIFICATION

This Malawi standard applies to sorghum grains as defined in **section 3**, for 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 sorghum grain.

MS 546:2009 POULTRY PROCESSING – CODE OF PRACTICE

This code is concerned with poultry, poultry carcasses, poultry parts and other edible portions thereof, which have not yet been treated in any way to ensure their preservation, except that they have been chilled or frozen and are for human consumption, whether by direct sale as such or through further processing. The code applies to all premises in which poultry is slaughtered, packed, or otherwise handled in the course of preparation, and all premises in

which poultry parts are processed, packed, or otherwise handled in the course of preparation. It also applies to conditions of transport from all such premises.

MS 549:2001 MILK POWDER HANDLING – CODE OF PRACTICE *(9 p) M*

This code of practice recommends general hygienic and technological practices for use in the handling (including production, preparation, processing, packaging, transportation and distribution) of milk powder for human consumption to ensure safe, sound and wholesome product.

MS 552:2005 SAFETY OF WELDING – CODE OF PRACTICE *(16p) M*

This standard establishes the general principles for the protection of persons from injury and illness, and for the protection of property and equipment from damage that can arise from welding processes.

MS 554:1996 PEANUT BUTTER – SPECIFICATION *(9 p) M*

The standard covers the requirements, and methods of sampling and test for peanut butter of two types; smooth texture peanut butter and crunchy texture peanut butter.

MS 555:2004 GLYCERINE FOR COSMETIC INDUSTRY – METHODS OF TEST *(18 p*)

Lays down methods of sampling and test for glycerine . It describes methods for sampling quantities of glycerine, either crude or refined, for industrial use, in the course of filling, or already contained in drums or in transportable or fixed tanks.

MS 557:2001 GLYCERINE FOR COSMETIC USE –SPECIFICATION *(9 p) M*

This standard specifies requirements for glycerine used as a cosmetic.

MS 566:1998 WAX SHOE POLISH – SPECIFICATION *(5 p) M*

Covers requirements for wax shoe polish of any colour, suitable for general application to leather shoes and goods.

MS 569:1995 TOILET PAPER – SPECIFICATION *(14 p)*

Covers three grades of creped toilet paper supplied in rolls.

MS 573:2007 ETHANOL – SPECIFICATION

Specifies requirements for four grades of ethanol, i.e. food grade, industrial grade, analytical grade, and fuel grade ethanol. It applies to ethanol that is of agricultural origin (starch or sugar based).

MS 577:2001 BENZENE, CLEANING – SPECIFICATION *(1 p) M*

Covers a hydrocarbon solvent suitable for general clearing purposes and for the clearing of silver platinum contact of telecommunication systems.

MS 588:2003 CHITENJE – SPECIFICATION *(3 p) M*

This Malawi Standard specifies the requirements for chitenje.

MS 590:2002 POLYVINYL ACETATE DISPERSION ADHESIVES FOR WOOD – SPECIFICATION *(5 p) M*

Covers the chemical, physical and performance requirements for three exposure classes of non-structural synthetic adhesives dispersed in water and based on the polymerization of vinyl acetate or on its co-polymerization**.**

MS 591:1996 CREOSOTE, WOOD PRESERVING (HIGH TEMPERATURE) – SPECIFICATION *(5 p) M*

Covers creosote that is derived entirely from coal tar produced by the high-temperature carbonization of bituminous coal, and that is intended for use in the preservation of timber.

MS 592:1996 CREOSOTE, WOOD PRESERVING (LURGI-GASIFICATION PROCESS) – SPECIFICATION *(4 p) M*

Covers creosote that is derived entirely from coal tar produced by the Lurgi-gasification processing of bituminous coal, and that is intended for use in the preservation of timber.

MS 596:2005 MIXTURES OF COPPER-CHROMIUM ARSENIC COMPOUNDS FOR TIMBER PRESERVATIVES – SPECIFICATION *(5p) M*

This specification covers mixtures of copper-chromium-arsenic compounds (in the form of a powder, a granular powder, a paste or a liquid) for timber preservation.

MS 597:2005 BORON TIMBER PRESERVATIVES – SPECIFICATION *(4P) M*

This Draft Malawi Standard covers requirements for the following two types of boron timber preservatives:

Type I: A sodium borate of a composition corresponding approximately to that of disodium octaborate tetrahydrate ($Na_2B_8O_{13}4H_2O$).

MS 598:2002 SAFETY IN THE WOOD PRESERVATION INDUSTRY – CODE OF PRACTICE *(5 p) M*

Serves as practical guide on safety and health aspects in and around timber treatment plans. It is applicable to any treatment process in which water borne preservatives, flame retardant organic solvent-based preservation or creosote are used.

MS 599-1:2002 FIBREBOARD PRODUCTS – SPECIFICATION

Part 1: Uncoated fibreboards *(11 p) M*

This part of MS 599 specifies the characteristics of uncoated fibreboard

MS 599-2:2002 FIBREBOARD PRODUCTS – SPECIFICATION

Part 2: Coated fibreboards *(8 p) M*

This part of MS 599 specifies the characteristics of coated fibreboard.

MS 600:2004 LAMINATED TIMBER (GLULAM) – SPECIFICATION *(21 p) M*

This specification covers the general requirements for softwood and hardwood laminated members that consist of laminations (glued or otherwise) bonded together with the general fibre direction parallel to the longitudinal or curved axis of each member.

MS 601:1997 NUTMEG – SPECIFICATION *(5 p) M*

This Malawi Standard specifies requirements for nutmeg, whole or broken, and for mace, whole or in pieces, obtained from the nutmeg tree (*Myristica fragrans* Houttuyn) for wholesale commercial purposes.

MS 602:2005 MECHANICAL STRESS GRADING OF SOFTWOOD –TIMBER (FLEXURAL METHOD) – CODE OF PRACTICE *3p)*

This code of practice covers the mechanical stress grading, by the determination of stiffness in bending, of solid timber (free from glued or other joints) derived from trees f the genus *Pinus*.

MS 609:1995 CEREALS AND PULSES – DETERMINATION OF THE MASS OF 1000 GRAINS *(2 p)*

The standard specifies a method for the determination of the mass of 1000 grains of cereals and pulses. The standard is applicable to all cereals and pulses with the exception of seed lots for sowing purposes.

MS 610:1995 CEREALS AND CEREAL PRODUCTS – DETERMINATION OF MOISTURE CONTENT (BASIC REFERENCE METHOD)

This Malawi standard specifies the basic reference method for the determination of the moisture content of cereals and cereal products.

The method does not apply to maize, for which an identical method, called the absolute method, is specified in the annex to ISO 6540.

This basic method, which necessitates the employment of special equipment and experienced analysts, is thereof only suitable for use in specialized laboratories, and is intended to serve as a standard for checking and perfecting routine methods for the determination of moisture content (see particularly ISO 712). It is not intended to be used for settling commercial disputes.

MS 612:1997 SORGHUM – DETERMINATION OF TANNIN CONTENT *(2 p)*

Specifies a universal method for the determination of tannin content in sorghum grains.

MS 615:2005 WASTE WITHIN HEALTH CARE FACILITIES – HANDLING AND DISPOSAL (CODE OF PRACTICE) *(18 p) M*

This standard develops criteria for segregation, collection, movement, storage and on-site disposal of waste within healthcare units, biological research facilities, abattoirs and veterinary surgeries.

MS 616:2002 GLAZING PUTTY FOR WOODEN AND METAL WINDOW FRAMES – SPECIFICATION *(10 p) M*

This specification covers the following two types of putty for glazing of window frames
Type I: Self-setting type for use in primed metal and wooden window frames
Type II: Reaction type for use in primed metal and primed window frames.

MS 617-1:1998 PIPES AND FITTINGS MADE OF UN-PLASTICIZED POLY (VINYL CHLORIDE) (PVC-U) FOR WATER SUPPLY – SPECIFICATION

Part 1: General *(2 p) M*

Specifies the general aspects of pipes, joints, fittings (post-formed and moulded) and ancillaries, made of unplasticized poly (vinyl chloride) (PVC-U), for a piping system intended to be used for buried water mains and services and for water supplies above ground, both inside and outside buildings.

MS 617-2:1998 PIPES AND FITTINGS MADE OF UN-PLASTICIZED POLY (VINYL CHLORIDE) (PVC-U) FOR WATER SUPPLY – SPECIFICATION

Part 2: Pipes (with or without integral sockets) ***(2 p) M***

Specifies the characteristics and properties of extruded pipes made of unplasticized poly(vinyl chloride) (PVC-U), with or without socket(s) (intergral or not), and intended to be used for buried water mains and services and not for water supplies above ground, both inside and outside buildings.

MS 617-3:1998 PIPES AND FITTINGS MADE OF UN-PLASTICIZED POLY (VINYL CHLORIDE) (PVC-U) FOR WATER SUPPLY – SPECIFICATION

Part 3: Fittings and joints ***(4 p) M***

Specifies the characteristics and properties of fittings (injection moulded and post-formed) and joints made of unplasticized poly (vinyl chloride) PVC-U, to be used for buried water mains and services and for water supplies above ground, both inside and outside buildings.

MS 619:2000 FRUIT JUICES – SPECIFICATION ***(3 p) M***

Applies to fruit juices made from fruits of a single species. It does not apply to any fruit juice which is subject to a specific Malawi Standard.

MS 620:2003 STRUCTURED WALL PIPES AND FITTINGS OF UPVC FOR BURRIED DRAINAGE AND SEWERAGE SYSTEMS – SPECIFICATION ***(33 p) M***

This standard covers unplasticized polyvinyl chloride (UPVC) structured wall pipes (including pipe fittings) with an essentially smooth inside surface, of nominal diameter 110 mm up to and including 1000 mm, and intended for buried gravity drainage and sewerage pipe systems for the transportation of soil and waste discharge of domestic and industrial origin. Pipes of larger diameter are considered to be engineering products and are therefore not included in this standard.

Where the piping carries industrial discharge, chemical and temperature resistance have to be taken into account.

MS 624:2001 NUTRITION LABELLING – GUIDELINES ***(3 p) M***

Recommends procedures for the nutrition labeling of foods.

MS 625:2001 NUTRITION CLAIMS – GUIDELINES ***(2 p) M***

Relate to nutrition claims made for a food irrespective of whether or not a food is covered by an individual Malawi Standard.

MS 626:2002 SAFETY HELMETS FOR INDUSTRIAL USE AND FOR FIREMEN – SPECIFICATION ***(16 p) M***

This specification 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 and during fire-fighting and rescue operations.

MS 627:1998 FIBRE-CEMENT SHEETS FOR ROOFING AND CLADDING (CORRUGATED AND FLAT) – SPECIFICATION ***(9 p) M***

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

MS 629:1996 ASBESTOS-CEMENT DRAIN AND SEWER PIPES – SPECIFICATION ***(5 p) M***

Applies to uncoated asbestos **–** cement pipes intended for underground use as drain or sewer pipes for gravity flow lines.

MS 630:2005 ROASTED AND GROUND COFFEE – SPECIFICATION *(9P)*

This standard prescribes the requirements and methods of sampling and test for roasted and ground coffee.

MS 632:1997 FERTILIZERS – DETERMINATION OF AMMONIACAL NITROGEN CONTENT TITRIMETRIC METHOD *(2 p)*

Specifies titrimetric method after distillation, for the determination of the ammoniacal nitrogen content of fertilizers. The method is applicable only in the absence of urea or its derivatives, or cynamide and of organic nitrogenous compounds.

MS 633:2001 MILK POWDER – SPECIFICATION *(8 p) M*

Specifies requirements and methods of sampling and test for milk provides (dried milk).

MS 639-1:1997 RETRO-REFLECTIVE REGISTRATION PLATES FOR MOTOR VEHICLES – SPECIFICATION

Part 1: Metal blanks *(9 p) M*

. Specifies requirement for two types of blanks intended for use in the production of the embossed registration plates that are covered by Part 2.

MS 639-2:1997 RETRO-REFLECTIVE REGISTRATION PLATES FOR MOTOR VEHICLES – SPECIFICATION

Part 2: Metal registration plates *(2 p) M*

Specifies requirements for registration plates that are produced by the embossing of metal blanks with a registration mark and that are intended for use on motor vehicles (including motor cycles and motor tricycles) and trailers.

MS 639-3:1997 RETRO-REFLECTIVE REGISTRATION PLATES FOR MOTOR VEHICLES – SPECIFICATION

Part 3: Plastics blanks *(6 p) M*

Specifies requirements for plastics blanks intended for use in the production of the registration plates that are covered by Part 4.

MS 639-4:1997 RETRO-REFLECTIVE REGISTRATION PLATES FOR MOTOR VEHICLES – SPECIFICATION

Part 4: Plastic registration plates *(17 p) M*

Covers requirements for plastic registration plates that are produced by applying a registration mark and border to plastic blanks and that are intended for use on motor vehicles (including motor cycles and motor tricycles) and trailers.

MS 641:2002 SAFETY HELMETS FOR MOTOR CYCLISTS – SPECIFICATION *(24 p) M*

This specification covers the requirements for the general design, construction, performance, marking, labelling, and testing of safety helmets for use by motor cyclists on the roads.

MS 647-2:2003 SAFETY GLASS FOR VEHICLES – SPECIFICATION PART2: LAMINATED SAFETY GLASS FOR VEHICLES

This specification covers laminated safety glass (excluding windscreens) for use in vehicles.

MS 650:2000 CONDUCTORS IN INSULATED CABLES AND CORDS – SPECIFICATION (*12 p) M*

This Malawi Standard specifies the nominal cross-sectional areas and requirements, including numbers and sizes of wires and resistance values, for conductors in electric cables and cords of a wide range of types. These conductors include solid and stranded copper and aluminium conductors in cables for fixed installations and flexible copper conductors.

The applicability of this standard to a particular type of cable is as specified in the standard for that type of cable. It does not apply, for example, to conductors for telecommunication purposes, and for some cables, for example flexible cables having the cores twisted together with unusually short lays, where the requirements specified for the class of conductors apply only in part.

MS 655-1:1998 GAMING EQUIPMENT – SPECIFICATION

Part 1: Casino equipment *(34 p) M*

Specifies constructional and operational requirements for gaming and related equipment that resides on, or is operated on (or both) the gaming floor of a Casino.

MS 655-2:1998 GAMING EQUIPMENT – SPECIFICATION

Part 2: Limited payout gaming equipment *(4 p) M*

Covers the constructional and operational requirements for gaming equipment operated under a gaming license at a site, other than a Casino, approved by the Legislative Authority.

MS 655-3:1998 GAMING EQUIPMENT – SPECIFICATION

Part 3: Monitoring and control systems for gaming equipment *(13 p) M*

Stipulates general hardware and software requirements, and the list of significant events, required by Malawi Gaming Board for Monitoring and Control Systems for gaming.

MS 655-4:1998 GAMING EQUIPMENT – SPECIFICATION

Part 4: Chips, plagues and tokens *(6 p) M*

Specifies the constructional and design requirements of chips, plaques and tokens to be used in Licensed premises as specified by Legislation Authorities (LA).

MS 655-5:1998 GAMING EQUIPMENT – SPECIFICATION

Part 5: General equipment *(4 p) M*

Covers constructional and design requirements of the general equipment to be used in licensed premises as specified by LA.

MS 656:2002 ADHESIVES FOR USE WITH CERAMIC TILES AND MOSAICS – SPECIFICATION *(15 p) M*

This Malawi Standard specifies the minimum requirements for adhesives used for fixing ceramic tiles to ensure that they are suitable for their proposed application.

MS 657-1:2004 PORTABLE RECHARGEABLE FIRE EXTINGUISHERS – SPECIFICATION

Part 1: Water type extinguishers *(12 p) M*

This standard specifies the characteristics of stored pressure, portable rechargeable fire extinguishers of the water type, of capacity in the range 9 ℓ to 10 ℓ (inclusive) and suitable for use on class A fires only.

MS 657-2:2004 PORTABLE RECHARGEABLE FIRE EXTINGUISHERS – SPECIFICATION

Part 2: Dry powder type extinguishers *(13 p) M*

This standard specifies the characteristics of stored-pressure portable rechargeable fire extinguishers of the dry powder type of capacity not exceeding 12 kg and suitable for use on fire of classes A and B.

MS 657-3:2004 PORTABLE RECHARGEABLE FIRE EXTINGUISHERS – SPECIFICATION

Part 3: Foam type extinguishers *(13 p) M*

This standard specifies the characteristics of stored pressure, portable rechargeable fire extinguishers of the foam type, of capacity not exceeding 10 ℓ and suitable for use on a variety of identified classes of fire.

MS 657-4:2004 PORTABLE RECHARGEABLE FIRE EXTINGUISHERS – SPECIFICATION

Part 4: CO_2 type extinguishers *(13 p) M*

This Malawi Standard specifies the characteristics of portable rechargeable fire extinguishers of the CO_2 type, of capacity not exceeding 9 kg and suitable for use on fires of classes B and C.

MS 658-1:2004 THE CLASSIFICATION, USE AND CONTROL OF FIRE-FIGHTING EQUIPMENT – CODE OF PRACTICE

Part 1: Portable fire extinguishers *(23 p) M*

This part of the code of practice covers the classification, selection, installation and control of portable fire extinguishers (excluding non-refillable fire extinguishers) that can be carried by one person. It also covers the conditions under which mobile fire extinguishers may be used.

MS 658-2:2004 THE CLASSIFICATION, USE AND CONTROL OF FIRE-FIGHTING EQUIPMENT – CODE OF PRACTICE

Part 2: Fire hose reels *(4 p) M*

This part of the code of practice covers the siting and site control of fire hose reels installed in premises.

MS 659:2002 PNEUMATIC TYRES FOR PASSENGER CARS AND LUGGAGE TRAILERS – SPECIFICATION *(11 p) M*

This standard applies to new pneumatic tyres primarily designed for use on vehicles of category M1, O1, and O2. It does not apply to tyres designed for speeds exceeding 240 km/h.

MS 660:2002 PNEUMATIC TYRES FOR COMMERCIAL VEHICLES AND TRAILERS – SPECIFICATION *(12 p) M*

This standard applies to new pneumatic tyres primarily designed for use on vehicles of category M_2, M_3, N_1, N_2, N_3, O_3 and O_4; it does not however apply to:

Tyres of a speed category below 80 km/h; or
Tyres designed for cycles and motor cycles.

MS 663:2001 MIXED FRUIT JUICES – SPECIFICATION *(4 p) M*

It prescribes the requirements for mixed fruit juice which shall be obtained from two or more species of sound, ripe fruits.

MS 665:2001 MIXED FRUIT NECTARS – SPECIFICATION *(4 p) M*

Applies to mixed fruit nectars for direct consumption.

MS 666-1:2002 COMPONENTS OF PRESSURE PIPE SYSTEMS (PVC-U) − SPECIFICATION

Part 1: Unplasticized poly(vinyl chloride) (PVC-U) pressure pipes (*33 p)*

This part of MS 666 specifies requirements for unplasticized poly (vinyl chloride) (PVC-U) pipes and injection-moulded fittings that are intended for above-ground pressure applications for the conveyance of portable water in reticulation systems and for other applications in which continuous temperatures in excess of 25 ^{o}C are not encountered. Minimum wall thicknesses are given, based on a design stress rating of 10 MPa for pipes of nominal outside diameter 90 mm or less and 12.5 MPa for pipes of nominal outside diameter 110 mm and more. Seven classes of pipes and three classes of fittings for reticulation systems are covered.

Twenty-five nominal sizes of pipes for reticulation systems (ranging from 16 mm to 630 mm) are specified.

Fittings are restricted to those for use in reticulation system and manufactured by injection moulding, and nominal sizes in the range 16 mm to 200 mm. Fittings made by hot-gas fusion and hot-plate fusion techniques are not covered in this part of MS 666. This part of MS 661 includes requirements for the components of two types of joints in reticulation system, i.e. solvents-weld joints (for pipes of nominal size not exceeding 200 mm) and rubber ring joints.

MS 666-2:2002 COMPONENTS OF PRESSURE PIPE SYSTEMS (PVC-U) − SPECIFICATION

Part 2: Modified poly(vinyl chloride) (PVC-M) pressure pipe systems *(30 p*)

This part of MS 666 specifies requirements for modified unplasticized poly(vinyl chloride) (PVC-M) 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 potable water in reticulation systems and for other applications, in which continuous temperatures in excess of 25 ºC are not encountered. Minimum wall thicknesses based on a design stress rating of 18 MPa are given for pipes of normal outside diameter 50 mm to 630 mm. Six classes of pipe are covered, together with post-formed fittings and bends.

This part of MS 666 also includes requirements for the components of rubber joint rings.

Fittings made by hot-gas and hot-plate fusion techniques are not covered in this part of MS 666.

MS 667-1:2002 PETROLEUM INDUSTRY – TERMINOLOGY

Part 1: Raw materials and products *(12 p)*

Consists of a list of English terms in use in the petroleum industry to indicate raw materials or petroleum products, together with the corresponding definitions.

MS 667-2:2002 PETROLEUM INDUSTRY – TERMINOLOGY

Part 2: Properties and tests *(11 p)*

The standard consists of a list of English terms in use in the petroleum industry to indicate properties of petroleum products and test methods, together with the corresponding definitions.

MS 671:2002 TOILET SOAP (SUPERFATTED) – SPECIFICATION *(4 p) M*

This specification covers superfatted toilet soap that incorporates unsaponified matter that imparts beneficial in-use characteristics.

The specification does not cover speciality soaps, such as soap for use by medical personnel, medicated soap, transparent soap and sea-water soap.

MS 675:2005 SAFETY PROCEDURES FOR THE DISPOSAL OF SURPLUS PESTICIDES AND ASSOCIATED TOXIC WASTE – CODE OF PRACTICE (*22 p) M*

This code of practice covers the following aspects for the safe disposal of pesticides, pesticide waste and empty pesticide containers:

(a) General precautions to be taken during the use of pesticides;

(b) Directives for the disposal of pesticide waste;

(c) Directives for the decontamination and disposal of empty pesticide containers;

(d) Directives for the treatment of pesticide spillages and leakage, and the action to be taken in the case of fires and freight emergencies that involve pesticides.

MS 678:2005 DRINKING WATER QUALITY - CONTROL AND SURVEILLANCE OF WATER IN PUBLIC SUPPLY NET WORKS *(3p) M*

This standard defines the control and surveillance of water in public water supply networks, It also indicates the sample frequency and types of analysis required.

MS 682-1:2002 WATER QUALITY – SAMPLING PART1 – GUIDANCE ON THE DESIGN OF SAMPLING PROGRAMMES AND SAMPLING TECHNIQUES (*23 p*)

This part of MS 682 sets out the general principles for, and provides guidance on, the design of sampling programmes and sampling techniques for all aspects of sampling water (including waste waters, sludges, effluents and bottom deposits).

It does not include detailed instructions for specific sampling situations, which are covered in the various other parts of MS 682. Also, it does not include microbiological sampling, which is covered in ISO 19458.

MS 682-3:2002 WATER QUALITY – SAMPLING (20*p*)

Part 3: Guidance on the preservation and handling of water samples

This part of standard gives general guidelines on the precautions to be taken to preserve and transport all water samples including those for biological analyses but not those intended for microbiological analysis.

MS 682-4:2002 WATER QUALITY – SAMPLING (6 *p*)

Part 4: Guidance on sampling from lakes, natural and man-made

This part of standard presents detailed principles to be applied to the design of sampling programmes, to sampling techniques and the handling and preservation of samples of water from natural and man-made lakes

MS 682-6:2002 WATER QUALITY – SAMPLING (12*p*)

Part 6: Guidance on sampling of rivers and streams

This standard sets out the principles to be applied to the design of sampling programmes, sampling techniques and the handling of water samples from rivers and streams for physical and chemical assessment,

MS 684:2003 WATER TAPS (METALLIC BODIES) – SPECIFICATION *(13 p) M*

This standard covers requirements for four classes of screw-down and non-screw-down metallic water taps (including stop taps) for the supply of water at temperatures not exceeding 75^{o}C. It also covers stopcocks of sizes up to and including 50 mm. It does not cover thermostatic mixer taps, single control mixer taps, metering taps, demand taps or taps of which the bodies are made entirely of a plastics material.

