



**MALAWI BUREAU OF STANDARDS**

*Promoting Standardization and Quality Assurance in Malawi*

# CATALOGUE OF MALAWI STANDARDS

**2015**

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

E-mail : [mbs@mbsmw.org](mailto:mbs@mbsmw.org)  
Website : [www.mbsmw.org](http://www.mbsmw.org)

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## 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.

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## 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. Metrology services**

Verification and calibration of measuring equipment used monitoring weight and volume of prepacked commodities for retail.

**6. Industrial research, training 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 MS-ISO 9001.

**8. International liaison:**

Fostering standardization activities through co-operation with African Regional Organi-

zation 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](mailto:mbs@mbsmw.org)**

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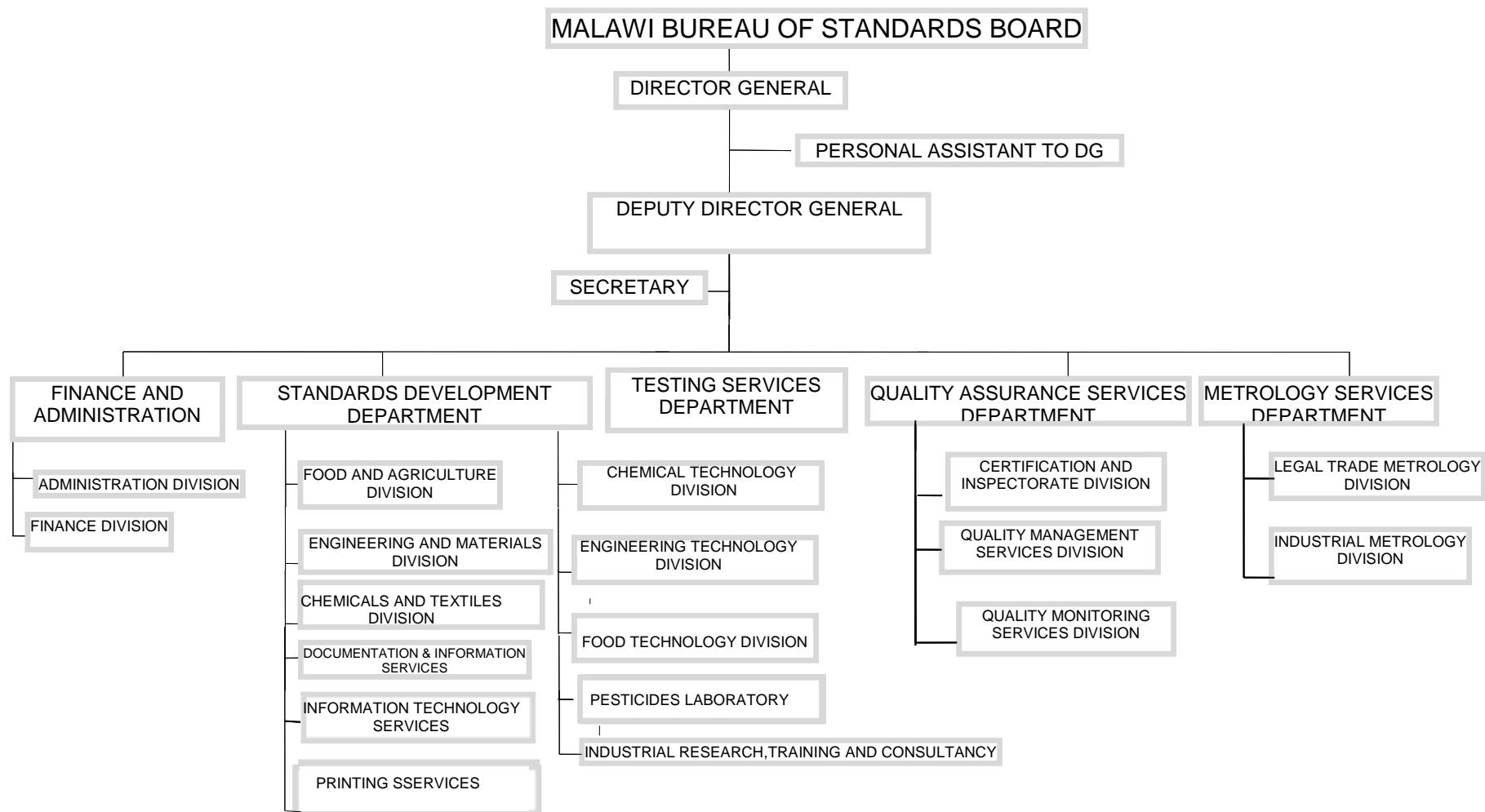
## OBJECTIVES OF THE MBS

The MBS Act outlines the following objectives which have to be executed by the organization in order to fulfil its mandate:

- a. To promote standardization in commerce and industry;
- b. To preparation and issue of standards and to administer schemes based thereon;
- c. To make arrangements to provide facilities for 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 the issue of certificates in regard thereto;
- d. To make arrangements or provide facilities in order to examine, test or analyze articles, materials and substances;
- e. To provide for testing of locally manufactured or imported commodities with a view to determine whether such commodities comply with the provisions of the MBS Act, the Merchandize Marks Act or any other law relating to standards of quality;
- f. To control the use of standardization marks;
- g. To encourage or undertake educational work in connection with standardization;
- h. To provide for cooperation with any person, association or organization outside Malawi having objects similar to those of the Bureau;
- i. To assist any ministry, Government department, local authority, other public authority or any statutory corporations in preparation and framing of the specifications or codes of practice required by it;
- j. To provide for corporation with the representatives of any branch of industry, ministry, Government Department, local authority, other public authority or any other statutory corporation or with any person with a view to bringing about standardization in connection with commodities;
- k. To asses quality systems and to administer the certification by such systems thus assessed;
- l. To supply reference material for specific purposes; and
- m. To perform, in so far as it is not repugnant to or inconsistent with the provisions of any written law, such functions as the Minister may assign to the Bureau, so as to promote and maintain standardization and quality regarding commodities.