MS 685:2003 WC FLUSHING CISTERNS – SPECIFICATION *(8 p) M*

This standard covers 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-flush operation, a dual-flush operation or an interruptible-flush operation.

MS 686:2003 AUTOMATIC SHUT OFF FLUSH VALVES FOR WATER CLOSETS FOR URINAL – SPECIFICATION *(6 p) M*

This standard covers the requirements for Automatic shut-off flush valves for water closets and urinals that are intended for supplying a pre-set amount of water.

MS 688:2004 UNPLASTICIZED POLY (VINYL CHLORIDE) (PVC-U) SOIL, WASTE AND VENT PIPES AND PIPE FITTINGS – SPECIFICATION *(31 p) M*

This standard covers unplasticized poly(vinyl chloride) (PVC-U) pipes (including vent pipes) and pipe fittings of nominal sizes 40-160 mm intended for above-ground non-pressure applications for the conveyance of soil (human excrement or faeces) and waste water where continuous temperatures in excess of 60 ºC are not encountered.

MS 689:2004 THE INSTALLATION OF POLYETHYLENE AND POLY(VINYL CHLORIDE) (PVC-U) AND (PVC-M) PIPES – CODE OF PRACTICE *(29 p) M*

This Malawi Standard defines the control and surveillance of water in public water supply networks. It also indicates the frequency and types of analysis required.

MS 691:2005 TOLERANCE LIMITS FOR DOMESTIC SEWAGE EFFLUENTS DISCHARGED INTO IN LAND SURFACE WATERS – SPECIFICATION *(2p) M*

This standard lays down the tolerance limits for sewage effluents discharged into inland surface waters. It does not cover sewage effluents discharged on land.

MS 695:2004 BATTERY-BASED PHOTOVOLTAIC (PV) SOLAR HOME SYSTEMS – SPECIFICATION *(5 p) M*

This Malawi Standard specifies the practical minimum requirements for a battery based photovoltaic (PV) system.

MS 696:2004 BATTERY-BASED PHOTOVOLTAIC (PV) SOLAR HOME SYSTEMS – CODE OF PRACTICE *(21 p) M*

This code of practice specifies the guideline on how a battery based photovoltaic (PV) system should be designed for the system to continue working for a period of between three to five years without problems.

MS 697:2005 INDUSTRIAL NOISE AFFECTING MIXED RESIDENTIAL AND INDUSTRIAL AREA – METHOD FOR RATING *(9 p)*

The standard describes methods for determining, at the outside of the building:

a) noise levels from factories, industrial premises or fixed installation and sources of an industrial nature in commercial premises; and

b) background noise level.

MS 699:2004 BOTTLED DRINKING WATERS OTHER THAN NATURAL MINERAL WATER – SPECIFICATION *(8p) M*

This Malawi standard specifies the description, treatment, testing, packaging and labelling of water that is not natural mineral water. The water may be offered as packaged non-carbonated ("still") water or as packaged carbonated ("sparkling") water, with or without permitted substances.

MS 700:2002 SOCIAL RESPONSIBILITY – REQUIREMENTS FOR COMBATING CHILD LABOUR *(6 p)*

This Malawi Standard specifies requirements of a work environment where an organization

a) aims to combat or eliminate child labour through the development, maintenance and enforcement of relevant policies, procedures and practices;

b) needs to demonstrate to interested parties that policies, procedures and practices of the organization are in conformity with the requirements of this standard.

The requirements of this standard shall apply to all industrial labour regardless of size or location of the organization. The standard however does not apply to domestic labour.

MS 702:2004 CAUSTIC SODA, ANALYTICAL AND COMMERCIAL – SPECIFICATION *(13 p) M*

This Malawi Standard prescribes the requirements, methods of test and sampling requirements for caustic soda, analytical and commercial in the solid and lye forms.

MS 704:2004 CASSAVA AND MAIZE STARCH FOR TEXTILE INDUSTRY – SPECIFICATION *(4 p) M*

This Malawi Standard covers cassava and maize starch used in the textile industry (mainly cotton) as a textile sizing and finishing material.Cassava starch shall mean the starch obtained from tubers of cassava (*Manihot esculenta*).

MS 707:2004 STARCHES AND DERIVED PRODUCTS – METHODS OF TEST (*16 p*)

This standard covers general methods of test for starches and its derived products

Physical and chemical methods of test for edible starches and starch products are covered in MS 705 and MS 706 respectively.

MS 708:2004 STARCH AND STARCH PRODUCTS – METHODS OF SAMPLING *(3 p)*

This Malawi Standard prescribes the sampling apparatus and the methods of sampling, for starches and starch products.

MS 709:2005 FLUORESCENT LIGHTS FOR USE IN PHOTOVOLTAIC (PV) SYSTEMS – SPECIFICAITON *(4p) M*

This Malawi Standard specifies the minimum requirements for fluorescent tube lights powered with direct current (DC) inverter ballasts for use in photovoltaic PV) systems.

MS 710:2005 SECONDARY CELLS AND BATTERIES FOR SOLAR PHOTOVOLTAIC (PV) ENERGY SYSTEMS – GENERAL REQUIREMENTS AND METHODS OF TEST (*8 p*) M

This Malawi Standard gives general information relating to the requirements of the secondary batteries used in photovoltaic (PV) solar energy systems and to the typical methods of test used for the verification of battery performances.

This Malawi Standard does not include specific information relating to battery sizing, method of charge or PV system design.

MS 711:2005 CRYSTALLINE SILICON TERRESTRIAL – PHOTOVOLTAIC (PV) MODULES – DESIGN QUALIFICATIONS AND TYPE APPROVAL *(29p) M*

This Malawi Standard lays down requirements for the design qualification and type approval of terrestrial photovoltaic (PV) modules suitable for long-term operation in general open-air climates, as defined in IEC 60721-2-1. It applies only to crystalline silicon types. Standards for thin-film modules are not covered in this Malawi Standard

MS 712-1:2005 ACOUSTICS – RECOMMENDED PRACTICE FOR THE DESIGN OF LOW NOISE AT WORKPLACES CONTAINING MACHINERY

PART 1: NOISE CONTROL STRATEGIES *(21p)*

This part of MS 712 outlines strategies to be used in dealing with noise problems in existing and planned workplaces by describing basic concepts in noise control (noise reduction, noise emission, noise emission and noise exposure). It is applicable to all types of workplaces and all types of sources of sound which are met in workplaces, including human activities.

It includes those important strategies to adopt when buying a new machine or equipment.

This part of MS 712 deals only with audible sound.

MS 712-2:2005 ACOUSTICS-RECOMMENDED PRACTICE FOR THE DESIGN OF LOW NOISE AT WORKPLACES CONTAINING MACHINERY

PART 2: NOISE CONTROL MEASURES *(24p) M*

This part of MS 712 deals with the technical aspects of noise control in workplaces. The various technical measures are stated, the related acoustical quantities described, the magnitude of noise reduction discussed and the verification methods outlined.

This part of MS 712 deals only with audible sound.

MS 712-3:2005 ACOUSTICS-RECOMMENDED PRACTICE FOR THE DESIGN OF LOW NOISE AT WORKPLACES CONTAINING MACHINERY

PART 3: SOUND PROPAGATION AND NOISE PREDICTION IN WORKROOMS *(25p)*

In this part of MS 712, sound propagation in a room is considered together with the prediction of sound pressure levels and of noise emission at the workplace.

Details of the description of the physical phenomena involved in a noise prediction scheme are strongly dependent on the situation being considered and the way this situation is modelled (input parameters, calculation techniques). This dependency is surveyed and the methodology of noise prediction is described. Recommendations are provided concerning the use of noise prediction methods are given in Annexes A to E.

MS 713:2005 PLASTIC PRODUCTS – GUIDELINES FOR SAFE MANAGEMENT AND DISPOSAL *(12 p) M*

This standard outlines general guidance on the identification, environmentally sound management of plastic wastes and their disposal.

MS 714:2005 OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT SYSTEMS – SPECIFICATION *(8 p)*

This standard gives requirements for an occupational health and safety (OS&H) management system, to enable an organization to control its OS&H risks and improve its performance. It does not state specific OS&H performance criteria, nor does it give detailed specifications for the design of a management system.

MS 717:2005 POLYPROPYLENE GRAIN SACKS – SPECIFICATION *(11 p) M*

This standard covers the requirements for three sizes of thermoplastic textile bags, namely 50 kg, 70 kg and 90 kg bags, made from (slip) resistant tubular woven fabric (of which polypropylene yarns are the major component) and that are suitable for use for the handling, transportation, and storage of whole grain and milled grain.

MS 719:2005 HAZARDOUS WASTE-MANAGEMENT, CLASSIFICATION AND DISPOSAL- CODE OF PRACTICE

This standard provides guidelines for classification, management, treatment and disposal of hazardous waste. requirements for transportation are also specified.

MS 721:2005 WOOD PACKAGING MATERIAL – GUIDELINES FOR PHYTOSANITARY MEASURES *(6p)*

This standard describes phytosanitary measures to reduce the risk of introduction and/or spread of quarantine pests associated with wood packaging material (including dunnage), made of coniferous and non-coniferous raw wood, for use in national and international trade.

MS 722:2005 LABELLING, PRESENTATION AND ADVERTISING OF PREPACKED GOODS FOR ULTIMATE CONSUMER *(5 p) M*

This standard specifies requirements for providing information regarding pre-packed goods. It sets rules of a general nature applicable to all pre-packed goods put on the market.

MS 724:2006 CORRUGATED BOARD CONTAINERS – SPECIFICATION *(9p)*

This specification covers requirements for the materials and construction of corrugated board containers.

MS 730:2005 SOLID WASTE DISPOSAL SITES, GUIDELINES FOR DESIGN – CODE OF PRACTICE (*10 p) M*

The standard prescribes guidelines for design of solid waste disposal sites taking the form of landfill, and treatment and incineration facilities.

MS 731:2005: SOLID WASTE DISPOSAL SITES. GUIDELINES FOR SAFE MANAGEMENT – CODE OF PRACTICE (*13 p) M*

The standard prescribes guidelines for safe management of solid waste disposal sites in the form of landfills, land treatment facility and incinerators.

MS 732:2005 EFFLUENT TREATMENT PLANTS – OPERATING CONDITIONS (CODE OF PRACTICE) (*7 p) M*

This standard covers the operating conditions for an effluent treatment plant. It does not cover to detail the design parameters of an effluent treatment plant.

MS 733:2005 BOREHOLE AND SHALLOW WELL WATER QUALITY – SPECIFICATION *(4p)*

This Malawi Standard specifies requirements for untreated or raw ground water in borehole and shallow wells suitable for human consumption and all usual domestic purposes.

It does not apply to other sources of ground water. It also does not cover ground water used for agricultural purposes.

MS 734:2005 PLASTIC CARRIER BAGS AND FLAT BAGS – SPECIFICATION *(2 p) M*

This standard specifies requirements for carrier bags and flat bags that are made from thermoplastic materials and are domestically produced or imported for use within Malawi.

MS 735:2006 PLASTIC – FILM AND SHEETING – DETERMINATION OF AVERAGE THICKNESS LENGTH AND WIDTH *(4p)*

This standard specifies the method for the determination of the gravimetric thickness of a sample of plastics film or sheeting (see section 2).

MS 744:2007 USE OF DAIRY TERMS – GENERAL STANDARDS *(2p)*

This Malawi Standard applies to the use of dairy terms in relation to food to be offered to the consumer or for further processing.

MS 751:2006 SWEETENED CONDENSED MILK – SPECIFICATION *(3p)*

This Malawi standard applies to sweetened condensed milk, intended for direct consumption or further processing.

MS 752:2006 EVAPORATED MILKS – SPEIFICATION

Applies to evaporated milks, intended for direct consumption or further processing, in conformity with the description in clause 3 of this Malawi Standard

MS 755:2007 GYPSUM ROCK FOR THE MANUFACTURE OF BINDERS – SPECIFICATION *(4p)*

This standard gives the specifications for gypsum rock used as raw materials for the manufacture of calcium sulphate binders or as an admixture in the manufacture of other kinds of binders.

MS 756:2007 GYPSUM CORE CORNICE – SPECIFICATION *(5p)*

This specification covers gypsum core cornice for use in buildings.

MS 758:2006 DOMESTIC SOLAR WATER HEATERS – SPECIFICATION *(10p)*

Specifies the characteristics of domestic solar water heaters.

MS 759:2006 SOLAR WATER HEATERS – CODE OF PRACTICE

This code covers the construction and installation for solar water heater systems.

MS 760:2006 DOMESTIC SOLAR WATER HEATERS – MECHANICAL QUALIFICATIONS TESTS *(P3)*

Specifies test methods for the mechanical qualification of domestic solar water heaters.

MS 761-1:2006 DOMESTICE SOLAR WATER HEATERS

PART 1: THERMAL PERFORMANCE USING AN OUT DOOR TEST *(10p)*

Describes an outdoor test method for the determination of the thermal performance of domestic solar water heaters.

MS 761-2:2006 DOMESTICE SOLAR WATER HEATERS

PART 2: THERMAL PERFORMANCE USING AN IN DOOR TEST *(4p)*

Specifies an indoor test method for the determination of the thermal performance of domestic solar water heating systems for potable water and of storage capacity not exceeding 0,3 m^3.

MS 767:2006 CORRUGATED BOARD CONTAINERS – METHODS OF TEST *(14p)*

This standard prescribes methods of test for corrugated board containers.

MS 768: LINERS- SPECIFICATION *(7p)*

This specification covers liners of nominal grammage in the range 120-180g/m^2 and fluting of nominal grammage in the range 112-180g/m^2 that are used in the manufacture of corrugated containers for packaging purposes.

MS 769: MEAT BURGERS – SPECIFICATION *(4p)*

This Malawi standard prescribes the requirements and methods of sampling for meat burgers made from comminuted meat (beef, lamb and mutton, poultry, pork)

MS 770:2007 FRESH FISH – SPECIFICATION

This Malawi standard establishes quality requirements for fish and permissible temperatures and times for the handling, preparation, distribution and packaging of fresh fish.

MS 773:2006 METROLOGICAL AND TECHNICAL REQUIREMENTS FOR NON-AUTOMATIC UNDENOMINATED BEAM SCALES AND BALANCES SUBJECT TO LEGAL METROLOGY CONTROL *(4 p)*

This Malawi Standard 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

MS 774:2006 METROLOGICAL AND TECHNICAL REQUIREMENTS FOR NON-AUTOMATIC, NON-SELF OR SEMI-SELF INDICATING UNGRADUATED COUNTER SCALES SUBJECT TO LEGAL METROLOGY CONTROL *(4 p) M*

This Malawi Standard 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.

MS 775-1:2007 HOT ROLLED STEEL BARS

PART 1: DIMENSIONS OF ROUND BARS (2p)

Specifies dimensions of metric series hot-rolled steel round bars.

MS 775-2:2007 HOT ROLLED STEEL BARS

PART 2: DIMENSIONS OF SQUARE BARS (2p)

Specifies dimensions of metric series hot-rolled steel square bars.

MS 775-3:2007 HOT ROLLED STEEL BARS

PART 3: DIMENSIONS OF FLAT BARS (2p)

Specifies dimensions of metric series hot-rolled steel flat bars.

MS 775-4:2007 HOT ROLLED STEEL BARS

PART 4: TOLERANCES OF ROUND, SQUARE AND FLAT BARS – METRIC SERIES (4p)

Specifies dimensional tolerances applicable to hot-rolled steel bars supplied in straight lengths in the following product forms

(a) round bars (for dimensions, see MS 775-1);

(b) square bars (for dimensions, see MS 775-2);

(c) hexagonal bars;

(d) octagonal bars; and

(e) flat bars (for dimensions, see MS 775-3)

MS 777:2007 STABILIZED SOIL BLOCKS – SPECIFICATION *(11p)*

This Malawi standard specifies the requirements for cement and /or stabilized soil blocks for use in super structures.

MS 779:2007 SOLAR PHOTOVOLTAIC (PV) WIND HYBRID SYSTEM – SPECIFICATION *(10p)*

Covers minimum requirements for domestic stand alone solar photovoltaic (pv)-wind hybrid systems.

MS 780:2007 SOLAR PHOTOVOLTAIC (PV) WATER PUMPING SYSTEM – SPECIFICATION *(15p)*

Covers specifications for solar photovoltaic (PV) water pumping systems for domestic use

MS 802:2009 **CHEDDAR – SPECIFICATION**

This standard applies to cheddar intended for direct human consumption or further processing in conformity with the description in **clause 3** of this standard

MS-ISO 5725:1994 **ACCURACY (TRUENESS AND PRECISION) OF MEASUREMENTS METHODS AND RESULTS: GENERAL PRINCIPLES AND DEFINITIONS.**

The purpose of ISO 5725 is as follows.

a) To outline the general principles to be understood when assessing accuracy (trueness and precision) of measurement methods and results, and in applications, and to establish practical estimations of the various measures by experiment (ISO 5725-1).

b) To provide a basic method for estimating the two extreme measures of the precision of measurement methods by experiment (ISO 5725-2).

c) To provide a procedure for obtaining intermediate measures of precision, giving the circumstances in which they apply and methods for estimating them (ISO 5725-3).

d) To provide basic methods for the determination of the trueness of a measurement methods (ISO 5725-4).

e) To provide some alternatives to the basic methods, given in ISO 5725-2 and ISO 5725-4, for determining the precision and trueness of measurement methods for use under certain circumstances (ISO 5725-5).

f) To present some practical applications of these measures of trueness and precision (ISO 5725-6).

MS-ISO 9000:2005 **QUALITY MANAGEMENT SYSTEMS – FUNDAMENTALS AND VOCABULARY (Third edition) *(30p)***

This international standard describes fundamentals of quality management systems, which form the subject of the MBS-ISO 9000 family, and defines related terms.

MS-ISO 9001:2008 **QUALITY MANAGEMENT SYSTEMS – REQUIREMENTS (Fourth edition) *(23 p)***

This international standard specifies requirements for a quality management system where an organization:

a) needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and

b) aims to enhance customer satisfaction through the effective application of the system, including processes for continued improvement of the system and assurance or conformity to customer and applicable regulatory requirements.

MS-ISO 9004:2000 **QUALITY MANAGEMENT SYSTEMS – GUIDELINES FOR PERFOMANCE IMPROVEMENTS (Second edition) *(56 p)***

This international standard provides guidelines beyond the requirements given in MS-ISO 9001 in order to consider both the effectiveness and efficiency of a quality management system, and consequently the potential for improvement of the performance of an organization. When compared to MS-ISO 9001, the objectives of customer satisfaction and product qualities are extended to include the satisfaction of interested parties and the performance of the organization.

MS-ISO 10002:2004 **QUALITY MANAGEMENT SYSTEMS – CUSTOMER SATISFACTION – GUIDELINES FOR COMPLAINTS HANDLING IN ORGANIZATION *(23p)***

This International Standard provides guidance on the process of complaints handling related to products within an organization, including planning, design, operation, maintenance and improvement. The complaints handling process described is suitable for use as one of the processes of an overall quality management system.
This International Standard is not applicable to disputes referred for resolution outside the organization or for employment-related disputes.

It is also intended for use by organizations of all sizes and in all sectors. Annex A provides guidance specifically for small businesses.

This International Standard addresses the following aspects of complaints handling:

a) enhancing customer satisfaction by creating a customer-focused environment that is open to feedback (including complaints), resolving any complaints received, and enhancing the organization's ability to improve its product and customer service;

b) top management involvement and commitment through adequate acquisition and deployment of resources, including personnel training;

c) recognizing and addressing the needs and expectations of complainants;

d) Providing complainants with an open, effective and easy-to-use complaints process;

e) Analysing and evaluating complaints in order to improve the product and customer service quality;

f) Auditing of the complaints-handling process;

g) Reviewing the effectiveness and efficiency of the complaints-handling process.

This International Standard is not intended to change any rights or obligations provided by applicable statutory or regulatory requirements.

MS-ISO 10005:2005 **QUALITY MANAGEMENT SYSTEMS – GUIDELINES FOR QUALITY PLANS *(23p)***

This International Standard provides guidelines for the development, review, acceptance, application and revision of quality plans.

It is applicable whether or not the organization has a management system in conformity with ISO 9001.

This International Standard is applicable to quality plans for a process, product, project or contract, any product category (hardware, software, processed materials and services) and any industry.

It is focused primarily on product realization and is not a guide to organizational quality management system planning.

This International Standard is a guidance document and is not intended to be used for certification or registration purposes.

NOTE: To avoid undue repetition of “process, product, project or contract”, this International Standard uses the term “specific case” (see 3.10).

MS-ISO 10006:2006 QUALITY MANAGEMENT SYSTEMS – GUIDELINES FOR QUALITY MANAGEMENT IN PROJECTS *(13p)*

This International Standard gives guidance on the application of quality management in projects.

It is applicable to projects of varying complexity, small or large, of short or long duration, in different environments, and irrespective of the kind of product or process involved. This can necessitate some tailoring of the guidance to suit a particular project.

This International Standard is not a guide to “project management” itself. Guidance on quality in project management processes is discussed in this International Standard. Guidance on quality in a project’s product related processes, and on the "process approach", is covered in ISO 9004.

Since this International Standard is a guidance document, it is not intended to be used for certification/registration purposes.

MS-ISO/TR 10013:2001 GUIDELINES FOR QUALITY MANAGEMENT SYSTEMS DOCUMENTATION *(14p)*

This Technical Report provides guidelines for the development and maintenance of the documentation necessary to ensure an effective quality management system, tailored to the specific needs of the organization. The use of these guidelines will aid in establishing a documented system as required by the applicable quality management system standard.

This Technical Report may be used to document management systems other than that of the ISO 9000 family, for example environmental management systems and safety management systems.

NOTE - When a procedure is documented, the term “written procedure ” or “documented procedure” is frequently used.

MS-ISO 10015:1999 QUALITY MANAGEMENT – GUIDELINES FOR TRAINING *(14p)*

These guidelines cover the development, implementation, maintenance, and improvement of strategies and systems for training that affect the quality of the products supplied by an organization.

This International Standard applies to all types of organizations.

It is not intended for use in contracts, regulations, or for certification.

It does not add to, change, or otherwise modify requirements for the ISO 9000 series.

This International Standard is not intended to be used by training providers delivering services to other organizations.

NOTE – The main source of reference for training providers should be ISO 9004-2:1991, Quality management and quality system elements — Part 2: Guidelines for services, until superseded by ISO 9004:2000.

Training providers may use this International Standard when addressing the training needs of their own personnel.

MS-ISO 14001:2004 ENVIRONMENTAL MANAGEMENT SYSTEMS – SPECIFICATION WITH GUIDANCE FOR USE *(23 p)*

This International Standard specifies requirements for an environmental management system to enable an organization to develop and implement a policy and objectives

which take into account requirements and other requirements to which the organization subscribes, and information about significant environmental aspects. It applies to those environmental aspects that the organization identifies as those which it can control and those which it can influence. It does not itself state specific environmental performance criteria.

MS-ISO 14004:2004 ENVIRONMENTAL MANAGEMENT SYSTEMS – GENERAL GUIDELINES ON PRINCIPLES, SYSTEMS AND SUPPORT TECHNIQUES *(39p)*

This Malawi Standard provides guidance on the establishment, implementation, maintenance and improvement of an environmental management system and its coordination with other management systems.

NOTE - While the system is not intended to manage occupational health and safety issues, they may be included when an organization seeks to implement an integrated environmental and occupational health and safety management system.

MS-ISO 14010:1996 GUIDELINES FOR ENVIRONMENTAL AUDITING – GENERAL PRINCIPLES *(4 p)*

Provides the general principles of environment auditing that are applicable to all types of environmental audits.

MS-ISO 14011:1996 GUIDELINES FOR ENVIRONMENTAL AUDITING – AUDIT PROCEDURES - AUDITING OF ENVIRONMENTAL MANAGEMENT SYSTEMS *(2 p)*

Establishes audit procedures that provide for the planning and conduct of an audit of an EMS to determine conformance with EMS audit criteria.

MS-ISO 14012:1996 GUIDELINES FOR ENVIRONMENTAL AUDITING – QUALIFICATION CRITERIA FOR ENVIRONMENTAL AUDITORS *(3 p)*

Provides guidance on qualification criteria for environmental auditors and lead auditors and is applicable to both internal and external auditors.

MS-ISO 14015:2001 ENVIRONMENTAL MANAGEMENT SYSTEMS – GENERAL GUIDELINES ON PRINCIPLES SYSTEM AND SUPPORT TECHNIQUES *(19p)*

This Malawi Standard provides guidance on how to conduct an EASO through a systematic process of identifying environmental aspects and environmental issues and determining, if appropriate, their business consequences.

This standard covers the roles and responsibilities of the parties to the assessment (the client, the assessor and the representative of the assessee), and the stages of the assessment process (planning, information gathering and validation, evaluation and reporting).
This standard does not provide guidance on how to conduct other types of environmental assessment, such as:

a) Initial environmental reviews;
b) Environmental audits (including environmental management system regulatory compliance audits);
c) Environmental impact assessments; or
d) Environmental performance evaluations.

Intrusive investigations and site remediation, as well as the decision to proceed with them, are outside the scope of this Standard.
This standard is not intended for use as a specification standard for certification or registration purposes or for the establishment of environmental management system requirements.

Use of this standard does not imply that other standards and legislation are imposed on the client or the assessee.

MS-ISO 14020:2000 ENVIRONMENTAL LABELS AND DECLARATIONS – GENERAL PRINCIPLES *(5p)*

The standard establishes guiding principles for the development and use of environmental labels and declarations. It is intended that other applicable standards in the MS-ISO 14020 series can be used in conjunction with this standard.

This standard is not intended for use as a specification for certification and registration purposes.

NOTE - Malawi standards in the series are intended to be consistent with the principles set forth in this standard. Other standards currently in the MS-ISO 14020 series are MS-ISO 14021, MS-ISO 14024, and MS-ISO/TR 14025.

MS-ISO 14031:1999 ENVIRONMENTAL MANAGEMENT ENVIRONMENTAL PERFORMANCE EVALUATION – GUIDELINES *(32p)*

This Malawi Standard gives guidance on the design and use of environmental performance evaluation within an organization. It is applicable to all organizations, regardless of type, size, location and complexity.

This Malawi Standard does not establish environmental performance levels. It is not intended for use as a specification standard for certification or registration purposes or for the establishment of any other environmental management system conformance requirements.

MS-ISO 14032:1999 ENVIRONMENTAL MANAGEMENT – EXAMPLES OF ENVIRONMENTAL PERFORMANCE EVALUATION (EPE) *(92p)*

This technical report 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; nongovernmental organizations; government agencies; small, medium and large enterprises; organizations with and without certified environmental management systems) and geographic locations.

IMPORTANT -
The examples in this report are included only because they illustrate the use of EPE. Value judgements in these examples related to the relative environmental benefits of one material over another, one process over another, or one product over another, reflect decisions made specifically by the management of the organizations in the examples.

MS-ISO 14040:1997 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT PRINCIPLES AND FRAMEWORK *(12p)*

This Malawi standard specifies the general framework, principles and requirements for conducting and reporting life cycle assessment studies. This Standard does not describe the life cycle assessment technique in detail.

MS-ISO 14041:1998 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT – GOAL AND SCOPE DEFINITION AND INVENTORY ANALYSIS *(22P)*

This standard in addition to MS-ISO 14040 specifies the requirements and the procedures necessary for the compilation and preparation of the definition of goal and

scope for a Life Cycle Assessment (LCA), and for performing, interpreting and reporting a Life Cycle Inventory analysis (LCI).

MS-ISO 14042:2000 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT – LIFE CYCLE IMPACT ASSESSMENT *(16p)*

This standard describes and gives guidance on a general framework for the life cycle impact assessment (LCIA) phase of life cycle assessment (LCA), and the key features and inherent limitations of LCIA. It specifies requirements for conducting the LCIA phase and the relationship of LCIA to the other LCA phases.

MS-ISO 14043:2000 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT INTO CYCLE INTERPRETATION *(18p)*

This standard provides requirements and recommendations for conducting the life cycle interpretation in LCA or LCI studies.

It does not describe specific methodologies for the life cycle interpretation phase of LCA and LCI studies.

MS-ISO 14044:2006 (COMESA) ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT REQUIREMENT AND GUIDELINES (*46p)*

This standard specifies the requirements and the procedures necessary for life cycle assessment (LCA) including:

a) The compilation and preparation of the definition of goal and scope of the LCA;

b) The life cycle inventory analysis (LCI) phase;

c) The life cycle impact assessment (LCIA) phase;

d) The life cycle interpretation phase;

e) The reporting and critical review of the LCA;

f) The limitations of the LCA;

g) The relationship between the LCA phases.;

h) The conditions for use of value choices and optional elements.

This standard covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies. The intended application of LCA or LCI results is considered during the goal and scope definition, but the application is outside the scope of this standard.

This standard, like other International Standards, is not intended to be used to create non-tariff trade barriers or to increase or change an organization's legal obligations. Neither is the standard intended for contractual or regulatory purposes or registration and certification.

MS-ISO/TS 14048:2000(COMESA) ENVIRONMENTAL MANAGEMENT – LIFE CYCLE IMPACT ASSESSMENT – DATA DOCUMENTATION FORMAT *(41 p)*

This technical specification 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.

The data documentation format specifies requirements on division of data documentation into data fields, each with an explanatory description. The description of each data field is further specified by the structure of the data documentation format.

This technical specification is applicable to the specification and structuring of questionnaire forms and information systems. However, it can also be applied to other aspects of the management of environmental data.

This technical specification does not include requirements on completeness of data documentation. The data documentation format is independent of any software or database platform for implementation.

This technical specification does not require any specific sequential, graphic or procedural solutions for the presentation or treatment of data, nor does it describe specific modelling methodologies for LCI and LCA data.

MS-ISO 14050:2005 (COMESA) ENVIRONMENTAL MANAGEMENT VOCABULARY (*29 p)*

This standard contains definitions of fundamental concepts related to environmental management, published in the MS-ISO 14000 series of Malawi Standards.

MS-ISO 15161:2001 GUIDELINES ON THE APPLICATION OF MS-ISO 9001:2000 FOR THE FOOD AND DRINK INDUSTRY (*35 p)*

Gives guidance to organizations in applying the requirements of MS-ISO 9001 during the development and implementation of a quality management system in the food and drink industry.

It gives information on the possible interactions of the ISO 9000 series of standards and the hazard analysis and critical control point (HACCP) system for food safety requirement.

MS-ISO 15189:2003 MEDICAL LABORATORIES – PARTICULAR REQUIRMENTS FOR QUALITY AND COMPETENCE *(39p)*

This International Standard specifies requirements for quality and competence particular to medical laboratories.

MS-ISO/IEC 17021 CONFORMITY ASSESSMENT.-. REQUIREMENTS FOR BODIES PROVING AUDIT AND CERTIFICATION OF MANAGEMENT SYSTEMS (*35p)*

This international standard contains principles and requirements for the competence, consistency and impartiality of the audit and certification of management systems of all types (e.g quality management systems or environmental management systems) and for bodies providing these activities. Certification bodies operating to this International Standard need not offer all types of management system certification.

Certification of management systems (named in this International Standard “certification”) is a third –party conformity assessment activity (see ISO/IEC 17000;2004, 5.5).Bodies performing this activity are therefore third-party conformity assessment bodies(named in the International Standard “certification body/bodies”)

MS-ISO 17025:2005 GENERAL REQUIREMENTS FOR THE COMPETENCE OF TESTING AND CALIBRATION LABORATORIES *(28p)*

This International Standard 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.

MS-ISO 19011:2002 **GUIDELINE FOR QUALITY AND/OR ENVIRONMENTAL MANAGEMENT SYSTEMS AUDITING**

This international standard provides guidance on the principles of auditing, managing audit programmes, conducting quality management system audits and environmental management system audits, as well as guidance on the competence of quality and environmental management system auditors.

It is applicable to all organizations needing to conduct internal or external audits of quality and/or environmental management systems or to manage an audit programme.

The application of this international standard to other types of audits is possible in principle, provided that special consideration is paid to identifying the competence needed by the team members in such cases.

MS-ISO 21569:2005 **FOODSTUFFS-METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – QUALITATIVE NUCLEIC ACID BASED METHODS**

This International Standard describes the procedure to qualitatively detect genetic modified organisms (GMOs) and derived products by analyzing the nucleic acids extracted from the sample under study. The main focus is on polymerase chain reaction (PCR) based amplification methods.

It gives general requirements for the specific detection and identification of target nucleic acid sequences (DNZ) and for the confirmation of the identity of the amplified DNA sequence.

Guidelines, minimum requirements and performance criteria laid down in this International Standard are intended to ensure that comparable, accurate and reproducible results are obtained in different laboratories.

This International Standard has been established for food matrices, but could be applied to other matrices (e.g. feed and plant samples from the environment).

MS-ISO 21570:2005 **FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – QUANTITATIVE NUCLEIC ACID BASED METHODS**

This international standard provides the overall framework of quantitative methods for the detection of genetically modified organisms (GMOs) in foodstuffs, using the polymerase chain reaction (PCR).

It defines general requirements for the specific amplification of DNA target sequences in order to quantify the relative GMO-derived DNA content and to confirm the identity of the amplified DNA sequence.

Guidelines, minimum requirements and performance criteria laid down in this international standard are intended to ensure that comparable, accurate and reproducible results are obtained in different laboratories.

This international standard has been established for food matrices, but is also applicable to other matrices, e.g. feed and plant samples from the environment.

Specific examples of methods are provided in annexes A and D.

MS-ISO 21571:2005 **FOODSTUFFS-METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – NUCLEIC ACID EXTRACTION**

This International Standard provides general requirements and specific methods for DNA extraction/purification and quantitation. These methods are described in annexes A and B.

This International Standard has been established for food matrices, but could also be applicable to other matrices, such as grains and feed.

It has been designed as an integral part of nucleic-acid-based analytical methods, in particular ISO 21569 on qualitative analytical methods, and ISO 21570 on quantitative analytical methods.

MS-ISO 21572:2004 FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – PROTEIN BASED METHODS

This European standard provides general guidelines and performance criteria for methods for the detection and/or quantitation of special proteins derived from genetically modified (GM) plant material in a specified matrix.

These general guidelines address existing antibody based methods. Methods other than those described in annex A may also detect the protein. The same criteria as outlined in this standard generally apply.

MS-ISO 24276:2005 FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – GENERAL REQUIREMENTS AND DEFINITION

This international standard specifies how to use the standards for sampling strategies (EN/TS21568), Nucleic acid extraction (ISO 21571), qualitative nucleic acid analysis (ISO 21569), quantitative nucleic acid analysis (21570) and protein-based methods (ISO 21572), and explains their relationship in the analysis of genetically modified organisms in foodstuffs.

It contains general definitions, requirements and guidelines for laboratory set-up, method validation requirements, description of methods and test reports.

It has been established for food matrices, but could also be applied to other matrices (seeds, feed and plant samples from the environment).

MS-ISO 22000:2005 FOOD SAFETY MANAGEMENT SYSTEMS – GENERAL GUIDELINES ON PRINCIPLES SYSTEM AND SUPPORT TECHNIQUES *(19p)*

The draft standard specifies requirements for a food safety management system where an organization in the food chain needs to demonstrate its ability to control

food safety hazards in order to ensure that food is safe at the time of human consumption.

It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products. The means of meeting any requirements of the draft standard can be accomplished through the use of internal and/or external resources.

MS-ISO/TS 22003:2005 FOOD SAFETY MANAGEMENT SYSTEMS- REQUIREMENTS FOR BODIES PROVIDING AUDIT AND CERTIFICATION OF FOOD SAFETY MANAGEMENT SYSTEMS

This Technical Specification

- Defines the rules applicable for the audit and certification of a food safety management system (FSMS) complying with the requirements given in ISO 22000 (or other sets of specified FSMS requirements), and

- Provides the necessary information and confidence to customers about the way certification of their suppliers has been granted.

Certification of FSMSs (named "certification" in this Technical Specification) is a third-party conformity assessment activity (see ISO/IEC 17000:2004, 5.5). bodies performing this activity are therefore third-party conformity assessment bodies (named "certification body/bodies" in this Technical Specification).

MS-ISO/TS 22004:2005 **FOOD SAFETY MANAGEMENT SYSTEMS – GUIDANCE ON THE APPLICATION OF ISO 2200:2005 *(13p)***

Provides generic guidance that can be applied in the use of ISO 22200.

MS-IEC 60044-1:2003 **INSTRUMENT TRANSFORMERS - PART 1: CURRENT TRANSFORMERS (M)**

Applies to newly manufactured current transformers for use with electrical measuring instruments and electrical protective devices at frequencies from 15Hz to 100 Hz. Applies basically to transformers with separate windings, but also to autotransformers.

MS-IEC 60044-2:12003 **INSTRUMENT TRANSFORMERS - PART 2: INDUCTIVE VOLTAGE TRANSFORMERS (M)**

Applies to new inductive voltage transformers for use with electrical measuring instruments and electrical protective devices at frequencies from 15 to 100 Hz. This standard relates basically to transformers with separate windings, but also to autotransformers. It replaces IEC 60186 (1987) plus amendments 1 and 2 only for inductive voltage transformers. IEC 60186 remains in force for capacitive voltage transformers.

MS-IEC 60044-7:1999 **INSTRUMENT TRANSFORMERS - PART 7: ELECTRONIC VOLTAGE TRANSFORMERS (M)**

Applies to newly manufactured electronic voltage transformers with analogue output, for use with electrical measuring instruments and electrical protective devices at frequencies from 15 Hz to 100 Hz. The standard covers optical arrangements with electronic components. Three phase voltage transformers are not included, but some of the requirements apply

MS-IEC60050-826 **INTERNATIONAL ELECTROTECHNICAL VOCABULARY – CHAPTER 826: ELECTRICAL INSTALLATION (2nd edition, *117p*)**

MS-IEC60050-851:1991 **INTERNATIONAL ELECTROTECHNICAL VOCABULARY – CHAPTER 851: ELECTRIC WELDING (1st edition, 30p)**

MS-IEC 60055-2:1981 **PAPER-INSULATED METAL-SHEATHED CABLES FOR RATED VOLTAGES UP TO 18/30 KV (WITH COPPER OR ALUMINIUM CONDUCTORS AND EXCLUDING GAS-PRESSURE AND OIL-FILLED CABLES) – PART 2: GENERAL AND CONSTRUCTION REQUIREMENTS (M)**

Specifies general and construction requirements for impregnated paper-insulated load-sheathed cables with copper or aluminium conductors from 0.6/1 kV. Tables for 21 different types cable construction are given.

MS-IEC 60061-DB-1:2006

LAMP CAPS AND HOLDERS TOGETHER WITH GAUGES FOR THE CONTROL OF INTERCHANGEABILITY AND SAFETY - PART 1: LAMP CAPS (M)

Consolidated edition incorporating the sheets of the third edition (1969) plus supplements A, B, C, D,E, F, G, H, I, J, K, L M, N, P, Q, R, S, T and U valid on 19996-12-31.

MS-IEC 60061-DB-2:2006

LAMP CAPS AND HOLDERS TOGETHER WITH GAUGES FOR THE CONTROL OF INTERCHANGEABILITY AND SAFETY - PART 2: LAMP HOLDERS (M)

MS-IEC 60061-DB-3:2006

LAMP CAPS AND HOLDERS TOGETHER WITH GAUGES FOR THE CONTROL OF INTERCHANGEABILITY AND SAFETY - PART 3: GAUGES (M)

MS-IEC 60064:2005

TUNGSTEN FILAMENT LAMPS FOR DOMESTIC AND SIMILAR GENERAL LIGHTING PURPOSES - PERFORMANCE REQUIREMENTS (M)

Applies to tungsten filament incandescent lamps for general lighting services (GLS) which comply with the safety requirements in IEC 60432-1.1

MS-IEC 60076-SER-1:2000

POWER TRANSFORMERS - PART 1: GENERAL (2nd edition, *87p*)(M)

This part of international standard IEC 60076 applies to three-phase and single-phase power transformers (including auto-transformers) with the exception of certain categories of small and special transformers such as:

- Single-phase transformers with rated power less than 1 kVA and three-phase transformers less than 5 kVA.;
- Instrument transformers;
- Transformers for static convertors;
- Traction transformers mounted on rolling rocks;
- Starting transformers;
- Testing transformers;
- Welding transformers.

When IEC standards do not exist for such categories of transformers, this part of IEC 60076 may still be applicable either as whole or in part.

For those categories of transformers and reactors which have their own IEC standards, this part is only applicable to the extent in which it is specifically called up by cross-reference in the other standard.

At several places in this part it is specified or recommended that an 'agreement' shall be reached concerning alternative or additional technical solutions or procedures. Such agreement is to be made between the manufacturer and the purchaser. The matters should preferably be raised at an early stage and the agreement be included in the contract specification.

MS-IEC 60076-SER-4:2002

POWER TRANSFORMERS - PART 4: GUIDE TO THE LIGHTNING IMPULSE AND SWITCHING IMPULSE TESTING – POWER TRANSFORMERS AND REACTORS (1st edition, *123p*)(M)

This part of IEC 60076 gives guidance and explanatory comments on the existing procedure for lightning and switching impulse testing of power transformers to supplement the requirements of IEC 60076-3 it is also applicable to the testing of reactors (see IEC 60289), modifications to power transformer

procedures being indicated where required.

Information is given on waveshapes, test circuits including test connections, earthing practices, failure detection methods, test procedure, measuring techniques and interpretation of results.

Where applicable, the test techniques are recommended in IEC 60060-1 and IEC 60060-2.

MS-IEC 60076-SER-5:2000 **POWER TRANSFORMERS - PART 5: ABILITY TO WITHSTAND SHORT CIRCUIT (M)**

Specifies the design and construction of transformers to withstand the thermal and dynamic effects of external short circuits under specified conditions. Includes tests to demonstrate the ability to withstand short circuit. Applies to transformers as defined in the scope of IEC 60076-1.

MS-IEC 60076-SER-11 **POWER TRANSFORMERS - PART 11: DRY-TYPE TRANSFORMERS (M)**

The object of this technical report is to give general information about the systems of plugs and socket-outlets for household and similar purposes which are used in the IEC countries. The report only contains national Systems which are commonly used in homes and offices. It is therefore limited to systems for a.c. with a rated voltage above 50 V but not exceeding 440 V, intended for household and similar purposes, either indoors or outdoors.

MS-IEC 60083:2006 **PLUGS AND SOCKET-OUTLETS FOR DOMESTIC AND SIMILAR GENERAL USE STANDARDIZED IN MEMBER COUNTRIES OF IEC (M)**

The object of this technical report is to give general information about the systems of plugs and socket-outlets for housholds and similar purposes which are used in the IEC countries. The report only contains National System which ate commonly used in homes and offices. It is therefore limited to systems for a.c. with a rated voltage above 50 V but not exceeding 440 V, intended for household and similar purposes, either indoors or outdoors.

MS-IEC 60086-1:2000 **PRIMARY BATTERIES - PART 1: GENERAL**

Standardizes primary batteries based on standardized electro-chemical systems, it specifies the physical dimensions, the discharge test conditions, and the discharge performance requirements.

MS-IEC 60086-2:2001 **PRIMARY BATTERIES - PART 2: PHYSICAL AND ELECTRICAL SPECIFICATIONS (M)**

Applicable to primary batteries based on standardized electro-chemical systems, it specifies the physical dimensions. The discharge test conditions, and the discharge performance requirements.

MS-IEC 60086-3:1995 **PRIMARY BATTERIES - PART 3: WATCH BATTERIES (M)**

Specifies dimensions, designation, methods of tests and requirements for primary batteries for watches. In several cases, a menu of test methods is given. When presenting battery electrical characteristics and/or performance data, the manufacturer specifies the test method used.

MS-IEC 60086-4:2000 **PRIMARY BATTERIES - PART 4: SAFETY OF LITHIUM BATTERIES (M)**

Specifies tests and requirements for primary lithium batteries to ensure their safe operation under intended use or reasonably foreseeable misuse.

MS-IEC 60086-5:2005 **PRIMARY BATTERIES - PART 5: SAFETY OF BATTERIES WITH AQUEOUS ELECTROLYTE (M)**

Specifies tests and requirements for primary batteries with aqueous electrolyte to ensure their safe operation under normal use and reasonably foreseeable misuse.

MS-IEC 60095-1:2000 **LEAD-ACID STARTER BATTERIES - PART 1: GENERAL REQUIREMENTS AND METHODS OF TEST (M)**

This part of IEC 60095 is applicable to lead-acid batteries with a nominal voltage of 12 V, used primarily as a power source for the starting and igniting of internal combustion engines, lighting and for auxiliary equipment or internal combustion engine vehicles. These bateries are commonly called "starter batteries".

MS-IEC 60095-2:1984 **LEAD-ACID STARTER BATTERIES - PART 2: DIMENSIONS OF BATTERIES AND DIMENSIONS AND MARKING OF TERMINAL (M)**

Applies to lead-acid batteries used for starting, lighting and ignition of passenger automobiles and light commercial vehicles with a nominal voltage of 12 V fastened to the vehicles by means of ledges on the long sides of the battery case, two alternative admissible means are specified in Section Three, Specifies:

- the main dimensions of starter batteries of four standard series;
- the location of the positive and negative terminals with respect to the fastening system;
- the dimensions of tapered terminal of starter batteries;
- the making of the polarity.

MS-IEC 60095-4:1989 **LEAD-ACID STARTER BATTERIES - PART 4: DIMENSIONS OF BATTERIES FOR HEAVY TRUCKS (M)**

Applies to lead-acid batteries for starting, lighting and igniting of heavy trucks.

MS-IEC 60096-0-1:2000 **RADIO-FREQUENCY CABLES. PART 0-1: GUIDE TO THE DESIGN OF DETAIL SPECIFICATION – COAXIAL CABLES (M)**

Gives recommendations for design parameters, including nominal characteristic impedances and diameter over dielectric, and guidance for the design of radio-frequency coaxial cables with braid, metallic tapes or tubular outer conductors. This edition supersedes the first edition of IEC 60096-0 (1970)

MS-IEC 60096-1:1986 **RADIO-FREQUENCY CABLES. PART 1: GENERAL REQUIREMENTS AND MEASURING METHODS (M)**

Relates to flexible or semi-felxible radio-requency cables of coaxial or twin conductor types designed for use in radio-communication equipment and in electronic devices employing similar techniques. The dielectric may be of solid air-spaced, or semi-air-spaced types, consisting of a thermoplastic of low-loss polymeric resin, a thermosetting compound, or a mineral material. Establishes uniform requirements for judging the electrical, climatic and mechanical properties of radio-frequency cables and describes test methods.

MS-IEC 60096-2:1961 **RADIO-FREQUENCY CABLES. PART 2: RELEVANT CABLE SPECIFICATIONS (CONSOLIDATED EDITION) (M)**

Consolidated reprint consisting of IEC 60096-2 (1961) and supplements 60096-2A (1965), 60096-2B (1966), 60096-2C (1976) and 60096D (1986)

MS-IEC 60096-3:1982 **RADIO-FREQUENCY CABLES. PART 3: GENERAL REQUIREMENTS AND TESTS FOR SINGLE-UNIT COAXIAL CABLES FOR USE IN CABLED DISTRIBUTION SYSTEMS (M)**

Specifies the general requirements and tests applicable to single-unit coaxial cables for use in cabled distribution systems.

MS-IEC 60096-4-1:1990 **RADIO-FREQUENCY CABLES. PART 4: SPECIFICATION FOR SUPERSCREENED CABLES – SECTION ONE: GENERAL REQUIREMENTS AND TEST METHODS (M)**

Covers the requirements of superscreened cables and is divided into two sections. This section (Section 1) specifies general requirements and test methods.

MS-IEC 60155:1993 **GLOW-STARTERS FOR FLUORESCENT LAMPS (M)**

Specifies interchangeable starters used with pre-heat tubular fluorescent lamps and should be used in conjunction with corresponding publications for fluoroscent lamps and their ballasts.

MS-IEC 60167:1964 **METHOD OF TEST FOR THE DETERMINATION OF THE INSULATION RESISTANCE OF SOLID INSULATING MATERIAL (1st edition, *21p*)**

These test methods cover procedures for the determination of insulation resistance without discrimination between the volume and surface resistances involved. Because the test specimen are simply and easily prepared, these methods are particularly useful for rapidly determining values which will give a general indication of quality when great accuracy is not required.

MS-IEC 60173:1964 **COLOURS OF THE CORES OF FLEXIBLE CABLES AND CORDS (M)**

Lays down a standard colour identification for the earthing core in flexible cables and cords with not more than five cores.

MS-IEC 60189-1:1989 **LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH. PART 1: GENERAL TEST AND MEASURING METHODS (2nd edition, *33p*)**

This standard specifies mechanical0.00, electrical and climatic test methods for low-frequency cables and wires designed for use in telecommunication inside plant and equipment and in electronic devices employing similar techniques.

MS-IEC 60189-2:1989 **LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH. PART 2: CABLES IN PAIRS, TRIPLES, QUADS AND QUINTUPLES FOR INSIDE INSTALLATIONS (M)**

Deals with cables construction and dimensions, mechanical requirements, thermal stability and electrical requirements.

MS-IEC 60215:1987 **SAFETY REQUIREMENTS FOR RADIO TRANSMITTING EQUIPMENT (M)**

Applies to radio transmitting equipment operating under the responsibility of skilled personnel and deals with protection against electric shock, skin burns, high temperature and fire, implosion and explosion, harmful radiation and miscellaneous hazards. Includes design and construction requirements and test methods to ensure safety or personnel, when the equipment is operating under conditions of normal use and certain fault conditions, when carrying out adjustments, during fault finding, and repair of the equipment : prevention of fire and its spread.

MS-IEC 60227-1:1998 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 1: GENERAL REQUIREMENTS (M)**

Gives definitions. Specifies marking, core identification and general requirements for the construction of cables. Appendix describes code designation of cables.

MS-IEC 60227-3:1997 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 3: NON-SHEATHED CABLES FOR FIXED WIRING (M)**

Specifications for polyvinyl chlorine insulated single-core non-sheathed cables for fixed wiring of rated voltages up to and including 450/750 V. This is a consolidated version of IEC 60227-3 (1993) and its Amendment 1 (1997)

MS-IEC 60227-4:1997 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 4: SHEATHED CABLES FOR FIXED WIRING (M)**

Details the particular specification for light polyvinyl chloride sheathed cables of rates voltage of 300/500 V

MS-IEC 60227-5:1998 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 5: FLEXIBLE CABLES (CORDS) (M)**

Details the particular specifications for polyvinyl chloride insulated flexible cables (cord), of rated voltages up to and including 300/500 V.

MS-IEC 60227-6:2001 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 6: LIFT CABLES AND CABLES FOR FLEXIBLE CONNECTIONS (M)**

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. Each cable complies with the appropriate requirements given in IEC 60227-1, and with the particular requirements of this part of IEC 60227

MS-IEC 60227-7:1995 **POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 7: FLEXIBLE CABLES SCREENED AND UNSCREENED WITH TWO OR MORE CONDUCTORS (M)**

This part of IEC 60227 details the particular specifications for polyvinyl chloride insulated screened and unscreened control cables of rated voltages up to and including 300/500 V.

All cables comply with the appropriate requirements given in IEC 60227-1 and each individual type of cable complies with the particular requirements of this part.

MS-IEC 60228:1978 **CONDUCTORS OF INSULATED CABLES (M)**

Specifies standardized nominal cross-section areas from 0.5 mm^2 to 2 000 mm^2, numbers and diameters of wires and resistance values of conductors in electric cables and flexible cords.

Classifies conductors for:

1. Cables for fixed installations
   - Class 1, solid conductors ;
   - Class 2, stranded conductors.

2. Flexible copper conductors
   - Class 5,
   - Class 6 (more flexible than Class 5)

Includes table of temperature correction factors kt for conductor resistance to correct the measured resistance at 1 ºC to 20 ºC. Does not apply to conductors for telecommunication purposes. Applies to conductors for pressure cables, conductors in extra-flexible welding cables or in special types of flexible cables for having the cores twisted together with unsually short lays. This publication supersedes IEC 60180 (1965).

MS-IEC 60244-1:1999 **METHODS OF MEASUREMENT FOR RADIO TRANSMITTERS - PART 1: GENERAL CHARACTERISTICS FOR BROADCAST TRANSMITTERS (2nd edition, *79p*) M**

Defines the conditions and methods of measurement to be used to ascertain the performance of a radio transmitter and to make possible the comparison of the results of measurement made by different observers.

MS-IEC 60245-1:2003 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 1: GENERAL REQUIREMENTS (4th edition, *49p*)(M)**

This part of 60245 applies to rigid and flexible cables with insulation, and sheath if any, based on vulcanized rubber of rated voltages U_0/U up to and including 450/750 V used in power installations of nominal voltage not exceeding 450/750 V a.c.

NOTE – For some types of flexible cables the term 'cord' is used.

The particular types of cables are specified in IEC 60245-3, IEC 60245-4, etc. the code designations of these types of cables are given in Annex A.

The test methods specified in parts 1 to 8 are given in IEC 60245-2, IEC 60332-1 and in the relevant parts of IEC 60811.

MS-IEC 60245-2: **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 2: TEST METHODS (M)**

This part of IEC 60245 gives the test methods specified in all parts of IEC 60245 as far as not laid down in IEC 60811.

MS-IEC 60245-3:1994 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 3: HEART RESISTANT SILICONE INSULATED CABLES (M)**

Details the particular specifications for silicone rubber insulated cables of rated voltage of 300/500 V.

MS-IEC 60245-4:2004 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 4: CORDS AND FLEXIBLE CABLES (M)**

Details the particular specifications for rubber insulated and braided cords and for rubber insulated and rubber or polychloroprene or other equivalent synthetic elastomer sheathed cords and flexible cables or rated voltages up to and including 450/750 V.

MS-IEC 60245-5:1994 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 5: LIFT CABLES (2nd edition, *17p*)(M)**

MS-IEC 60245-6:1994 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 6: ARC WELDING ELECTRODE CABLES (M)**

Details the particular specifications for rubber insulated lift arc welding electrode cables.

MS-IEC 60245-8:2004 **RUBBER INSULATED CABLES - RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 8: CORDS FOR APPLICATIONS REQUIRING HIGH FLEXIBILITY (M)**

Details the particular specifications for rubber or cross-linked polyvinyl chloride insulated and rubber of cross-linked polyvinyl chloride sheathed cords or related voltage 300/300 V. for use in applications where high flexibility is required, for example iron cords.

MS-IEC 60254-1:1997 **LEAD-ACID TRACTION BATTERIES - PART 1: GENERAL REQUIREMENTS AND METHODS OF TESTS (M)**

Is applicable to lead-acid traction batteries used as power sources for electric propulsion.

Clauses 1 to 5 re applicable to all traction battery applications which include road vehicles, locomotives, industrial trucks and mechanical handling equipments. Clause 6 offers a series of tests which may be used specifically to test batteries developed for use in vehicles such as light passenger vehicles, motor cycles, light commercial vehicles, e.t.c.

MS-IEC 60254-2:2000 **LEAD-ACID TRACTION BATTERIES - PART 2: DIMENSIONS OF CELLS AND TERMINAL AND MARKING OR POLARITY ON CELLS (M)**

Definitions standard values relating to energizing quantities influencing quantities. Fundamental characteristics relating to temperature rises and behaviour in service. Accuracy requirements relating to the characteristic quantity and specified times. Mechanical and electrical requirements. Markings and data. Methods of measurement.

MS-IEC 60269-1:1998 **LOW-VOLTAGE FUSES – PART 1: GENERAL REQUIREMENTS (M)**

Establishes the characteristics of fuses or parts of fuses (fuse-base, fuse carrier, fuse-link) in such a way that they can be replaced by other fuses or parts of fuses having the same characteristics provided that their dimensions are identical. This publication supersedes IEC 60066 (1953) and IEC 60088 (1957).

MS-IEC 60269-2:1986

LOW-VOLTAGE FUSES– PART 2: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY AUTHORIZED PERSONS (FUSES MAINLY FOR INDUSTRIAL APPLICATIONS) (M)

The following characteristics of fuses are specified in addition to IEC Publication 269-1:

- Minimum rated breaking capacities;
- Time-current characteristics;
- 12t characteristics;
- Standard conditions of constructions;
- Power dissipation and acceptance.

MS-IEC 60269-2-1:2004

LOW VOLTAGE FUSES – PART 2-1:SUPPLEMENTRY REQUIREMENTS FOR FUSES FOR USE BY AUTHORIZED PERSONS (FUSES MAINLY FOR INDUSTRIAL APPLICATIONS) – SECTION I TO V : EXAMPLES OF TYPES OF STANDARDIZED FUSES (M)

This standard is divided into five sections, each dealing with a specific example of standardized fuse for use by authorized persons:

- Section I: Fuses wit fuse-links with blade contacts.
- Section II: Fuses with fuse-links with bolted connections.
- Section III: Fuses with fuse-links having cylindrical contact caps.
- Section IV: Fuses with fuse-links with offset blade contacts.
- Section V: Fuses with fuse-links having “”gD” and “”gN” characteristics.

MS-IEC 60269-3:2003

LOW-VOLTAGE FUSES - PART 3: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY UNSKILLED PERSONS (FUSES MAINLY FOR HOUSEHOLD AND SIMILAR APPLICATIONS) (M)

Applies to ‘gG’ fuses used by unskilled persons for domestic and similar applications with rated currents not exceeding 100 A and rated voltages not exceeding 500 V a.c. Replaces IEC 60088 (1957)

MS-IEC 60269-3-1:1999

LOW-VOLTAGE FUSES - PART 3-1: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY UNSKILLED PERSONS (FUSES MAINLY FOR HOUSEHOLD AND SIMILAR APPLICATIONS) – SECTIONS I TO IV

Gives a comprehensive description of the mechanical and electrical characteristics of these fuses and of the relevant tests. Describes six types of standardized fuses: D types fuses; cylindrical fuses (types A, B, C); pin-type fuses; cylindrical fuse links (primarily used in plugs). This new publication is of equal interest to the manufacturer and to the user of fuses namely for household and similar applications.

MS-IEC 60287-1-1:2001

ELECTRIC CABLES – CALCULATION OF THE CURRENT RATING – ART 1-1: CURRENT RATING EQUATIONS (100% LOAD FACTOR) AND CALCULATION OF LOSSES - GENERAL (1st edition, *67p*)

This section of IEC 60287 is applicable to the conditions of steady-state operation of cables at all alternating voltages up to 5 kV, buried directly in the ground, in ducts, troughs or in steel pipes, both with and without partial drying-out of the soil, as well as cables in air. The term steady-state is intended to mean a continuous constant current (100 % load factor) just sufficient to produce asymptotically the maximum conductor temperature, the surrounding ambient temperature being

assumed constant.

This section provides formulae for current ratings and losses.

The formulae given are essentially literal and designedly leave open the selection of certain important parameters. These may be divided into three groups:

- Parameters related to construction of cables (for example, thermal resistivity of insulating material) for which representative values have been selected based on published work;

- Parameters related to surrounding conditions, which may vary widely, the selection of which depends on the country in which the cables are being used or are to be used;

- Parameters which result from agreement between manufacturer and user which involve a margin for security of service (for example, maximum conductor temperature).

MS-IEC 60287-2-1:2001

ELECTRIC CABLES – CALCULATION OF THE CURRENT RATING – PART 2-1: THERMAL RESISTANCE – CALCULATION OF THERMAL RESISTANCE (2nd edition, *79p*)

This section of IEC 60287 is applicable to the conditions of steady-state operation of cables at all alternating voltages up to 5 kV, buried directly in the ground, in ducts, troughs or in steel pipes, both with and without partial drying-out of the soil, as well as cables in air. The term steady-state is intended to mean a continuous constant current (100 % load factor) just sufficient to produce asymptotically the maximum conductor temperature, the surrounding ambient temperature being assumed constant.

This section provides formulae for current ratings and losses.

The formulae given are essentially literal and designedly leave open the selection of certain important parameters. These may be divided into three groups:

- Parameters related to construction of cables (for example, thermal resistivity of insulating material) for which representative values have been selected based on published work;

- Parameters related to surrounding conditions, which may vary widely, the selection of which depends on the country in which the cables are being used or are to be used;

- Parameters which result from agreement between manufacturer and user which involve a margin for security of service (for example, maximum conductor temperature).

MS-IEC 60287-3-2

ELECTRIC CABLES - CALCULATION OF THE CURRENT RATING - PART 3: SECTIONS ON OPERATING CONDITIONS - SECTION 2: ECONOMIC OPTIMIZATION OF POWER CABLE SIZE (M)

Deals solely with the economic choice of conductor size based on joule losses. Voltage dependent losses have not been considered.

MS-IEC 60296:2003

FLUIDS ELECTRO TECHNICAL APPLICATIONS - UNUSED MINERAL INSULATING OILS FOR TRANSFORMERS AND SWITCHGEAR (M)

Covers specifications and test methods for unused mineral insulating oils,

intended for use in transformers, switchgear and similar electrical equipment. Oils with and without additives are within the scope.

MS-IEC 60304:1982 **STANDARD COLOURS FOR INSULATION FOR LOW-FREQUENCY CABLE AND WIRES (M)**

Applies to thermoplastic insulation to be used with low frequency cables and wires.

MS-IEC 60305:1995 **INSULATORS FOR OVERHEAD LINES WITH A NOMINAL VOLTAGE ABOVE 1000 V-CERAMIC OR GLASS INSULATOR UNITS FOR A.C. SYSTEMS - CHARACTERISTICS OF INSULATOR UNITS OF THE CAP AND PIN TYPE (M)**

Applies to string insulator units of the cap and pin type with insulating parts of ceramic material or glass, intended for a.c. overhead lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz. It also applies to insulators of similar design used in substations.

MS-IEC 60309-1:2005 **PLUGS, SOCKET-OUTLETS AND COUPLES FOR INDUSTRIAL PURPOSES - PART 1: GENERAL REQUIREMENTS (M)**

This standard applies to plugs and socket outlets, cable couplers and appliance couplers, with a rated operating voltage not exceeding 690 V 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.

The list of preferred ratings is not intended to exclude other ratings.

MS-IEC 60335-1:2005 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 1: GENERAL REQUIREMENTS (M)**

This third edition of IEC 60335-1(1991) and its 1st amendment (1994) covers the general requirements for safety of household appliances. All parts 2s, dealing with particular requirements, should be used in conjunction with this 3rd edition, except parts 2-57 and 2-63.

MS-IEC 60335-2-15:2005 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-15: PARTICULAR REQUIREMENTS FOR APPLIANCES FOR HEATING LIQUIDS (M)**

Deals with the safety of electrical appliances for heating liquids for household and similar purposes, e.g. kettles, coffee-makers, steam cookers. To be used by laymen in light industry and on farms.

MS-IEC 60335-2-21:2004 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-21: PARTICULAR REQUIREMENTS FOR STORAGE WATER HEATERS (M)**

Applies to stationary non instantaneous storage water heaters intended for heating water to a temperature below its boiling point, their rated voltage being not more than 250 V for single-phase appliances and 480 V for other appliances.

MS-IEC 60335-2-29:2004 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-29: PARTICULAR REQUIREMENTS FOR BATTERY CHARGERS (M)**

This standard deals with the safety of battery chargers for household and similar use having an output at safety extra-low voltage, their rated voltage being not more than 250 V.

MS-IEC 60335-2-3:2005 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-3: PARTICULAR REQUIREMENTS FOR ELECTRIC IRONS (M)**

Deals with the safety of electric rooms heaters for household and similar purposes with a rated voltage not more than 250 V for single-phase appliances and 480 V for other appliances.

MS-IEC 60335-2-39:2004 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-39: PARTICULAR REQUIREMENTS FOR COMMERCIAL ELECTRIC MULTI-PURPOSE COOKING PANS (M)**

Deals with the safety of electrical commercial multi-purpose cooking pans, not intended for household use. Typical use is in restaurants, canteens, bakeries, butcheries, etc. Their rated voltage is not more than 250 V for single-phase appliances and 480 V for other appliances. It also covers the electrical part of appliances using other forms of energy.

MS-IEC 60335-2-45:2002 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-45: PARTICULAR REQUIREMENTS FOR PORTABLE HEATING TOOLS AND SIMILAR APPLIANCES (M)**

Deals with the safety of portable electric heating tools and similar appliances, their rated voltage being not more than 250 V.

MS-IEC 60335-2-47:2002 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-47: PARTICULAR REQUIREMENTS FOR COMMERCIAL ELECTRIC BOILING PANS (M)**

Deals with the safety of electrical commercial boiling pans. They are not intended for household use. As examples, they are used in restaurants, canteens, bakeries and butcheries. Their rated voltage is not more than 250 V for single-phase appliances and 480 V for other appliances. The electrical part of appliances making use of other energy heat sources is covered.

MS-IEC 60335-2-59:2006 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-59: PARTICULAR REQUIREMENTS FOR INSECT KILLERS (M)**

Applies to electric insect killers for household and similar purposes. It does not apply to appliances emitting vaporized chemicals, applicances emitting ultrasonic waves, or appliances used in corrosive or explosive atmospheres.

MS-IEC 60335-2-71:2002 **HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-71: PARTICULAR REQUIREMENTS FOR ELECTRICAL HEATING APPLIANCES FOR BREEDING AND REARING ANIMALS (M)**

Deals with the safety of all kinds of electrical heating appliances for animals used for livestock keeping and breeding such as: heat radiating appliances, electrical sitting-hens, incubators, chicken breeding units and heating plates for animals. The rated voltage of these appliances is not more than 250 V for single-phase operation and 480 V for other operations.

MS-IEC 60357:2002 **TUNGSTEN HALOGEN LAMPS (NON VEHICLE) (M)**

This standard specifies dimensions and characteristics of tungsten halogen lamps. The standard has been divided into sections according to the following lamp

Applications:

Projection photographic (including studio) floodlighting special purpose general purpose stage lighting lamps for automobile, aircraft and similar applications are not covered by this standard. This consolidated version of IEC 60357 is based on the second edition (1982) and its amendments 1(1984), 2(1985), 3(1987), 4(1989), 5(1992), 6(1993), 7(1994), 8(1995), 9(1996), 10(1996), 11(1997), 12(1999) and 13(2000) It bears the edition number 2.13

MS-IEC 60364-4-41:2005 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 4-41: PROTECTION FOR SAFETY - PROTECTION FOR SAFETY - PROTECTION AGAINST ELECTRIC SHOCK (M)**

Specifies essential requirements regarding protection against electric shock, including basic protection (protection against direct contact) of persons and livestock. It deals also with the application and co-ordination of these requirements in relation to external influences.

Requirements are also given for the application of additional protection in certain cases.

MS-IEC 60364-4-42:2001 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 4-42: PROTECTION FOR SAFETY - PROTECTION AGAINST THERMAL EFFECTS (M)**

Persons, fixed equipment, and fixed materials adjacent to electrical equipment shall be protected against harmful effects of heat developed by electrical equipment, or thermal radiation, particularly the following effects:

- Combustion or degradation of materials;
- Risk of burns;
- Impairment of the safe function of installed equipment.

MS-IEC 60364-4-43:2001 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 4-43: PROTECTION FOR SAFETY - PROTECTION AGAINST OVERCURRENT (M)**

Describes how live conductors are protected by one or more devices for automatic eruption of the supply in the event of overload (see clause 433) and short-circuits (see clause 434) except in cases where the overcurrent is limited in accordance with clause 436 or by the conditions described in 433.3, or 434.3 are met. Further, protection against overload and against short circuits shall be co-ordinated in accordance with clause 435.

MS-IEC 60364-5-51:2005 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-51: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - COMMON RULES (M)**

This part of IEC 60364 deals with the selection of equipment and its erection. It provides common rules for compliance with measures of protection for safety requirements for proper functioning for intended use of the installation, and requirements appropriate to the external influence foreseen.

MS-IEC 60364-5-52:2001 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-52: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - WIRING SYSTEMS (M)**

Part 5-52 of IEC 60364 deals with the selection and selection and erection of wiring systems.

MS-IEC 60364-5-53:2002 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-53: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - ISOLATION, SWITCHING AND CONTROL (M)**

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.

MS-IEC 60364-5-54:2002 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-54: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - EARTHING ARRANGEMENTS, PROTECTIVE CONDUCTORS AND PROTECTIVE BONDING CONDUCTORS (M)**

MS-IEC 60364-5-55:2002 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-55: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - OTHER EQUIPMENT (M)**

Covers requirements for low voltage generating sets. Particular requirements for supplies for safety services are given in clause 556 wile clause 559 applies to the selection and erection of luminaires and lighting installations intended to be part of the fixed installation.

Electrical standby supply systems, other than for safety services, are outside the scope of this standard.

This part of IEC 60364 does not apply for installations in hazardous areas (BE3).

MS-IEC 60364-6-61:2006 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 6-61:VERIFICATION – INITIAL (M)**

It provides requirements for initial and periodic verification of an electrical installation.

Clause 61 provides requirements for initial verification by inspection and testing, of an electrical installations to determine, as far as reasonably practicable, whether the requirements of the other parts of IEC 60364 have been met and requirements for the reporting of the results of the initial verification. The initial verification takes place upon completion of a new installation or completion of additions or alterations to exiting installations.

Clause 62 provides requirements for periodic verification of an electrical installation to determine, as far as reasonably practicable, whether the installation and all its constituent equipment are in a satisfactory condition for use and requirements for the reporting of the results of the periodic verification.

MS-IEC 60364-7-705:1984 **ELECTRICAL INSTALLATIONS OF BUILDINGS. PART 7: REQUIREMENTS FOR SPECIAL INSTALLATIONS OR LOCATIONS. SECTION 705: ELECTRICAL INSTALLATIONS OF AGRICULTURAL AND HORTICULTURAL PREMISES (M)**

The particular requirements of this section apply to all parts of fixed installations of agricultural and horticultural premises outdoors and indoors and to locations where livestock are kept (such as stables, chicken-houses, pigeries, feed-processing locations, lefts and storages for hay, straw and fertilizers)

MS-IEC 60364-7-714:1996 **ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 7: REQUIREMENTS FOR SPECIAL INSTALLATIONS OR LOCATIONS - SECTION 714: EXTERNAL LIGHTING INSTALLATIONS (M)**

This section of IEC 364-7 deals with external lighting installations. The requirements apply particularly to:

- Lighting installations e.g. for roads, parks, gardens, public places, sporting areas, illuminations of monuments and floodlighting;
- Other equipment incorporating lighting such as telephone kiosks, bus shelters, advertising panels, town plans, roads signs.

These rules do not apply:

- Public lighting installations which are part of public power grid and operated by a public supply authority who is responsible for and has taken all necessary measures regarding safety;
- Temporary festoon lighting;
- Road traffic signal systems;
- Luminaires which are fixed to the outside of a building and are supplied directly from the internal wiring of that building.

For lighting installations for swimming pools and fountains, see IEC 364-7-702.

MS-IEC 60383-1:1993 **INSULATORS FOR OVERHEAD LINES WITH A NOMINAL VOLTAGE ABOVE 1000 V PART 1: CERAMIC OR GLASS INSULATOR UNITS FOR A.C. SYSTEMS - DEFINITIONS, TEST METHODS AND ACCEPTANCE CRITERIA (M)**

Applies to insulators of ceramic material or glass for use on a.c. overhead power lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz. Also applies to insulators for use on d.c. overhead electric traction lines and applies to string insulator units, rigid overhead line insulators and to insulators of similar design when used in substations.

MS-IEC 60410 **SAMPLING PLANS AND PROCEDURES FOR INSPECTION BY ATTRIBUTES (M)**

This recommendation established sampling plans and procedures for inspection by attributes. When specified by the responsible authority, this recommendation shall be called up in the specification, contract, inspection instructions or other documents and the provisions set forth herein shall govern. The “response authority” shall be designated in one of the above documents.

MS-IEC 60423:1993 **CONDUITS FOR ELECTRICAL PURPOSES - OUTSIDE DIAMETERS OF CONDUITS FOR ELECTRICAL INSTALLATIONS AND THREADS FOR CONDUITS AND FITTINGS (M)**

This International Standard specifies outside diameters for conduits used in electrical installations and the dimensional requirements for threads. It also specifies the dimensional requirements for threads used in associated fittings.

It is not applicable to extra-heavy duty rigid steel conduits specified in IEC 981.

MS-IEC 60432-1:2005 **INCANDESCENT LAMPS - SAFETY SPECIFICATIONS - PART 1: TUNGSTEN FILAMENT LAMPS FOR DOMESTIC AND SIMILAR GENERAL LIGHTING PURPOSES (M)**

Specifies the safety and interchangeability requirements of tungsten filament incandescent lamps for general lighting service having:

- Rated wattage up to and including 200 W;
- Rated voltage of 50 V to 250 V inclusive;
- Bulbs of the A, B, C, G, M, P, PS, PAR or R shapes, or other bulb shapes where the lamps are intended to serve the same purpose as lamps with the foregoing bulb shapes;
- Bulbs with all kinds of finishes;
- Caps B15d, B22d, E12, E14, E17, E26, E26d, E26/50 x 39, E27 or E27/51 x 39

As far as is reasonably practicable, this standard is also applicable to lamps with bulbs and caps other than those mentioned above, but which serve the same purpose.

MS-IEC 60432-2:2005 **INCANDESCENT LAMPS - SAFETY SPECIFICATIONS - PART 2: TUNGSTEN HALOGEN LAMPS FOR DOMESTIC AND SIMILAR GENERAL LIGHTING PURPOSES (M)**

Specifies the safety and the related interchangeability requirements of tungsten halogen lamps for general lighting service. It covers those tungsten halogen lamps that are used as direct replacements for conventional tungsten filament lamps as well as new tungsten halogen lamps which have no correspondence in IEC 60432-1, but for which the safety and interchangeability requirements are treated by this standard in conjunction with IEC 60432-1. These tungsten halogen lamps have the following characteristics:

- Rated wattage up to and including 250 W;
- Rated voltage of 50 V to 250 V inclusive;
- Caps B115d, B22d, E12, E14, E17, E26, E26D, E26/50 X 39, E27 or E27/51 x 39

Lamps complying with this standard are self-shielded, but need not be marked with a special symbol. As they are direct replacements for conventional tungsten filament lamps, there will be no corresponding luminaire marking.

MS-IEC 60433:1998 **INSULATORS FOR OVERHEAD LINES WITH A NOMINAL VOLTAGE ABOVE 1 000 V- CERAMIC INSULATORS FOR A.C SYSTEMS - CHARACTERISTICS OF INSULATORS UNITS OF THE LONG ROD TYPE (M)**

Prescribes specified values for the electrical and mechanical characteristics and for the principal dimensions of string insulator units of the long rod type with insulating parts of ceramic material intended for a.c. overhead lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz. It is also applicable to insulators of similar design, used in substations. Applies also to string insulator units: -of the long rod type either with a clevis at both ends for coupling with a tongue, or with a socket at both ends for coupling with a pin ball - with external metal fittings -for use on overhead lines situated in slightly polluted areas, and the creepage distances given in Tables I and II have been established accordingly -and insulators of similar design, used in substations. This standard may be regarded as a provisional standard for insulators for d.c. overhead lines.

NOTE

- For general definitions and methods of tests see IEC 60383.
- For dimensions of clevis and tongue couplings of string insulator units, see IEC 60471.
- For dimensions of ball and socket couplings of string insulator units, see IEC 60120.

MS-IEC 60530:1975 **METHODS FOR MEASURING THE PERFORMANCE OF ELECTRIC KETTLES AND JUGS FOR HOUSEHOLD AND SIMILAR USE (M)**

Applies to electric kettles and jugs for household and similar use with a capacity up to 2.5.1.

MS-IEC 60567:2005 **OIL-FILLED ELECTRICAL EQUIPMENT - SAMPLING OF GASES AND OF OIL FOR ANALYSIS OF FREE AND DISSOLVED GASES – GUIDANCE (M)**

Deals with the techniques for sampling free gases from gas- collecting relays and for sampling oil from oil-filled equipment such as power and instrument

transformers, reactors, bushings, oil-filled cables and oil-filled tank-type capacitors. Three methods of sampling free gases and three methods of sampling oil are described. The choice between the methods often depends on the apparatus available and on the quantity of oil needed for analysis.

MS-IEC 60598-1:2003 **LUMINAIRES - PART 1: GENERAL REQUIREMENTS AND TESTS (M)**

Covers general requirements for the classification and marking of luminaires and for their mechanical and electrical construction, together with related tests. Is applicable to luminaires for use with tungsten filaments, tubular fluorescent and other discharge lamps on supply voltages not exceeding 1 000 V. This publication supersedes IEC 60162 (1972).

MS-IEC 60598-2-3:2000 **LUMINAIRES - PART 2-3: PARTICULAR REQUIREMENTS - LUMINAIRES FOR ROAD AND STREET LIGHTING (M)**

Specifies requirements for luminaires for road and street lighting, for use with tungsten filament, tubular fluorescent and other discharge lamps on supply voltages not exceeding 1 000 V.

MS-IEC 60598-2-5:1992 **LUMINAIRES - PART 2-5: PARTICULAR REQUIREMENTS - FLOOD LIGHTS (M)**

Specifies requirements for floodlights for use with tungsten filament, tubular fluorescent and other discharge lamps on supply voltages not exceeding 1 000 V.

MS-IEC 60614-2-1:1993 **SPECIFICATION FOR CONDUITS FOR ELECTRICAL INSTALLATIONS. PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS. SECTION ONE: METAL CONDUITS (M)**

This clause of Part 1 is applicable except as follows:

Addition:

This standard specifies requirements for threadable and non-threadable plain rigid metal conduits.

MS-IEC 60614-2-2:1980 **SPECIFICATION FOR CONDUITS FOR ELECTRICAL INSTALLATIONS. PART 2: PARTICULAR SPECIFICATIONS FOR RIGID PLAIN CONDUITS OF INSULATING MATERIALS (M)**

This clause of Part 1 is applicable except as follows:

Addition:

This standard specifies requirements for rigid non-flame propagating plain conduits of insulating materials

MS-IEC 60614-2-5:1992 **SPECIFICATIONS FOR CONDUITS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS - SECTION 5: FLEXIBLE CONDUITS (M)**

This clause of part 1 is applicable except as follows:

Addition:

This standard specifies requirements for flexible conduits of metal, insulating or composite materials for the protection of conductors and cables in electrical installations. It does not cover requirements for conduit fittings.

MS-IEC 60614-2-6:1992 **SPECIFICATIONS FOR CONDUITS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS - SECTION 6: PLIABLE CONDUITS OF METAL OR COMPOSITE MATERIALS (M)**

This clause of Part 1 is applicable except as follows:

Addition:

This standard specifies requirements for pliable conduits of metal or composite materials for the protection of conductors and cables in electrical installation. It does not cover requirements for conduit fittings.

MS-IEC 60649:1979 **CALCULATION OF MAXIMUM EXTERNAL DIAMETER OF CABLES FOR INDOOR INSTALLATIONS (M)**

Specifies the method of calculation for maximum external diameter of low frequency cables for indoor installations. Gives an example of calculation of diameter over assembly for cable with screened elements. Has the status of a technical report.

MS-IEC 60652:2002 **LOADING TESTS ON OVERHEAD LINE STRUCTURES (M)**

Codifies the methods of testing supports for overhead lines.

It is applicable to the testing of supports and structures of overhead lines for voltages above 45 kV; it can also serve as reference to the testing of lower voltage support.

There is no restriction on the type of material used in the fabrication of the supports which may include, but not be limited to, metallic alloys, concrete, timber, laminated wood and composite materials. If required by the client, this standard may also be applied to the testing of telecommunication supports, railways/tramway overhead electrification supports, electrical substation gantries, street lighting columns, wind turbine towers, ski-lift supports, etc.

Test on reduced scale models of supports are not covered by this standard.

MS-IEC 60665:1980 **A.C ELECTRIC VENTILATING FANS AND REGULATORS FOR HOUSEHOLD AND SIMILAR PURPOSES (M)**

Specifies the performance and the corresponding methods of test of ventilating fans for household and similar purposes intended for air forcing and exhaust, not exceeding 0.5 m in size, driven by single-phase a.c. motors having a power consumption not exceeding 500 W (including any associated regulators), for use on single-phase a.c. circuits not exceeding 250 V. Applies to ventilating fans such as wall fans, window fans, kitchen fans, etc.

MS-IEC 60669-1:2000 **SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED-ELECTRICAL INSTALLATIONS - PART 1: GENERAL REQUIREMENTS (M)**

Applies to manually operated general purpose switches for a.c. only, with a rated voltage not exceeding 440 V and a rated current not exceeding 63 A.

MS-IEC 60672-2 **CERAMIC AND GLASS INSULATING MATERIALS - PART 2: METHODS OF TEST (M)**

Applicable to ceramic, glass and glass-ceramic materials to be used for electrical insulation purposes. Specifies methods of test. Intended to provide test results typical of the material from which the test pieces are processed. Since, in the majority of cases, ceramic components for insulating purposes are of rather different size and shape to test pieces, the results of such tests provide only a guide to the actual properties of components. The limitations imposed by the method of forming and processing are discussed where relevant.

MS-IEC 60672-3:1997 **CERAMIC AND GLASS INSULATING MATERIALS - PART 3: SPECIFICATIONS FOR INDIVIDUAL MATERIALS (M)**

Applicable to ceramic, glass-ceramic, glass-mica and glass materials for electrical insulating purposes giving a classification of materials and typical numerical values for the major characteristics.

MS-IEC 60826:1991 **DESIGN CRITERIA OF OVERHEAD TRANSMISSION LINES (M)**

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 also be applied to lines with a lower nominal voltage.

It also provides a framework for the preparation of national standards dealing with overhead transmission lines, using reliability concepts and employing probabilistic or semi-probabilistic methods. These national standards will need to establish the local climatic data for the use and application of this standard, in addition to other data that are country specific.

Although the design criteria in this standard apply to new lines, many concepts can be used to address the reliability requirements for refurbishments for refurbishment and uprating of existing lines.

This standard does not cover the detailed design of line components such as towers, foundations, conductors or insulators

MS-IEC 60865-1:1993 **SHORT-CIRCUIT CURRENTS - CALCULATION OF EFFECTS -PART 1: DEFINITIONS AND CALCULATION METHODS (M)**

It is applicable to the mechanical and thermal effects of short circuit currents. It contains standardized procedures for the calculation of the effects of the short-circuit currents in two sections as follows:

- Section 2 – The electromagnetic on rigid conductors and flexible conductors.
- Section 3 – the thermal effect on bare conductors and electrical equipment.

For cables and insulated conductors reference is made, for example, to IEC 949 and IEC 986.

Only a.c. systems for rated voltages up to and including 420 kV are dealt with in this standard.

MS-IEC 60884-1:1987 **PLUGS, SOCKET-OUTLETS AND COUPLES FOR HOUSEHOLD AND SIMILAR PURPOSES - PART 1: GENERAL REQUIREMENTS (M)**

Applies to plugs and fixed or portable socket-outlets for a.c. only with or without earthing contact, with a rated voltage greater than 50 V but not exceeding 440 V and a rated current not exceeding 32 A, intended for household and similar purposes, either indoors or outdoors.

The rated current is limited to 16 A maximum for fixed socket-outlets provided with screwless terminals.

This standard does not cover requirements for flush mounting boxes, however, it covers only those requirements for surface-type mounting boxes which are necessary for the tests on the socket-outlet.

MS-IEC 60884-2-1:1987 **PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES. - PART 2: PARTICULAR REQUIREMENTS FOR FUSED PLUGS (M)**

This clause of Part 1 is applicable except as follows:

Addition

This standard 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.

MS-IEC 60884-2-2:1987 **PLUGS AND SOCKETS-OUTLETS OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES. - PART 2: PARTICULAR REQUIREMENTS FOR SOCKET-OUTLETS FOR APPLIANCES (M)**

Applies to socket-outlets integrated or intended to be incorporated in or fixed to appliances.

MS-IEC 60885-1:1995 **ELECTRICAL TEST METHODS FOR ELECTRIC CABLES. PART 1: ELECTRICAL TESTS FOR CABLES, CORDS AND WIRES FOR VOLTAGES UP TO AND INCLUDING 450/750 V (M)**

The electrical test methods described in this standard are given as a guide to be followed for testing wires, cords and cables in case the relevant cable standard does not prescribe a different electrical test method.

The electrical tests are applicable only to:

- Unsheathed wires, cords and cables;
- Cores taken from complete sheathed cords and cables all having a maximum rated voltage up to and including 450/750 V

MS-IEC 60888:1987 **ZINC-COATED STEEL WIRES FOR STRANDED CONDUCTORS (M)**

Applies to zinc-coated steel wires used in the construction and/or reinforcement of conductors for overhead power transmission purposes.

It is intended to cover all wires used in constructions where the individual wire diameters, including coating, are in the range of 1.25 mm to 5.50 mm.

Three grades of steel are included to reflect the needs of conductor users: regular steel, high strength and extra high strength steel and extra high strength steel.

Two classes of coating represented by minimum zinc mass per unit area are included: Class 1 and Class 2.

MS-IEC 60889:1987 **HARD-DRAWN ALUMINIUM WIRE FOR OVERHEAD LINE CONDUCTORS (M)**

Is 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 1.25 mm to 5.00 mm.

MS-IEC 60896-11:2002 **STATIONERY LEAD-ACID BATTERIES - PART 11: VENTED TYPES - GENERAL REQUIREMENTS AND METHODS OF TESTS (M)**

This part of IEC 60896 is applicable to lead-acid cells and batteris which are designed for service in fixed locations (i.e not habitually to be moved from place to place) and which are permanently connected to the load and to the d.c. power supply. Batteries operating in such applications are called “stationery batteries”.

MS-IEC 60904-2:1984 **PHOTOVOLTAIC DEVICES. PART 2: REQUIREMENTS FOR REFERENCE SOLAR CELLS (M)**

This standard gives requirements for the classification, selection, packaging, marking, calibration and care of crystalline silicon reference solar cells.

MS-IEC 60904-3 **PHOTOVOLTAIC DEVICES. PART 3: MEASUREMENT PRINCIPLES FOR TERRESTRIAL PHOTOVOLTAIC (PV) SOLAR DEVICES WITH REFERENCE SPECTRAL IRRADIANCE DATA (M)**

This standard applies to the following crystalline silicon photovoltaic devices for

terrestrial applications:

a) Single solar cells with or without a protective cover
b) Sub-assemblies of solar cells
c) Flat modules

This standard is not applicable to solar cells designed for operation in concentrated sunlight, to modules embodying concentrators, nor to hybrid collectors which in addition to generating electricity, transfer heat to fluids for use in thermal systems.

MS-IEC 60906-1:1989 **IEC SYSTEM OF PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES - PART 1: PLUGS AND SOCKET-OUTLETS 16A 250 V A.C. (M)**

This standard applies to the IEC system of plugs and socket-outlets rated 16 A 250 V a.c. for household and similar purposes for the connection of equipment to distribution systems having nominal voltages between 200 V and 250 V a.c, in sofar as dimensional requirements are concerned.

This standard does not apply to plugs and socket-outlets rated 15A 125 V a.c. for household and similar purposes for the connection of equipment to distribution systems having nominal voltages between 100 V and 125 V a.c.

MS-IEC 60921:2004 **BALLATS FOR TUBULAR FLUORESCENT LAMPS - PERFORMANCE REQUIREMENTS (M)**

This standard specifies performance requirements fro ballasts, excluding resistance types for use in a.c. supplies up to 1 000v 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. It applies to complete ballasts and their component parts such as resistors, transformers and capacitors.

A.C supplied electronic ballasts for tubular fluorescent lamps for high frequency operation specified in IEC 61347 – 2 -3 are excluded from the scope of standard.

MS-IEC 60923:2005 **AUXILIARIES FOR LAMPS - BALLATS FOR DISCHARGE LAMPS (EXCLUDING TUBULAR FLUORESCENT LAMPS) - PERFORMANCE REQUIREMENTS (M)**

Specifies performance requirements for ballasts for discharge lamps such as high pressure mercury vapour, how-pressure sodium vapour, high pressure requirements for a particular type of ballast. This standard covers inductive type ballasts for use in a.c. supplies up to 1500 v at 50 Hz to 60 Hz associated with discharge lamps having rated wattages, dimensions and characteristics as specified in the relevant IEC lamp standards.

MS-IEC 60925:2001 **DC SUPPLIED ELECTRONIC BALLATS FOR TUBULAR FLUORESCENT LAMPS - PERFORMANCE REQUIREMENTS (M)**

Specifies performance requirements for star devices (starter and ignitors) for tubular fluorescent and other discharge lamps for use on a.c supplies up to 1000 v at 50 Hz or 60Hz, which produce starting pulses not greater than 5 kV. It should be read in conjunction with IEC 60926.

MS-IEC 60927:2004 **AUXILIARIES FOR LAMPS - STARTING DEVICES (OTHER THAN GLOW STARTERS) - PERFORMANCE REQUIREMENTS (M)**

Specifies performance requirements for starting device (starter and ignitors) for tubular fluorescent and other discharge lamps for use on a.c. supplies up to 1 000 V at 50 Hz or 60 Hz, which produce starting purses not greater than 5 kV. It should be read in conjunction with IEC 60926.

MS-IEC 60974-11:2004 **ARC WELDING EQUIPMENT - PART 11: ELECTRODE HOLDERS (M)**

This part of IEC 60974 is applicable to electrode holders for manual metal arc welding with electrodes up to 10 mm in diameter.

It is not applicable to electrode holders fir under water welding.

This part of IEC 60974 specifies safety and performance requirements of electrode holders.

MS-IEC 60974-12:2005 **ARC WELDING EQUIPMENT - PART 12: COUPLING DEVICE FOR WELDING (M)**

This part of IEC 60974 is applicable to coupling devices for cables for welding and allied processes designed for connection and disconnection without using tools.

This part of IEC 60974 specifies safety and performance requirements of coupling devices.

This part of IEC 60974 is not applicable to coupling devices for underwater welding.

MS-IEC 61035-1:1990 **SPECIFICATION FOR CONDUIT FITTINGS FOR ELECTRICAL INSTALLATIONS PART 1: GENERAL REQUIREMENTS (M)**

This International Standard specifies requirements for conduit fittings for use with conduits for the protection of conductors and/or cables in electrical installations, and type tests for the quality of joints of conduit fittings to conduit.

This standards also applies to conduit fittings used for assembling conduits to conduit boxes.

Connecting couplers, bends, reducing couplers, tees, cross-pieces, threaded stoppers and the like are within the scope of this standard.

MS-IEC 61035-2-1:1993 **SPECIFICATION FOR CONDUIT FITTINGS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR SPECIFICATIONS - SECTION 1: METAL CONDUIT FITTINGS (M)**

This clause of part 1 is applicable except as follows:

Addition:

This section of IEC 1035-2 specifies requirements for metal conduit fittings, for use with circular, threadable or non-threadable conduits complying with IEC 614.

This standard is not applicable to fittings for use with flexible conduits (IEC 614-2-5)

MS-IEC 61035-2-2:1993 **SPECIFICATION FOR CONDUIT FITTINGS FOR ELECTRICAL INSTALLATION - PART 2: PARTICULAR SPECIFICATIONS - SECTION 2: CONDUIT FITTINGS OF INSULATING MATERIAL.(M)**

This clause of part 1 is applicable except as follows:

Addition:

This section of 1035-2 specifies requirements for conduit fittings of insulating material, for use with circular conduits complying with IEC 614.

MS-IEC 61039:1990 **GENERAL CLASSIFICATION OF INSULATING LIQUIDS (M)**

This International Standard defines the detailed classification of family N (insulating liquids) which belongs to class L (lubricants, industrial oils and related products) in accordance with ISO 8681 and ISO 6743-0

MS-IEC 61058-1:2001 **SWITCHES FOR APPLIANCES - PART 1 GENERAL REQUIREMENTS (M)**

This International Standard applies to switches (mechanical or electronic) for appliances actuated by hand, by foot or by other human activity, to operate or control electrical appliances and other equipment for household or similar purposes with a rated voltage not exceeding 440V and a rated current not exceeding 63 A.

MS-IEC 61058-2-1:1992

SWITCHES APPLIANCES - PART 2-1: PARTICULAR REQUIREMENT FOR CORD SWITCHES (M)

This clause of part 1 is applicable except as follows:

Replacement:

1.1 this International Standard IEC 1058-2-1 applies to cord switches for appliances actuated by hand, by foot or by other human activity for use in, on or with appliances and other equipment for household and similar purposes, with a rated voltage not exceeding 250 V and a rated current not exceeding 16 A

1.2 *Replacement*

This standard applies to switches intended to be connected to a cord.

MS-IEC 61084-1:1991

CABLE TRUNKING AND DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS - PART 1: GENERAL REQUIREMENTS (M)

Specifies requirements for cable trunking and cable ducting systems intended for the accommodation, and where necessary for the segregation, of conductors, cables or cords and/or other electrical equipment in electrical installations.

This specification does not apply to conduit, cable tray or cable ladder or current – carrying parts within the system.

MS-IEC 61084-2-1:1996

CABLE TRUNKING AND DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR REQUIREMENTS - SECTION 1: CABLE TRUNKING AND DUCTING SYSTEMS INTENDED FOR MOUNTING ON WALLS OR CEILINGS (M)

This section of IEC 1084-2 specifies requirements for cable trunking and ducting systems intended for mounting on walls or ceilings. The cable trunking and ducting systems accommodate and where necessary, segregate conductors, cables or cords and other electrical equipment.

The systems are intended to be mounted directly on walls or ceilings, flush or semiflush, or indirectly on walls or ceilings or on structures away from walls or ceilings.

Cable trunking and ducting systems are hereinafter called CT/DS.

This standard does not apply to conduits, cable trays or cable ladders, electrical accessories e.g. switches, socket-outlets or the like, for which other IEC standards apply, or current carrying parts within the system.

The different types of systems are shown in figure 101 and described in annex A.

MS-IEC 61084-2-4:1996

CABLE TRUNKING AND DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS – PART 2: PARTICULAR REQUIREMENTS – SERVICE POLES (M)

This section of IEC 1084-2 specifies requirements for service poles intended for the accommodation, and where necessary for the segregation, of conductors, cables or cords and/or other electrical equipment in electrical installations. It specifies requirements for service poles intended for either re-locatable or fixed mounting, in any direction as shown in figure 101.

This standard does not apply to conduits, cable trays or cable ladders or to current-carrying parts within the system.

MS-IEC 61089:1991 **ROUND WIRE CONCENTRIC LAY OVERHEAD ELECTRICAL STRANDED CONDUCTORS (M)**

This International Standard specifies the electrical and mechanical characteristics of round wire concentric lay overhead electrical stranded conductors made of combinations of any of the following metal wires:

a) Hard-drawn aluminium as per IEC 889 designated A1;
b) Aluminium alloy type B as per IEC 104 designated A2;
c) Aluminium alloy type A as per IEC 104 designated A3 (and when applicable to the following cores, as per IEC 888);
d) Regular strength steel, designated S1A or S1B, where A and B are zinc coating classes, corresponding respectively to classes 1 and 2;
e) High strength steel, designated S2A or S2S;
f) Extra high strength steel, designated S3A.

MS-IEC 61138:1994 **CABLES FOR PORTABLE EARTHING AND SHORT-CIRCUITING EQUIPMENT (M)**

This International Standard applies to flexible cables with covering based on ethylene propylene rubber (EPR) or on polyvinyl chloride (PVC) for portable earthing and short-circuiting equipment.

For this type of cable no rated voltage is given as such cables are exclusively intended for earthing and short-circuiting equipment.

The particular types of cable and their code designations are specified in section 2 of this standard.

MS-IEC 61140:2004 **PROTECTION AGAINST ELECTRIC SHOCK-COMMON ASPECTS FOR INSTALLATION AND EQUIPMENT (M)**

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.

This standard has been prepared for installations system and equipment without a voltage limit.

The requirements of this standard apply only if they are incorporated, or are referred to, in the relevant standards. It is not intended to be used as a stand-alone standards.

MS-IEC 61156-1:2004 **MULTICORE AND SYMMETRICAL PAIR/QUAD CABLE FOR DIGITAL COMMUNICATIONS PART 1 – GENERIC SPECIFICATION (M)**

This part of IEC 61156 is a guide to indoor cables which specifies the definition and requirements of multicore, symmetrical pair and quad cables used in digital communication system such as ISDN, local area networks and data communication systems.

MS-IEC 61156-1-1:2001 **MULTICORE AND SYMMETRICAL PAIR/QUAD CABLE FOR DIGITAL COMMUNICATIONS – PART 1-1: CAPABILITY APPROVAL – GENERIC SPECIFICATION (M)**

This part of IEC 61156 which is a generic specification applies to Capability approval requirements for multicore and symmetrical pair/quad cables for digital communications as specified in IEC 61156-1 series.

It specifies the requirements for a manufacturer seeking approval of his capability to design (if applicable), manufacture, inspect, test and release multicore and symmetrical pair/quad cables for digital communications as defined in his Capability Manual.

MS-IEC 61173:1992 **OVER VOLTAGE PROTECTION FOR PHOTOVOLTAIC (PV) POWER GENERATING (M)**

Gives guidance on the protection of overvoltage issues for both stand-alone and

grid-connected photovoltaic power generating systems**.**

MS-IEC 61194:1992 **CHARACTERISTIC PARAMETERS OF STAND-ALONE PHOTOVOLTAIC (PV) SYSTEMS (M)**

This International Standard defines the major electrical, mechanical and environmental parameters for the description and performance analysis of stand-alone photovoltaic systems. The parameters as listed are presented in a standard format for the purposes of procurement and performance analysis:

- Measurement of short-and long-term on-site photovoltaic system performance;
- Comparison between on-site measured and projected performance, both extrapolated to standard test conditions (STC)

Specialised documents related to specific applications and/or to specific uses (designing, performance prediction and measurement) may be issued, if necessary).

MS-IEC 61215:2005 **CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES DESIGN QUALIFICATION AND TYPE APPROVAL (M)**

This International Standard 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. It applies only to crystalline silicon modules types. A standard for thin-film modules has been published as IEC 61646.

This standard does not apply to modules used with concentrated sunlight.

MS-IEC 61293 :1994 **MARKING OF ELECTRICAL EQUIPMENT WITH RATINGS RELATED TO ELECTRICAL SUPPLY - SAFETY REQUIREMENTS (M)**

This International Standard establishes minimum requirements (see note 1) and general rules on marking electrical equipment (see note 2) with ratings and other characteristics to enable the proper and safe selection and installation of electrical equipment related to any supply or electricity.

MS-IEC 61364 **NOMENCLATURE OF HYDROELECTRIC POWERPLANT MACHINERY**

This technical report provides a basic nomenclature for hydraulic machinery used in hydroelectric power stations and defines their components.

The object of the report is to:

- Standardise the names of components by giving a preferred name where more than one exist
- Define components diagrammatically to facilitate their identification;
- Aid in translation of component names from one language to another.

MS-IEC 61386-1:1996 **CONDUIT SYSTEMS FOR ELECTRICAL INSTALLATIONS - PART 1; GENERAL REQUIREMENTS (M)**

This part of IEC 1386 specifies requirements and tests for conduit systems, including conduits and conduit fittings, for the protection and management of insulated conductors and/or cables in electrical installations or in communication systems up to 1000 V a.c. and/or 1500 V d.c. this standard applies to metallic, non-metallic and composite conduit systems, including threaded and non-threaded entries which terminate the system. This standard does not apply to enclosures and connecting boxes which come within the scope of IEC 670.

MS-IEC 61394:1997 **OVERHEAD LINES - CHARACTERISTICS OF GREASES FOR ALUMINIUM, ALUMINIUM ALLOY AND STEEL BARE CONDUCTORS (M)**

This technical report applies to products designed for corrosion protection of bare electrical overhead conductors in any combination of

- Wires of aluminium and aluminium alloy;
- Wires of steel coated with zinc (galvanized) and zinc alloy with aluminium;
- Wires of steel coated with aluminium.

MS-IEC 61400-SER-1:2005 **WIND TURBINE GENERATOR SYSTEMS - PART 1: SAFETY REQUIREMENTS (M)**

Deals with safety aspects, quality assurance and engineering integrity, and specifies safety requirements for design, installation and operation of wind turbine generator systems.

MS-IEC 61400-SER-2:2006 **WIND TURBINE GENERATOR SYSTEMS - PART 2: SAFETY OF SMALL WIND TURBINES (M)**

Deals with safety philosophy, quality assurance, engineering integrity and specifies requirements for the safety of wind turbines having a swept area smaller than 40m2 and generating at a voltage below 1000v a.c. or 1500v d.c

MS-IEC 61400-SER-12-1:2005 **WIND TURBINE GENERATOR SYSTEMS - PART 12-1: WIND TURBINE POWER PERFORMANCE TESTING (M)**

Specifies a procedure for measuring the power performance characteristics of a single wind turbine generator system (WTGS) and applies to the testing of WTGS of all types and sizes connected to the electrical network.

MS-IEC 61400-SER-23:2001 **WIND TURBINE GENERATOR SYSTEMS - PART 23: FULL SCALE STRUCTURAL TESTING OF ROTOR BLADES (M)**

This technical specification provides guidelines for the full-scale structural testing of wind turbine blades and for the interpretation or evaluation of results, as a possible

part of a design verification of the integrity of the blade.

The following tests are considered in this technical specification:

- Static strength test;
- Fatigue tests;
- Other tests determining blade properties.

MS-IEC 61427:1995 **SECONDARY CELLS AND BATTERIES FOR PHOTOVOLTAIC ENERGY SYSTEMS (PVES) - GENERAL REQUIREMENTS AND METHODS OF TEST (M)**

Gives general information relating to the requirements of the secondary batteries used in photovoltaic energy systems and to the typical methods of test used for the verification of battery performances.

This international standard does not include specific information relating to battery assizing, method of change of PVES design.

MS-IEC 61429:1995 **MARKING OF SECONDARY CELLS AND BATTERIES WITH THE INTERNATIONAL RECYCLING SYMBOL ISO 7000-1135 (M)**

Defines the conditions of utilization of the recycling symbol of the international organization for standardization (ISO) associated with the chemical symbols indicating the electrochemical system of the battery. This standard applies to lead-acid batteries (pb) and nickel-cadmium batteries (Ni-Cd).

In all cases cells have to be marked individually with the exception of those constituting a battery or a subassembly that cannot be dismantled. For example, traction batteries and stationary batteries should be marked on or near the type of plate only.

The object of this standard is to present recommendations concerning the size of the symbol and its location on the surface of the cells and batteries or on the packages of button cells.

MS-IEC 61479:2002 **LIVE WORKING - FLEXIBLE CONDUCTOR COVERS (LINE HOSES) OF INSULATING MATERIAL (M)**

Is applicable to flexible insulating covers (line hoses) for the protection of workers from accidental contact with live or earthed electrical conductors and for the avoidance of short circuits during live working.

MS-IEC 61558-1:2005 **SAFETY OF POWER TRANSFORMERS, POWER SUPPLIES, REACTORS AND SIMILAR PRODUCTS - PART 1: GENERAL REQUIREMENTS AND TESTS (M)**

This International Standard deals with safety aspects of power transformers, power supplies, reactors and similar products such as electrical, thermal and mechanical safety.

It covers the following types of dry-type transformers, power supplies, including switch mode power supplies, and reactors, the windings of which may be encapsulated or non-encapsulated.

MS-IEC 61597 **OVERHEAD ELECTRICAL CONDUCTORS - CALCULATION FOR STRANDES BARE CONDUCTORS (First edition *85p*)(M)**

Provides information with regards to conductors specified in IEC 61089. Such information include properties of conductors and useful methods of calculations. It does not discuss all theories and available methods for calculating conductor

properties, but provides users with simple methods that provide acceptable accuracies. This publication has the status of a Technical Report - type 3.

MS-IEC 61663-2:2001 **LIGHTING PROTECTION - TELECOMMUNICATION LINES - PART 2: LINES USING METALLIC CONDUCTORS (M)**

This part of IEC 61663 deals with protection against lighting of outdoor telecommunication lines using metallic conductors (for example, access networks, lines between buildings).

These lines concern:

- Telecommunication lines connecting a switch with a network termination (NTI)
- Telecommunication or signal lines connecting equipment located in different buildings, e.g. ISDN lines or signal lines between computers.

The object of this standard is to protect telecommunication lines and connect equipment against the direct and indirect influence of lighting by limiting the risk of damage due to overvoltages and overcurrents, liable to occur in these lines, to values which are lower than or equal to the tolerable risk of damage. For more details see annex A.

The type of building can also have an effect on the risk assessment of lighting damage to telecommunication lines as well as the physical layout of the equipment installation. However, these and other similar aspects are covered by appropriate specific standards and are beyond the scope of this standard,

Fibre optical cable with metallic pairs in the cable core must be protected, following the requirements of this standard, together with those requirements defined in IEC 61663-1.`

MS-IEC 61672-1:2001 **ELECTOACOUSTICS - SOUND LEVEL METERS - PART 1: SPECIFICATIONS (M)**

This standard gives electroacoustical performance specifications for three kinds of sound measuring instruments:

- A conventional sound level meter that measures exponential time-weighted sound level;
- An integrating-averaging sound level meter that measures time-average sound level; and
- An integrating sound level meter that measures sound exposure level.

MS-IEC 61672-2 **ELECT ACOUSTICS - SOUND LEVEL METERS - PART 2: PATTERN EVALUATION TESTS (M)**

This part of IEC 61672 provides details of the tests necessary to verify conformance to all mandatory specifications given in IEC 61672-1:2002 for conventional sound level meters, integrating-averaging sound level meters and integrating sound level meters. Pattern evaluation tests apply for each channel of a multi-channel sound level meter, as appropriate. Tests and test methods are applicable to class 1 and class 2 sound level meters. The aim is to ensure that all testing laboratories use consistent methods to perform pattern evaluation tests.

MS-IEC 61683 **PHOTOVOLTAIC SYSTEMS – POWER CONDITIONERS – PROCEDURE FOR MEASURING EFFICIENCY (M)**

This standard 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 a direct measurement of input and output power in the factory. An isolation transformer is included where it is applicable.

MS-IEC 61701:1995 **SALT MIST CORROSION TESTING OF PHOTOVOLTAIC (PV) PUMPING SYSTEMS (M)**

Determines the resistance of the module to corrosion from salt mist.

MS-IEC 61702:1995 **RATING OF DIRECT COUPLED PHOTOVOLTAIC (PV) PUMPING SYSTEMS (M)**

Defines predicted short-term characteristics (instantaneous and for a typical daily period) of direct coupled photovoltaic (PV) water pumping systems. It also defines minimum performance values to be obtained on-site. It does not address PV pumping systems with batteries.

The parameters defining the photovoltaic power generating system (PVPGS) and the standard days, used to provide data in figure 1 should be in accordance with IEC standards, in preparation, on the reference solar day.

MS-IEC 61721 **SUSCEPTIBILITY OF A PHOTOVOLTAIC (PV) MODULE TO ACCIDENTAL IMPACT DAMAGE (RESISTANCE TO IMPACT TEST) (M)**

Determines the susceptibility of a module to accidental impact damage.

MS-IEC 61724 **PHOTOVOLTAIC SYSTEM PERFORMANCE MONITORING – GUIDELINES FOR MEASUREMENT, DATA EXCHANGE AND ANALYSIS (M)**

Recommends procedures for the monitoring of energy-related photovoltaic (PV) system characteristics, and for the exchange and analysis of monitored data. The purpose is the assessment of the overall performance of PV systems.

MS-IEC 61725 **ANALYTICAL EXPRESSION FOR DAILY SOLAR PROFILES (M)**

Provides a normative equation for analytically deriving a set of data points or a curve of irradiance versus time of day for a synthetic solar day.

MS-IEC 61727 **PHOTOVOLTAIC (PV) SYSTEMS – CHARACTERISTICS OF THE UTILITY INTERFACE (M)**

This International Standard applies to utililty-interconnected photovoltaic (PV power systems operating in parallel with the utility and utilizing static (solid-state) non-islanding inverters for the conversion of DC to AC. This document describes specific recommendations for systems rated at 10 kVA or less, such as may be utilized on individual residences single or three phase. This standard applies to interconnection with the low-voltage utility distribution system.

MS-IEC 61773 **OVERHEADLINE TESTING OF FOUNDATIONS FOR STRUCTURES (M)**

Is applicable to the testing procedures for foundations of overhead line structures

MS-IEC 61836 **SOLAR PHOTOVOLTAIC ENERGY SYSTEMS – TERMS AND SYMBOLS**

MS-IEC 61951-1:2006 **SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES - PORTABLE SEALED RECHARGEABLE SINGLE CELLS PART 1: NICKEL-CADMIUM (M)**

Specifies marking, designation, dimensions, tests and requirements for portable sealed nickel-cadmium small prismatic, cylindrical and button rechargeable single cells, suitable for use in any orientation. This International Standard is an amalgamation of all currently valid standards for portable sealed nickel-cadmium secondary single cells: IEC 60285, 1999, IEC 60509, 1988 and IEC 61440, 1997. It complies with the objective, which was to reduce the number of valid standards.

MS-IEC 62019:2003 **ELECTRICAL ACCESSORIES – CIRCUIT-BREAKERS AND SIMILAR EQUIPMENT FOR HOUSEHOLD USE – AUXILIARY CONTACT UNITS (M)**

Applies to auxiliary electromechanical contact units associated (or intended to be associated) with circuit breakers for over current protection, and with residual current operated circuit breakers with or without integral overcurrent protection for household and similar installations having a rated voltage not exceeding 440 V a.c. and 250 C d.c. and rated current not exceeding 10 A.

The object of this standard is to state

a) The characteristics of auxiliary contact units;
b) Their electrical and mechanical requirements with respect to

- The various duties to be performed
- The significance of the rated characteristics and of the markings;
- The tests to verify the rated characteristics;

c) The functional requirements to be satisfied by the auxiliary contact units with respect to
- Environmental conditions, including those of enclosed equipments
- Dielectric properties
- Terminals
- Safety of use

MS-IEC 62081:1999 **ARC WELDING EQUIPMENT - INSTALLATION AND USE (M)**

This Technical Specification describes the general conditions for the installation and use of arc welding equipment that comply with IEC 60974-1. Gives particular information for operators.

MS-IEC PAS 62111:1999 **SPECIFICATION FOR THE USE OF RENEWABLE ENERGIES IN RURAL DECENTRALIZED ELECTRIFICATION (M)**

This document offers an initial approach to a range of systems for decentralised rural electrification, based on a theoretical analysis of user requirements and of data arising from socio-economic surveys. 8 types of system were selected as responding to three types of need. The electrification systems identified were on stream renewable energy process supply systems, private systems and service systems.

MS-IEC 62133:2002 **SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES - SAFETY REQUIREMENTS FOR PORTABLE SEALED SECONDARY CELLS, AND FOR BATTERIES MADE FROM THEM, FOR USE IN PORTABLE APPLICATIONS (M)**

Specifies requirements and tests for the safe operation of portable sealed secondary

cells and batteries (other than button) containing alkaline or other non-acid electrolytes, under intended use and reasonably foreseeable misuse.

MS-IEC 62305-1:2006 **PROTECTION AGAINST LIGHTNING – PART 1: GENERAL PRINCIPLES (M)**

This part of IEC 62305 provides the general principles to be followed in the protection against lightning of

- Structures including their installations and contents as well as persons
- Services connected to a structure

The following cases are outside the scope of this standards:

- Railway systems;
- Vehicles, ships, aircraft, offshore installations;
- Underground high pressure pipelines;
- Pipe, power and telecommunication lines not connected to a structure.

MS-IEC 62305-3 :2006 **PROTECTION AGAINST LIGHTNING – PART 3: PHYSICAL DAMAGE TO STRUCTURES AND LIFE HAZARD (M)**

This part of IEC 62305 provides the requirements for protection of a structure against physical damage by means of a lightning protection system (LPS), and for protection against injury to living beings due to touch and step voltages in the vicinity of an LPS (see IEC 62305-1).

PART 2

LIST OF STANDARDS ACCORDING TO ICS CLASSIFICATION

The subject structure is based on the International classification for Standards (ICS)

01 GENERALITIES. TERMINOLOGY.STANDARDISATION. DOCUMENTATION

01.020 Terminology (principles and coordination)

01.40 Vocabularies

01.040.55 Packaging and distribution of goods

MS 99-2	Packaging sacks – Vocabulary - Part 2 sacks made from thermoplastic film.
MS 100-1	Packaging sacks – Description and method of measurement for empty paper sacks - Part 1: Empty paper sacks.
MS 103	Packaging – Pictorial marking for handling of goods.

01.040.75 Petroleum and related technologies (vocabularies)

MS 667-1	Petroleum Industry – Terminology
MS 667-2	Petroleum Industry - Terminology

01.060 Quantities and units

MS 174	Rulers for general purpose – Specification

01.070 Colour coding

01.075 Character symbols

01.80 Graphical symbols

MS-IEC 61836	**Solar photovoltaic energy systems – Terms and symbols**

01.100 Technical drawings

01.110 Technical product documentation

01.120 Standardization. General rules

01.140 Information sciences. Publishing

03 SOCIOLOGY. SERVICES.COMPANY ORGANISATION AND MANAGEMENT. ADMINISTRATION. TRANSPORT

03.020 Sociology. Demography

MS 700	Social responsibility – Requirements for combating child labour

03.040 Labour. Employment

03.060 Finances. Banking. Monetary systems. Insurance

03.080 Services

03.100 Company organization and management

03.120 Quality

03.120.10 Quality management and quality assurance

MS-ISO 9000	Quality management systems – Fundamentals and vocabulary (Third edition)
MS-ISO 9001	Quality management systems – Requirements (Fourth edition)
MS-ISO 9004	Quality management systems – Guidelines for performance improvements (Second edition)
MS-ISO 10002	Quality management – Customer satisfaction – Guidelines for complaints handling in organization
MS-ISO 10005	Quality management systems – Guidelines for quality plans
MS-ISO 10006	Quality management systems – Guidelines for quality management in projects
MS-ISO/TR 10013	Guidelines for quality management systems documentation
MS-ISO 10015	Quality management – Guidelines for training
MS-ISO 14043	Environmental management-Life cycle assessment-Life cycle interpretation.
MS-ISO 14044	Environmental management-Life cycle assessment-Requirements and guidelines.
MS-ISO 14048	Environ management – Life cycle impact assessment-Data documentation format
MS-ISO 14050	Environmental management-Vocabulary
MS-ISO 15161	Guidelines on the application of MS-ISO 9001:2000 for the food and drink industry
MS-ISO 19011	Guidelines for quality and/or environmental management systems auditing
MS-ISO 17025	General requirements for the competence of testing and calibration laboratories

03.140 Patents. Intellectual property

03.160 Law. Administration

03.180 Education

03.200 Leisure. Tourism

03.220 Transport

03.240 Postal services

07 MATHEMATICS. NATURAL SCIENCES

07.020 Mathematics

07.030 Physics. Chemistry

07.040 Astronomy. Geology. Geography

07.060 Geology. Metrology. Hydrology

07.080 Biology. Botany. Zoology

07.100 Microbiology

07.100.30 Food microbiology

MS 289-4 Animal Feeds and feeding stuffs – Methods of test

11 HEALTHCARE TECHNOLOGY

11.020 Medical sciences and health care facilities in general

MS 336 Open woven bandages – Specification

11.040 Medical equipment

11.060 Dentistry

11.080 Sterilization and disinfection

11.080.20 Disinfectants and antiseptics

MS 66 Antibacterial liquid toilet soap – Specification

11.100 Laboratory medicine

MS ISO 15189 Medical laboratories – Particular requirements for quality and competence

11.120 Pharmaceutic

11.140 Hospital equipment

11.160 First aid

11.180 Aids for disabled or handicapped persons

11.200 Birth control. Mechanical contraceptives

MS 307 Natural latex rubber condoms – Requirements and test methods
MS 308 Reusable rubber contraceptive diaphragms – Specification

11.220 Veterinary medicine

13 ENVIRONMENT HEALTH PROTECTION. SAFETY

13.020 Environmental protection

13.020.10 Environmental management

MS-ISO 14001 Environmental management systems – Specification with guidance for use
MS-ISO 14004 Environmental management systems – General guidelines on principles, systems and support techniques
MS-ISO 14004 Environmental management systems – General guidelines on principles, systems and support techniques.

MS/ISO 14010	Guidelines for environmental auditing – General principles
MS-ISO 14011	Guidelines for environmental auditing – Audit procedures – Auditing of environmental management systems
MS-ISO 14012:1	Guidelines for environmental auditing – Qualification criteria for environmental auditors
MS-ISO 14015	Environmental management systems – General guidelines on principles and support techniques *(19p)*
MS-ISO 14020	Environmental labels and declarations – General principles
MS-ISO 14031	Environmental management Environmental performance evaluation – Guidelines
MS-ISO 14032	Environmental management – Examples of environmental performance evaluation (EPE)
MS-ISO 14040	Environmental management – Life cycle assessment principles and framework
MS-ISO 14041	Environmental management – Life cycle assessment Coal and scope definition and inventory analysis
MS-ISO 14042	Environmental management – Life cycle assessment life cycle impact assessment
MS-ISO 19011	Guidelines for quality and/or environmental management systems auditing

13.020.40 Pollution, pollution control and conservation

MS 59	Industrial effluents – Tolerance limits for discharge into inland surface waters
MS 691	Tolerance limits for domestic sewage effluents discharged into in land surface waters – specification

13.030 Wastes

MS 59	Solid waste – Handling, transportation and disposal – Code of practice

13.030.10 Solid Wastes

MS 713	Plastic products – Guidelines for safe management and disposal

13.030.30 Special wastes

MS 615	Waste within health care facilities – handling and disposal (code of practice)
MS 675	Safety procedures for the disposal of surplus pesticides and associated toxic waste – code of practice

13.030.40 Installations and equipment for waste disposal and treatment

MS 119	Small incinerators – Specification
MS 326	Incinerators −standard performance requirements for incineration plant for the destruction of hospital waste – specification
MS 346	Incinerators – Methods of specifying purchasers requirements for incineration plant for the destruction of hospital waste
MS 356	Design, specification, installation and commissioning of incineration plant for the destruction of hospital waste – code of practice
MS 359	Incinerators – Performance of incineration plant for the destruction of hospital waste – Methods of test and calculation
MS 730	Solid waste disposal sites, guidelines for design – code of practice
MS 731	Solid waste disposal sites: Guidelines for safe management – code of practice
MS 732	Effluent treatment plants – operating conditions (code of practice**)**

13.040 Air quality

13.060 Water quality

13.060.10 Water of natural resources

MS 733 Borehole and shallow well water quality - Specification

13.060.20 Drinking water

MS 214 Drinking water – Specification
MS 678 Drinking water quality - control and surveillance of water in public supply net works
MS 699 Bottled drinking water other than mineral water

13.060.01 Water quality in general

MS 682-1 Water quality – Sampling Part 1: Guidance on the design of sampling programmes and sampling techniques
MS 682-3 Water quality – Sampling Part 3: Guidance on the preservation and handling of water samples
MS 682-4 Water quality – Sampling Part 4: Guidance on sampling from lakes, natural and man made
MS 682-6 Water quality – Sampling Part 6: Guidance on sampling of rivers and streams

13.080 Soil quality. Pedalogy

13.100 Occupational safety. Industrial hygiene

MS 125 Chemical laboratories – Code of safety
MS 714 Occupational safety and health management systems – Specification

13.110 Safety of machinery

13.120 Domestic safety

13.140 Noise with respect to human beings

MS 712-1 Acoustics – Recommended practice for the design of low noise at workplaces containing machinery Part 1: Noise control strategies
MS 712-2 Acoustics – Recommended practice for the design of low noise at workplaces containing machinery Part 2: Noise control measure
MS 712-3 Acoustics – Recommended practice for the design of low noise at workplaces containing machinery Part 3: Sound propagation and noise prediction in workrooms

13.160 Vibration and shock with respect to human beings

13.180 Ergonomics

13.200 Accident and disaster control

13.220 Protection against fire

13.220.10 Fire fighting

MS 657-1 Portable rechargeable fire extinguishers – Specification Part 1: Water type extinguishers
MS 657-2 Portable rechargeable fire extinguishers – Specification Part 2: Dry powder type extinguishers
MS 657-3 Portable rechargeable fire extinguishers – Specification Part 3: Foam type extinguishers

MS 657-4 Portable rechargeable fire extinguishers – Specification Part 4: CO_2 type extinguishers
MS 658-1 The classification, use and control of fire-fighting equipment – Code of practice Part 1: Portable fire extinguishers
MS 658-2 The classification, use and control of fire-fighting equipment – Code of practice Part 2: Fire hose reels

13.230 Explosion protection

13.240 Protection against excessive pressure

13.260 Protection against electric shock

13.280 Radiation protection

13.300 Protection against dangerous goods

13.310 Protection against crime

13.320 Alarm and warning systems

13.340 Protective equipment

13.340.10 Protective clothing

MS 106 Welding helmets shields, goggles and welding spectacles – Specification

13.340.20 Head protective equipment

MS 626 Safety helmets for industrial use and for firemen –Specification
MS 641 Safety helmets for motor cyclists – Specification

13.340.50 Protective footwear

MS 70 Industrial heavy-duty leather boots – Specification
MS 94 Industrial and safety rubber boots – Specification
MS 123 Industrial and safety poly(vinyl chloride) boots – Specification

17 METROLOGY AND MEASUREMENT. PHYSICAL PHENOMENA

17.020 Metrology and measurement in general

17.040 Linear and angular measurements

MS 174 Rulers for general purpose – Specification

17.060 Measurement of volume, mass, density, viscosity

MS:773 Metrological and technical requirement for non-automatic, undenominated beam scales and balances subject to legal metrology control.
MS 774 Metrological and technical requirement for non-automatic, non-self or semi-self indicating, ungraduated counter scales subject to legal metrology control

17.080 Measurement of time, velocity, acceleration, angular velocity

17.100 Measurement of force, weight and pressure

17.120 Measurement of fluid flow

17.140 Acoustics and acoustic measurements

MS 173 Acoustics Noise pollution – Tolerance limits

17.140.01 Acoustic measurements and noise abatement in general

MS 697 Industrial noise affecting mixed residential and industrial area – Method for rating

17.140.99 Other standards related to acoustics

MS 173 Acoustics – Noise pollution-Tolerance limits

17.160 Vibrations, shock and vibration measurements

17.180 Optics and optical measurements

17.200 Thermodynamics and temperature measurements

17.220 Electricity. Magnetism. Electrical and magnetic

17.240 Radiation measurements

19 TESTING

19.020 Test conditions and procedures in general

19.040 Environmental testing

19.060 Mechanical testing

MS 761-1 Domestic Solar Water Heaters
Part 1 Thermal performance using an outdoor test method

19.080 Electrical and electronic testing

19.100 Non-destructive testing

19.120 Particle size analysis. Sieving

21 MECHANICAL SYSTEMS AND COMPONENTS FOR GENERAL USE

21.020 Characteristics and design of machines, apparatus, equipment

21.040 Screw threads

21.060 Fasteners

MS 322 Mild Steel nails - Specification

21.060.50 Pins. Nails

21.080 Hinges, eyelets and other articulated joints

21.100 Bearings

21.120 Shafts and couplings

21.140 Seals, glands

21.160 Springs

21.180 Housings, enclosures, other machine parts

21.200 Gears

21.220 Flexible drives and transmissions

21.240 Rotary-reciprocating mechanisms and their parts

MS 321 Zinc – Coated fencing wire (plain and barbed) - Specification

21.260 Lubrication systems

23 FLUID SYSTEMS AND COMPONENTS FOR GENERAL USE

23.020 Fluid storage devices

23.020.30 Pressure vessels, gas cylinder

MS 521 CO_2 gas cartridges (steel) – Specification

23.040 Pipeline components and pipelines

23.040.20 Plastic pipes

MS 3 Unplasticized polyvinyl chloride, (UPVC) sewer and drain-pipes and pipe fittings − Specification (second revision)

MS 4 Unplasticized polyvinyl chloride (UPVC) type 1, pressure pipes and fittings (for cold water services) − Specification (first revision)

MS 5 Unplasticized polyvinyl chloride (UPVC) pipes and pipe fittings for use above ground in drainage installations − Specification (first revision)

MS 7 Unplasticized polyvinyl chloride (UPVC) pipes installation − Code of practice

MS 38 Unplasticized polyvinyl chloride (UPVC) rigid conduit and fittings for use in electrical installations − Methods of test.

MS 374 Black polyethylene pipes for the conveyance of liquids − Specification
Part 1: Low density polyethylene pressure pipes
Part 2: High density polyethylene pressure pipes
Part 3: High Density Polyethylene PE 80 Pressure pipes

MS 407 Black polyethylene pipes for the conveyance of liquids − Methods of test
MS 456 Unplasticized polyvinyl chloride (UPVC) pipes and fittings − Methods of test
MS 617-1 Pipes and fittings made of un-plasticized poly(vinyl chloride)(PVC-U) for water supply – Specification
MS 617-2
MS 617-3
Part 1: General
MS 620 Structured wall pipes and fittings of UPVC for buried drainage and sewerage systems – Specification
MS 666 Components of pressure pipe systems (PVC-U) − Specification
Part 1: Unplasticized poly(vinyl chloride) (PVC-U) pressure pipes
Part 2: Modified poly(vinyl chloride) (PVC-M) pressure pipe systems
MS 688 Unplasticized poly (vinyl chloride) (PVC-U) soil, waste and vent pipes and pipe fittings – specification
MS 689:2004 The installation of polyethylene and poly(vinyl chloride) (PVC-U) and (PVC-M) pipes

23.040.45 Plastic fittings

MS 620 Structured wall pipes and fittings of UPVC for buried drainage and sewerage systems – Specification

MS 666 Components of pressure pipe systems (PVC-U) − Specification
Part 1: Unplasticized poly(vinyl chloride) (PVC-U) pressure pipes
Part 2: Modified poly(vinyl chloride) (PVC-M) pressure pipe systems

23.040.50 Pipes and fittings of other materials

23.060 Valves

23.060.01 Valves in general

MS 684 Water taps (metallic bodies) – Specification

23.060.20 Ball and plug valves

MS 686 Automatic shut off flush valves for water closets for urinal – Specification

23.080 Pumps

23.100 Fluid power systems

23.120 Ventilators. Fans. Air-conditioners

23.140 Compressors and pneumatic machines

23.160 Vacuum technology

25 MANUFACTURING ENGINEERING

25.020 Manufacturing forming processes

25.040 Industrial automation systems

25.060 Machine tool systems

25.080 Machine tools

25.100 Cutting tools

25.120 Chipless working equipment

25.140 Hand-held tools

25.160 Welding, brazing and soldering

25.160.10 Welding processes

MS 552 Safety of welding – Code of practice

25.180 Industrial furnaces

25.200 Heat treatment

25.220 Surface treatment and coating

25.220.40 Metallic coating

MS 321 Zinc-coated fencing wire (plain and barbed) – Specification

27 ENERGY AND HEAT TRANSFER ENGINEERING

27.010 Energy and heat transfer engineering in general

27.020 Internal combustion engines

27.040 Gas and steam turbines. Steam engines

27.060 Burners. Boilers

27.060.10 Liquid and solid fuel burners

MS 155 Solid fuel cookstoves - Type II – Specification
MS 157 Cook-stove, liquid fuel non-pressure Type – Specification
MS 158 Cook-stoves, solid fuel - Type 1 – Specification
MS 185 Cook-stove, liquid fuel non-pressure – Methods of test
MS 480 Cook-stoves, solid fuel - Type 1 – Methods of test

27.070 Fuel CELLS

27.080 Heat pumps

27.100 Power stations in general

27.120 Nuclear energy engineering

27.140 Hydraulic energy engineering

27.160 Solar energy engineering

MS 62 Solar water heaters – Specification
MS 695 Battery-based photovoltaic (PV) solar home systems – Specification
MS 696 Battery-based photovoltaic (PV) solar home systems – Code of practice
MS 710 Secondary cells and batteries for solar (PV) energy systems – Specification
MS 711 Crystalline silicon terrestrial photovoltaic (PV) modules – Design, qualification and type approval
MS 780 Solar photovoltaic (PV) water pumping systems - Specification

27.180 Wind turbine systems and other alternative sources of energy

27.200 Refrigerating technology

27.220 Heat recovery. Thermal insulation

29 ELECTRICAL ENGINEERING

29.020 Electrical engineering in general

MS 17 Safety of electrical appliances – Specification

29.030 Magnetic materials

29.035 Insulating materials

29.040 Insulating fluids

29.045 Semi-conducting materials

29.050 Conducting materials

29.060 Electrical wires and cables

MS 15 Flexible cords for power and lighting appliances – Specification
MS 528 PVC-insulated cables for electricity supply – Specification

29.060.01 Electrical wire and cables in general

MS 14 Glass-reinforced polyester (GRP) laminated sheets (profile or flat) – Specification

29.060.20 Cables

MS 650 Conductors in insulated cables and cords – Specification

29.080 Insulation

29.100 Components for electrical equipment

29.120 Electrical accessories

29.120.10 Conduits for electrical purposes

MS 2 Non-metallic conduit and fittings (for electrical wiring) – Specification

29.130 Switchgear and control gear

29.140 Lamps and related equipment

MS 8 Manually operated air break switches – Specification
MS 9 Plugs, socket outlets and socket outlet adaptors – Specification
MS 16 Apparatus connector for portable domestic appliances – Specification

29.140.30 Fluorescent lamps. Discharge lamps

MS 709 Fluorescent lights for use in photovoltaic (PV) systems – Specification

29.160 Rotating machinery

29.180 Transformers. Reactors
29.200 Rectifiers. Convertors. Stabilized power supply

29.220 Galvanic cells and batteries

29.220.10 Primary cells and batteries

MS 35:1986 Primary dry batteries – Specification

29.220.20 Acid secondary cells and batteries

MS 180 Lead-acid starter batteries – Specification
MS 181 Lead-acid starter batteries – Methods of test
MS 420 Lead acid starter batteries – Code of practice for handling and operation

29.240 Power transmission and distribution networks

29.260 Electrical equipment for working in special conditions

29.280 Electric traction equipment

31 ELECTRONICS

31.020 Electronic components

31.040 Resistors

31.060 Capacitors

31.080 Semiconductor devices

31.100 Electronic tubes

31.120 Electronic display devices

31.140	**Piezoelectric and dielectric devices**
31.160	**Electric filters**
31.180	**Printed circuits and boards**
31.190	**Electronic components assemblies**
31.200	**Electromechanical components for electronic and telecommunications equipment**
31.220	**Electromechanical components**
31.240	**Mechanical structures for electronic equipment**
31.260	**Optoelectronics. Laser equipment**
33	**TELECOMMUNICATIONS. AUDIO AND VIDEO ENGINEERING**
33.020	**Telecommunications in general**
33.030	**Telecommunication services. Applications**
33.040	**Telecommunication systems**
33.050	**Telecommunication terminal equipment**
33.060	**Radio communications**
33.070	**Mobile services**
33.080	**Integrated Services Digital Network (ISDN)**
33.100	**Electromagnetic compatibility (EMC)**
33.120	**Components and accessories for telecommunications equipment**
33.140	**Special measuring equipment for use in telecommunications**
33.160	**Audio, video and audiovisual engineering**
33.170	**Television and radio broadcasting**
33.180	**Fibre optic communications**
33.200	**Telecontrol. Telemetering**
35	**INFORMATION TECHNOLOGY. OFFICE EQUIPMENT MACHINES**
35.020	**Information technology (IT) in general**
35.040	**Character sets and information coding**

43.100 Passenger cars. Caravans and light trailers

MS 639 Retro-reflective registration plates for motor vehicles – Specification
Part 1: Metal blanks
. Part 2: Metal registration plates
Part 3: Plastics blanks
Part 4: Plastic registration plates

43.120 Electric road vehicles

43.140 Motor cycles and mopeds

43.150 Cycles

43.160 Special purpose vehicles

43.180 Diagnostic, maintenance and test equipment

45 RAILWAY ENGINEERING

45.020 Railway engineering in general

45.040 Materials and components for railway engineering

45.069 Railway rolling stock

45.080 Rails and railway components

45.100 Cableway equipment

45.120 Equipment for railway/cableway construction and maintenance

47 SHIP BUILDING AND MARINE STRUCTURES

47.020 Shipbuilding and marine structures in general

47.040 Seagoing vessels

47.060 Inland navigation vessels

47.080 Small craft

49 AIRCRAFT AND SPACE VEHICLE ENGINEERING

49.020 Aircraft and space vehicles in general

49.025 Materials for aerospace construction

49.030 Fasteners for aerospace construction

49.035 Components for aerospace construction

49.040 Coatings and related processes used in aerospace industry

49.045 Structure and structure elements

49.050 Aerospace engines and propulsion systems

49.060 Aerospace electric equipment and systems

49.080 Aerospace fluid systems and components
49.090 On-board equipment and instruments

49.095 Passenger and cabin equipment

49.100 Ground service and maintenance equipment

49.120 Cargo equipment

49.140 Space systems and operations

53 MATERIALS HANDLING EQUIPMENT

53.020 Lifting equipment

53.040 Continuous handling equipment

53.060 Industrial trucks

53.080 Storage equipment

53.100 Earth-moving machinery

53.120 Equipment for manual handling

55 PACKAGING AND DISTRIBUTION OF GOODS

55.020 Packaging and distribution of goods in general

MS 103 Packaging – Pictorial marking for handling goods
MS 105 Transport packages, dimension of rigid rectangular packages – Specification

55.040 Packaging materials and accessories

MS 721 Wood packaging material – Guidelines for phytosanitary measures
MS 717 Polypropylene grain sacks- Specification
MS 722 Labelling, presentation and advertising of prepacked goods for ultimate consumer
MS 767 Corrugated board containers: Methods of test
MS 768 Liners and fluting for corrugated board - Specification

55.060 Spools. Bobbins

55.080 Sacks. Bags

MS 99-2	Packaging sacks – Vocabulary Part 2: Sacks made from thermoplastic flexible film
MS 100	Sacks, packaging – Description and method of measurement Part 1: Empty paper sacks
MS 207	Tea sacks – Specification
MS 363	Packaging sacks – Drop test Part 1: Paper sack Part 2: Sacks made from thermoplastic flexible film
MS 364	Paper and board – Determination of tensile properties Part 1: Constant rate of loading method Part 2: Constant rate of elongation method
MS 522	Packaging sacks – Methods of sampling empty sacks for testing
MS 717	Polypropylene grain sacks - Specification
MS 734	Plastic carrier bags and flat bags – Specification
MS 735	Plastic – Film and sheeting – Determination of average thickness, length and width

55.100 Bottles Pots. Jars

MS 20	Blow moulded plastic containers up to 5 litres capacity – Specification

55.120 Cans. Boxes. Crates

MS 20	Blow moulded plastic containers up to 5 litres capacity – Specification

55.130 Aerosol containers

55.140 Barrels. Druns. Canisters

55.160 Cases. Boxes. Crates

MS 724	Corrugated board containers - Specification

55.180 Freight distribution of goods

MS 101	Freight containers – Terminology
MS 102	Freight containers (series i): Classification, dimensions and rating – Specification
MS 722	Labelling, presentation and advertising of prepacked goods for ultimate consumer

55.200 Packaging machinery

55.220 Storing. Warehousing

55.230 Distribution and vending machines

59 TEXTILES AND LEATHER TECHNOLOGY

59.020 Processes of the textile industry

59.040 Textile auxiliary materials

MS 261	Industrial synthetic fibre, sewing threads – Specification
MS 264	Loomstate cotton duck – Specification

59.060 Textile fibres

59.060.01 Textile fibres in general

MS 329 Textiles – Ternary fibre mixtures – Quantitative analysis
MS 341 Ropes and cordages – Specification

59.080 Products of the textile industry

59.080.01 Textiles in general

MS 134 Textiles – Woven fabric Descriptions
MS 269 Cotton towels – Specification
MS 273 Cotton bed sheets – Specification

59.080.30 Textile fabrics

MS 315 Fablic linings for footwear – Specification
MS 588 Chitenje – Specification

59.100 Materials for the reinforcement of composites

59.120 Textile machinery

59.140 Leather technology

MS 311 Leather, terms and vocabulary
MS 526 Vegetable-tanned outer-sole leather – Specification

59.140.20 Raw skins, hides and pelts

MS 290 Hides and skins, raw – Guidelines for grading
MS 293 Raw hides and skins – Terminology of defects
MS 358 Hides and skins, raw – Rules for preservation

61 CLOTHING INDUSTRY

61.020 Clothes

MS 270 Cotton baby napkins – Specification
MS 330 Size designation of clothes (men's and boys' outerwear garments)
MS 331 Size designation of clothes (women's and girls' outerwear garments)
MS 332 Size designation of clothes (infants' garments)
MS 333 Size designation of clothes (definitions and body measurement procedure)
MS 337 Hessian cloth – Specification

61.040 Headgear clothing accessories. Fastening of clothing

61.060 Footwear

MS 109 Casual and fashion plastic shoes – Specification
MS 312 Men's shoes with stuck-on outer soles – Specification
Part 1: Flat lasted construction

Part 2: California type construction
Part 3: Moccasin type construction

MS 313 Infants and children's shoes (stuck-on and stitch-down constructions) – Specification
M MS 315 Fabric lining for footwear – Specification
MS 316 Threads for footwear – Specification
MS 357 Threads for footwear – Methods of tests

61.080 Sewing machines and other equipment for the clothing industry

65 AGRICULTURE

65.020 Farming and forestry

65.040 Farm building, structures and installations

65.060 Agricultural machines, implements and equipment

MS 530 Farm implements – Methods of sampling

65.060.20 Soil working equipment

MS 76 Agricultural hand hoe – Specification
MS 110 Single furrow animal drawn plough shares – Specification

65.060.99 Other agricultural machines and equipment

MS 183 Axes and hatchets – Specification

65.080 Fertilizers

MS 167 Fertilizers and soil conditioners – Vocabulary
MS 255 Compound fertilizers – Specification
MS 258 Fertilizers – Ammonium sulphate – Specification
MS 265 Bagged fertilizers, handling and storage – Code of practice
MS 271 Fertilizer – Super Phosphate – Specification
MS 272 Calcium Ammonium Nitrate fertilizer – Specification
MS 351 Fertilizers – urea – Specification
MS 353 Fertilizers – Ammonium nitrate – Specification
MS 354 Fertilizes – Muriate of potash – Specification
MS 355 Fertilizers – Sulphate of potash – Specification
MS 632 Fertilizers – Determination of ammoniacal nitrogen content – Titrimetric method

65.100 Pesticides and other agrochemicals

65.100.01 Pesticides and other agrochemicals in general

MS 89 Pesticides – Handling, storage and disposal – Code of practice
MS 120 General requirements for pesticides – Specification

65.100.10 Insecticides

MS 375 Methyl-bromide insecticidal fumigant – Specification
MS 376 Ethylene-dibromide insecticide – Specification

65.120 Animal feeding stuffs

MS 212 Poultry feeds – Specification
MS 240 Pig feed – Specification
MS 417 Meat meal and meat and bone meal as livestock feed – Specification
MS 422 Fish meal as livestock feed – Specification
MS 423 Bone meal as livestock feed – Specification
MS 424 Blood meal as livestock feed – Specification

65.140 Beekeeping

65.145 Hunting

65.150 Fishing and fish breeding

MS 132 Fishing nets – Designation of netting yarns in the textile system
MS 137 Fishing nets, hanging of netting – Basic terms and definitions

67 FOOD TECHNOLOGY

67.020 Processes in the food industry

MS 21 Food and food processing units – Code of hygienic conditions
MS 212 Poultry feeds – Specification
MS 300 General guidelines for establishing a Hazard Analysis Critical Control Point (HACCP) System in a food establishment
MS 477 Food for infants and children – Code of hygienic practice
MS-ISO 15161 Guidelines on application of ISO 9001-2000 in food and drink industry
MS-ISO 22000 Food safety management systems-Requirements forcing organization in the food chain
MS-ISO/TS 22004: Food safety management systems-Guidance on the application of ISO 2200:2005

67.040 Food products in general

MS 64 Mixed animal and vegetable ghee – Specification

67.050 General methods of tests and analysis for food products

MS 144 Agricultural food products : Determination of crude fibre content: General method
MS 23 Processed fruits and vegetables – Methods of test

67.060 Cereals, pulses and derived products

MS 30 Wheat flour – Specification

MS 31 Common bread – Specification
MS 32 Maize grain – Specification (first revision)
MS 34 Maize flour – Specification
MS 55 Wheat grain – Specification
MS 145 Cereals and pulses – Methods of sampling as milled products
MS 146 Cereals – Methods of sampling as grain
MS 148 Cereals and cereal products – Determination of fat content
MS 149 Cereals, pulses and derived products – Determination of ash
MS 150 Wheat flour – Determination of wet gluten

MS 151 Cereals and cereal products – Determination of alpha-amylase
MBS 179 Rice - Specification
MS 195 Fresh green beans – Specification
MS 224 Pasta products - Specification
MS 234 Buns – Specification
MS 242 Cowpeas – Specification
MS 243 Dry garden peas – Specification
MS 244 Soya beans – Specification
MS 245 Bean – Specification
MS 349 Edible cassava flour – Specification
MS 400 Pigeon peas - specification
MS 609 Cereals and pulses – Determination of mass of 1000 grains
MS 612 Sorghum – Determination of tannin content

67.080 Fruits. Vegetables

MS 479 Avocado – Specification

67.080.01 Fruits, vegetables and derived products in general

MS 23 Processed fruits and vegetables – Methods of test
MS 228 Macadamia kernels – Specification
MS 230 Tomatoes – Specification

67.080.10 Fruits and derived products

MS 176 Jams, jellies and marmalades – Specification
MS 231 Fresh pineapples – Specification
MS 461 Cashew kernels – Specification

67.080.20 Vegetables and derived products

MS 24 Canned pineapples – Specification
MS 25 Tomato puree – Specification
MS 26 Tomato juice – Specification
MS 27 Tomato sauce – Specification
MS 28 Canned tomatoes – Specification
MS 63 Vegetable ghee – Specification

67.100 Milk and milk products

MS 111 Dairy farming – Code of hygienic conditions for milking

67.100.01 Milk and milk products in general

67.100.02

MS 73 Raw cow's milk – Specification
MS 74 Pasteurized cow's milk – Specification
MS 75-1 Milk and Milk Products- Methods of sampling and chemical analysis for milk products.
MS 75-2 Milk and Milk Products : Microbiological examination
MS 196 Milk – Determination of titratable acidity
MS 197 Milk – Determination of freezing point
MS 198 Cream – Determination of fat content
MS 292 Milk and milk products – Methods of test – Microbiological examination
Part 1: Total plate count

Part 2: Coliform count
Part 3: Yeasts and moulds
Part 4: Swab test

MS 744 Use of dairy terms – General standard

67.100.10 Milk and processed milk products

MS 75-1 Milk and milk products – Part 1: Method of sampling microbiological analysis
MS 75-2 Milk and milk products – Part 2: Method of sampling and chemical analysis
MS 191 Yoghurts – Specification
Part 1: Yoghurt and Sweetened yoghurt
Part 2: Flavoured yoghurt
MS 291 Milk carriers industrial hygiene – Code of practice
MS 549 Milk powder handling – Code of practice.
MS 633 Milk powder – Specification
MS 751 Sweetened condensed milk – Specification
MS 752 Evaporated milks - Specification

67.100.20 Butter

MS 190 Cheese – Methods for chemical analysis

67.100.40 Ice cream and ice confectionery

MS 193 Dairy cream for direct consumption – Specification
MS 198 Cream – Determination of fat content

67.100.99 Other milk products

MS 191 Yoghurts – Specification
Part 1: Yoghurt and sweetened yoghurt
Part 2: Flavoured yoghurt

67.120 Meat, meat products and other animal produce

MS 769 Meat burgers - Specification

67.120.10 Meat and meat products

MS 199 Pork and beef sausages – Specification
MS 200 Meat animals for ante-mortem slaughter and post mortem – Transportation, handling and inspection – Code of practice
MS 206 Meat grading – Code of practice

67.120.30 Fish and fishery products

MS 115 Frozen fish – Specification
MS 116 Salted fish – Specification
MS 117 Smoked fish – Specification
MS 118 Canned fish, canned fish products, and canned marine mollusks - Specification
MS 510 Fish meal – Vocabulary
MS 770 Fresh fish - Specification

67.140 Tea. Coffee. Cocoa

67.140.10 Tea

MS 43 Black tea – Specification
MS 410 Black tea – Methods of test
MS 412 Black – Methods of sampling
Part 1: Sampling from large containers
Part 2: Sampling from small container
MS 459 Black tea – Vocabulary

67.140.20 Coffee and coffee substitutes

MS 630 Roasted and ground coffee - Specification

67.160 Beverages

67.160.10 Alcoholic beverages

MS 50 Beer – Specification
MS 107 Alcoholic beverages – Methods of test
MS 177 Fruit squashes – Specification
MS 178 Country wines – Specification
MS 208 Opaque beer – Specification
MS 210 Spirits – Specification

67.160.20 Non-alcoholic beverages

MS 18 Carbonated soft drinks – Specification
MS 22 Carbonated soft drinks – Methods of test
MS 26 Tomato juice – Specification
MS 57 Pineapple juice – Specification
MS 214 Drinking water – Specification
MS 248 Orange juice – Specification
MS 294 Fruit nectars – Specification
MS 295 Lemon juice Specification
MS 296 Passion fruit juice – Specification
MS 297 Mango juice – Specification
MS 298 Guava nectar – Specification
MS 295 Lemon juice – Specification
MS 519 Thobwa powder – Specification
MS 619 Fruit juices – Specification
MS 663 Mixed fruit juices – Specification
MS 665 Mixed fruit nectars – Specification
MS 699 Bottled drinking water other than natural mineral water *(8p)*

67.180 Sugar. Sugar products. Starch

67.180.10 Sugar and sugar products

MS 201 Biscuits – Specification.
MS 202 Sugar, white – Specification
MS 209 Sugar, raw – Specification
MS 227 Sugar confectionery – Specification
MS 232 Chewing gum and bubble gum – Specification

67.180.20 Starch and derived products

MS 704 Cassava and maize starch for textile industry – Specification
MS 707 Starches and derived products – methods of test
MS 708 Starch and starch products – Methods of sampling

67.190 Chocolate

67.200 Edible oils and fats. Oilseeds

MS 213 Groundnuts – Specification
MS 228 Macadamia kernels – Specification
MS 461 Cashew kernels – Specification

67.200.10 Animal and vegetable fats and oils

MS 10 Tung oil – Specification
MS 51 Edible oils and fats – Specification
MS 56 Edible oils and fats – Methods of analysis
MS 77 Groundnut oil – Specification
MS 78 Refined sunflower oil – Specification
MS 79 Refined cottonseed oil – Specification
MS 80 Rape seed oil – Specification
MS 154 Refined soya bean oil – Specification
MS 225 Margarine – Specification
MS 554 Peanut butter – Specification

67.220 Spices and condiments. Food additives

67.220.10 Spices and condiments

MS 53 Chilli sauce – Specification
MS 96 Chillies and capsicums, whole or ground – Specification
MS 97 Curry powder – Specification
MS 140 Spices and condiments – Methods of sampling
MS 141 Spices and condiments – Determination of total ash
MS 142 Spices and condiments – Determination of filth
MS 152 Turmeric, whole or ground – Specification
MS 153 Coriander, whole or ground – Specification
MS 226 Garlic – Specification
MS 246 Ginger – Whole in pieces or ground – Specification
MS 303 Mint, dried – Specification
MS 304 Cinnamon – Whole or ground (powdered) – Specification
MS 305 Thyme, whole – Specification
MS 306 Celery seed, whole – Specification
MS 554 Peanut butter – Specification
MS 601 Nutmeg – Specification

67.220.20 Food additives

MS 11 Artificial vinegar – Specification
MS 12 Vinegar – Methods of test
MS 188 Salt – Specification

67.230 Prepackaged and prepared foods

MS 19 Labelling of prepacked foods – General standard
MS 90 High-protein baby food – Specification
MS 93 High protein baby food – Methods of analysis
MS 477 Food for infants and children – Code of hygienic practice
MS 624 Nutrition labeling – Guidelines
MS 625 Nutrition claims – Guidelines

67.250 Sensory analysis

67.260 Plant and equipment for the food industry

71 CHEMICAL TECHNOLOGY

71.020 Production in the chemical industry

71.040 Analytical chemistry

71.040.01 Analytical chemistry in general

MS 169 Sampling of chemical products for industrial use – Safety in sampling

71.040.30 Chemical reagents

MS 702 Caustic soda, analytical and commercial – Specification

71.060 Inorganic chemicals

71.060.99 other inorganic chemicals

MS 187 School chalk – Specification

71.080 Organic chemicals

MS 372 Hand dish washing liquids – Specification

71:080:60 Alcohols. Ethers

MS 573 Ethanol - Specification

71.100 Products of the chemical industry

71.100.01 Products of the chemical industry in general

MS 468 Mosquito coils – Specification
MS 469 Mosquito coils – Methods of test

71.100.40 Surface-active agents

MS 48 Carbolic soap – Specification
MS 65 Soap powder or chips – Specification
MS 253 Synthetic detergent powders for household use – Specification
MS 254 Synthetic detergent powders for household use – Methods of test
MS 373 Scouring powder – Specification

71.100.50 Wood protecting chemicals

MS 44 Timber, the preservative treatment – Code of practice
MS 254 Synthetic detergent powders for house household use-Methods of test
MS 384 Wood preservatives – Specification
MS 408 Creosote for wood preservation – Specification
MS 591 Creosote, wood preserving (high temperature) – Specification
MS 592 Creosote, wood preserving (lurgi-gasification process) – Specification
MS 596 Mixtures of copper – chromium. Arsenic compounds for timber preservatives.
MS 597 Boron timber preservatives – specification
MS 598 Safety in the wood preservation industry – Code of practice

71.100.70 Cosmetics. Toiletries

MS 42 Bathing bars - Specification
MS 48 Carbolic soap – Specification
MS 49 Toilet soap – Specification
MS 52 Liquid toilet soap – Specification
MS 60 Soaps – Methods of analysis
MS 108 Petroleum jelly for cosmetic industry – Specification
MS 112 Toothpaste – Specification
MS 250 Laundry soap – Specification
MS 266 Cosmetics – Guidelines for hygienic manufacture
MS 334 Skin care products – Specification
MS 470 Hair creams – Specification
MS 471 Hair oils – Specification
MS 475 Hair shampoo, soap based – Specification
MS 555 Glycerine for cosmetic industry – Methods of test
MS 557 Glycerine for cosmetic use – Specification
MS 671 Toilet soap (super fatter) - Specification

71.100.80 Chemicals for purification of water

MS 91 Limes for water treatment – Specification

71.100.99 Other products of the chemical industry

MS 267 Calcium carbonate (precipitated) for cosmetic industry – Specification

71.120 Equipment for the chemical industry

73 MINING AND MINERALS

73.020 Mining and quarrying

73.040 Coals

73.060 Metalliferous minerals

73.080 Non-metalliferous minerals

73.100 Mining equipment

73.120 Equipment for processing of materials

75 PETROLEUM AND RELATED TECHNOLOGIES

75.020 Extraction and petroleum and natural gas

75.040 Crude petroleum

75.060 Natural gas

75.080 Petroleum products in general

MS 108 Petroleum jelly for cosmetic industry – Specification
MS 538 Diesel – Specification
MS 667 Petroleum industry – Terminology
Part 2: Properties and tests

75.100 Lubricants, industrial oils and related products

MS 45 Lubricating grease – Specification
MS 577 Benzene, cleaning – Specification
MS 667 Petroleum industry – Terminology
Part 2: Properties and tests

75.120 Hydraulic

75.140 Waxes, bituminous materials and other petroleum products

MS 33 Candles – Specification
MS 84 Wax floor polish – Specification
MS 566 Wax shoe polish – Specification

75.160 Fuels

75.160.20 Liquid fuels
MS 170 Unleaded petrol – Specification
MS 368 Methylated spirit – Specification
MS 370 Methylated spirits – Methods of test
MS 498 Illuminating paraffin – Specification
MS 538 Diesel – Specification

75.180 Equipment for petroleum and natural gas industries

75.200 Petroleum, petroleum products and natural gas handling equipment

77 METALLURGY

77.020 Production of metals

77.040 Testing of metals

77.060 Corrosion of metals

77.080 Ferrous metals

77.100 Ferroalloys

77.120 Non-ferrous metals

77.140 Iron and steel products

MS 319 Steel door frames - Specification
MS 322 Mild steel nails – Specification
MS 509 Iron sheets, galvanized – Specification

77.140.60 Steel bars and rods

MS 775-1 Hot rolled steel bars – Dimensions of round bars
MS 775-2 Hot rolled steel bars – Dimensions of square bars
MS 775-3 Hot rolled steel bars – Dimension of flat bars
MS 775-4 Hot rolled steel bars – Tolerances of round, square and flat bars

77.140.65 Steel wire, wire ropes and link chains

MS 321 Zinc-coated fencing wire (plain and barbed) – Specification

77.140.70 Steel profiles

MS 319 Steel door flames - Specification
MS 320 Windows and door made from rolled mild steel sections – Specification (*20p)*

77.150 Products of non-ferrous metals

77.160 Powder metallurgy

77.180 Equipment for the metallurgical industry

79 WOOD TECHNOLOGY

79.020 Wood technology processes

MS 44 Timber, the preservative treatment – Code of practice

79.040 Wood, sawn logs and sawn timber

MS 37 Preservative treated timber – Specification
MS 489 Wooden poles and cross-arms for power transmission, low voltage reticulation and telephone systems. – Specification
MS 493 Timber, hardwood furniture – Specification
MS 494 Softwood flooring boards – Specification
MS 499 Timber, stress graded softwood general structural – Specification
MS 502 Softwood furniture timber – Specification
MS 503 Softwood joinery timber – Specification
MS 600 Laminated timber (glulam) – Specification
MS 602 Mechanical stress grading of softwood timber (flexural method) – Code of practice

79.060 Wood-based panels

MS 494 Boards, softwood flooring – Specification

79.060.01 Wood-based panels in general

MS 488 Wooden ceiling and paneling boards *(10p)*

79.060.20 Fibre and particle boards

MS 599 Fibreboard products – Specification
Part 1: Uncoated fibreboards
Part 2: Coated fibreboards

79.080 Semi-manufactures of timber

79.100 Cork and cork products

79.120 Woodworking equipment

81 GLASS AND CERAMICS INDUSTRIES

81.020 Processes in glass industries

MS 397 Glazed ceramic sanitary-ware – Specification

81.040 Glass

81.060 Ceramics

81.080 Refractories

81.100 Equipment for the glass and ceramics industries

83 RUBBER AND PLASTICS INDUSTRIES

83.020 Manufacturing processes in the rubber band plastics industries

83.040 Raw materials for rubber and plastics

83.060 Rubber

83.080 Plastics

83.100 Cellular materials

MS 218 Polyurethane foam cores – Specification
MS 223 Polyurethane foams – Methods of test

83.120 Reinforced plastics

83.140 Rubber and plastic products

MS 20 Blow moulded plastic containers up to 5 litres capacity – Specification
MS 458 Rubber seals – Joint rings for water supply, drainage and sewerage pipelines material – Specification

83.140.20 Laminated sheets

MS 14 Glass-reinforced polyster (grp) laminated sheets (profile or flat) – Specification

83.140.99 Other rubber and plastic products

MS 13 Glass-reinforced polyester (grp) laminated products – Specification

83.160 Tyres

83.160.10 Road vehicle tyres

MS 529-1: The production of reconditioned tyres. Part 1: Definitions *(3p)*
MS 529-3: The production of reconditioned tyres. Part 3: Repairs *(5p)*
MS 529-4: The production of reconditioned tyres. Part 4: Passenger car tyres *(10p)*
MS 529-5: The production of reconditioned tyres. Part 5: Weight truck cross-ply tyres *(9p)*
MS 529-6: The production of reconditioned tyres. Part 6: Bus and truck cross-ply tyres *(13p)*
MS 529-7: The production of reconditioned tyres. Part 7: Tyres reconditioned by the procured tread process *(14 p)*
MS 659 Pneumatic tyres for passenger cars and luggage trailers – Specification
MS 660 Pneumatic tyres for commercial vehicles and trailers – Specification

83.180 Adhesives

MS 46 Adhesives for the laminating and finger-jointing of timber for furniture and joinery, phenolic and aminoplastic resin – Specification
MS 590 Polyvinyl acetate dispersion adhesives for wood – Specification
MS 656 Adhesives for use with ceramic tiles and mosaics – Specification

83.200 Equipment for the rubber and plastics industries

85 PAPER TECHNOLOGY

85.020 Paper production processes

85.040 Pulps

85.060 Paper and board

MS 360 Paper – Determination of bursting strength
MS 364 Paper and board – Determination of tensile properties
Part 1: Constant rate of loading method
Part 2: Constant rate of elongation method
MS 523 Paper – Determination of tearing strength
MS 524 Paper and board **–** Determination of bursting strength after immersion in water

85.080 Paper products

MS 569 Toilet paper – Specification

85.100 Equipment for the paper industry

87 PAINT AND COLOUR INDUSTRIES

87.020 Paint coating processes

87.040 Paints and varnishes

MS 278: Road marking paint – Specification
MS 279 Emulsion paint for new galvanized iron – Specification
MS 280 Emulsion paints for interior decorative purposes – Specification
MS 282 High gloss synthetic enamel paint (alkyd type) – Specification
MS 284 Emulsion paints for exterior use – Specification
MS 287 Paints, priming paint for steel – Specification.
MS 288 Paints, primers for wood – Specification
MS 377 Roofing paints – Specification
MS 380 Distemper – Specification
MS 383 Automotive paints –Specification
MS 386 Bituminous paints – Specification
MS 388: Oil gloss paint for interior and exterior use – Specification
MS 389 Plaster primer (alkali-resistant, latex type) – Specification
MS 391 Varnish for interior use – Specification
MS 392 Varnish for wood floors – Specification
MS 393 Paint undercoat – Specification
MS 394 Aluminium finishing paint – specification
MS 398 Paint removers – specification

87.060 Paint Ingredients

87.060.30 Solvents

MS 378 Mineral turpentine – specification
MS 396 Mineral solvents for paint (white spirit and related hydrocarbons solvents) – specification

87.080 Inks. Printing inks

87.100 Paint coating equipment

91 CONSTRUCTION MATERIALS AND BUILDING

91.010 Construction industry

91.020 Physical planning. Town planning

91.040 Buildings

91.060 Elements of buildings

91.060.50 Door and windows

MS 616 Glazing putty for wooden and metal window frames – Specification

91.080 Structures of buildings

91.090 External structures

91.100 Construction materials

91.100.10 Cement. Gypsum. Lime. Mortar

MS 29 Ordinary cement – Specification
MS 85 Limes for use in building – Specification
MS 88 Solvent cement for assembly of UPVC pipe fittings – Specification
MS 92 Limes – Methods of test
MS 414 Masonry cement (without air entrainment agents) – Specification
MS 629 Asbestos-cement drain and sewer pipes – Specification
MS 627 Fibre-cement sheets for roofing and cladding (corrugated and flat) – Specification
MS 755: Gypsum rock for the manufacture of binders – Specification
MS 756 Gypsum core cornice - Specification

91.100.15 Mineral Materials and Products

MS 6 Burnt clay bricks – Specification (First revision)
MS 175 Burnt clay bricks – Code of practice for moulding and firing
MS 777 Stabilized soil blocks - Specification

91.100.25 Ceramic building products

MS 161 Cement roofing products – Specification

91.100.30 Concrete and concrete products

MS 71 Concrete building blocks – Specification
MS 309 Concrete floor and wall tiles – Specification

91.100.40 Products in fibre-reinforced cement

MS 495 Boards, fibre-cement – Specification
MS 627 Fibre-cement sheets for roofing and cladding (corrugated and flat) – Specification
MS 629 Asbestos-cement drain and sewer pipes – Specification

91.110.50 Binders. Sealing materials

MS 616 Glazing putty for wooden and metal window frames – Specification

91.120 Protection of and in buildings

91.120.30 Water proofing

MS 263 Tarpaulins – Specification
MS 264 Loomstate cotton duck – Specification

91.120.40 Lightning protection

MS 310 Protection of building against lightning – Code of practice

91.140 Installations in buildings

91.140.60 Water supply systems

MS 348 Afridev deep-well handpump – Specification
MS 458 Rubber seals – Joint rings for water supply, drainage and sewerage pipelines material – Specification

MS 532 Borehole construction – Code of practice

91.140.70 Sanitary installations

MS 318 Cast iron brackets and supports for wash basins and sinks – Specification
MS 685 WC flushing cisterns - Specification

91.140.80 Drainage systems

MS 458 Rubber seals – Joint rings for water supply, drainage and sewerage pipelines material – Specification

91.160 Lighting

91.180 Interior finishing

91.190 Building accessories

91.200 Construction technology

91.220 Construction equipment

93 CIVIL ENGINEERING

93.010 Civil engineering in general

93.020 Earthworks. Excavations. Foundation construction. Underground works

93.025 External water conveyance systems

93.030 External water conveyance systems

93.040 Bridge construction

93.060 Tunnel construction

93.080 Road engineering

93.080.30 Road equipment and installations

MS 317 Cast iron manhole covers, inspection covers and frames – Specification

93.100 Construction of railways

93.110 Construction of ropeways

93.120 Construction of airports

93.140 Construction of waterways and ports

93.160 Hydraulic construction

MS 348 Afridev borehole handpumps – Specification
MS 532 Borehole construction – Code of practice

95 MILITARY ENGINEERING

95.020 Military engineering. Military affairs. Weapons

97 DOMESTIC AND COMMERCIAL EQUIPMENT ENTERTAINMENT. SPORTS

97.020 Home economics on general

97.030 Domestic electrical appliances in general

97.040 Kitchen equipment

97.040.20 Cooking ranges, working tables, ovens and stove hoods

MS155 Cookstove, solid fuel – Type II – Specification
MS 157 Cookstove, liquid fuel non pressure – Specification
MS 158 Cookstove, solid fuel (type 1) – Specification

97.040.30 Domestic refrigeration appliances

MS 159 Cooler blocks – Specification

97.040.50 Small kitchen appliances

MS 520 Electrical appliances for heating liquids - specification

97.060 Laundry appliances

MS 156 Irons, solid fuel pressing – Specification

97.080 Floor treatment appliances

97.100 Domestic, commercial and industrial heating appliances

97.120 Automatic controls for household use

97.130 Shop fittings

97.140 Furniture

97.145 Ladders

97.150 Non-textile floor coverings

97.160 Home textile. Linen

97.170 Body care equipment

97.180 Miscellaneous domestic and commercial equipment

MS 186 Ballpoint pens – Specification
MS 221 Black lead pencil – Specification
MS 251 Safety wood matches – Specification
MS 252 Safety wood matches – Methods of test

97.190 Equipment for children

97.195 Items of art and handicrafts

97.200 Equipment for entertainment

97.200.01 Equipment for entertainment in general

MS 655 Gaming equipment – Specification
Part 1: Casino equipment
Part 2: Limited payout gaming equipment
Part 3: Monitoring and control systems for gaming equipment
Part 4: Chips, Plagues and Tokens
Part 5: General equipment

97.220 Sports equipment and facilities

99 (No Title)

SUMMARY ANALYSIS OF PRINTED MALAWI STANDARDS

ACTIVITY / TYPE OF STANDARD	NUMBER OF STANDARDS PER FIELD OF ACTIVITY				TOTALS
	CHEMICALS AND TEXTILES	ENGINEERING AND MATERIALS	FOOD AND AGRICULTURE	QMS (MBS/ISO9000) AND EMS (MBS/ISO14000)	
Specifications	78	297	102	8	485
Vocabulary	5	16	4	2	27
Code of practice	19	44	12	19	94
Sampling and test methods	19	58	37	3	118
TOTALS	121	416	155	32	724

ALPHABETICAL SUBJECT INDEX

SUBJECT **MS Nr.**

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

Y

Z