# MALAWI BUREAU OF STANDARDS

## ORGANIZATION 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 22 Farm implements
TC 2 Pipes and fittings	TC 23 Milk and milk products
TC 3 Bricks and tiles	TC 24 Cells and batteries
TC 4 Electrical and general safety standards	TC 25 Leather and leather products
TC 6 Packaging	TC 26 Textiles and garments
TC 7 National building regulations	TC 27 Fertilizers and Agricultural chemicals
TC 8 Spices and condiments	TC 28 Cosmetics
TC 9 Cement and limes	TC 29 Fertilizers (combined with TC 27)
TC 10 Processed foods	TC 30 Environmental protection and pollution Control
TC 11 Beverages	TC 32 Stationery and publications
TC 12 Paints and varnishes	TC 33 Iron and steel products
TC 13 Chemicals and chemical laboratories	TC 34 Meat and meat products
TC 14 Edible oils and fats	TC 35 Kitchen and tableware
TC 15 Soaps and detergents	TC 36 Rubber and rubber products
TC 16 Primary agricultural products	TC 37 Pharmaceuticals and healthcare products
TC 17 Timber and timber products	TC 38 Brush-ware and dusters
TC 18 Tea	TC 39 Fish and fishery products
TC 19 Bread and confectioneries	TC 41 Tobacco and tobacco products
TC 20 Petroleum products	
TC 21 Coal, paraffin and solar Heaters	

## LIST OF WITHDRAWN STANDARDS

Withdrawn standard		Replaced by
1.	MBS 1:1973	MS 18:1982
2.	MBS 3: 1976	MS 3:2004
3.	MBS 4:1976	MS 4:1993
4.	MBS 5:1976	MS 5:1993
5.	MBS 6:1979	MS 6:1994
6.	MBS 18:1982	MS 18:2010
7.	MBS 19:1982	MS 19:2001
8.	MBS 21:1984	MS 21:2002
9.	MBS 22:1984	MS 22:2010
10.	MBS 29:1984	MS 29:2001
11.	MBS 30:1985	MS 30:2011
12.	MBS 32:1985	MS 32:1998
13.	MBS 34:2002	MS 34:2011
14.	MBS 37:1995	MS 37:2002
15.	MS 43:2008	MS 43:2013
16.	MBS 44:1996	MS 44:2004
17.	MBS 48:1986	MS 48:2006
18.	MBS 51:2003	MS 51:2011
19.	MBS 52:1986	MS 52:2000
20.	MBS 84:1986	MS 84:1991
21.	MBS 92:1986	MS 92: 2013
22.	MBS 97:1988	MS 97:2013
23.	MBS 103:1988	MS 103:1993
24.	MBS 105:1988	MS 105:1995
25.	MBS 123:1988	MS 123:1998
26.	MBS 153:1988	MS 153:2014
27.	MBS 170:2004	MS 170:2012



<b>Withdrawn standard</b>		<b>Replaced by</b>
28.	MBS 179:1988	MS 179:2010
29.	MBS 187:1993	MS 187:1999
30.	MBS 202:2011	MS 202: 2013
31.	MBS 209:2011	MS 209: 2013
32.	MBS 212:1995	MS 212:2014
33.	MBS 214:1990	MS 214:2005
34.	MBS 225:1995	MS 225:2013
35.	MBS 251:1991	MS 251:2002
36.	MBS 252:1991	MS 252:2002
37.	MBS 253:1991	MS 253:2002
38.	MBS 255:1991	MS 255:1998
39.	MBS 258:1991	MS 258:2000
40.	MBS 267:1991	MS 267:2004
41.	MBS 272:1991	MS 272:2000
42.	MBS 298:1991	MS 298:2000
43.	MBS 304:1991	MS 304:2014
44.	MBS 315:1991	MS 315:2003
45.	MBS 414:1992	MS 414-1:2002
46.	MBS 509:1995	MS 509:2010
47.	MBS-ISO 8402:1994	MS-ISO 9000:2000
48.	MBS-ISO 9000:1987	MS-ISO 9000-1:1994
49.	MBS-ISO 9001:2000	MS-ISO 9001:2008
50.	MBS-ISO 9002:1987	MS-ISO 9002 1994
51.	MBS-ISO 9002:1994	MS-ISO 9000:2000
52.	MBS-ISO 9003:1987	MS-ISO 9003:1994
53.	MBS-ISO 9003:1994	MS-ISO 9001:2008
54.	MBS-ISO 9004:1987	MS-ISO 9004-1:1994
55.	MBS-ISO 9004-1:1994	MS ISO 9001:2000
56.	MS-ISO 15189:2003	MS-ISO 15189:2007

<b>Withdrawn standard</b>		<b>Replaced by</b>
57.	MS-ISO 17021:2006	MS-ISO 17021:2011

## ***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](mailto:mbs@mbsmw.org)**

***STANDARDIZATION AND QUALITY CONTROL***

**KEY TO INDUSTRIAL DEVELOPMENT**

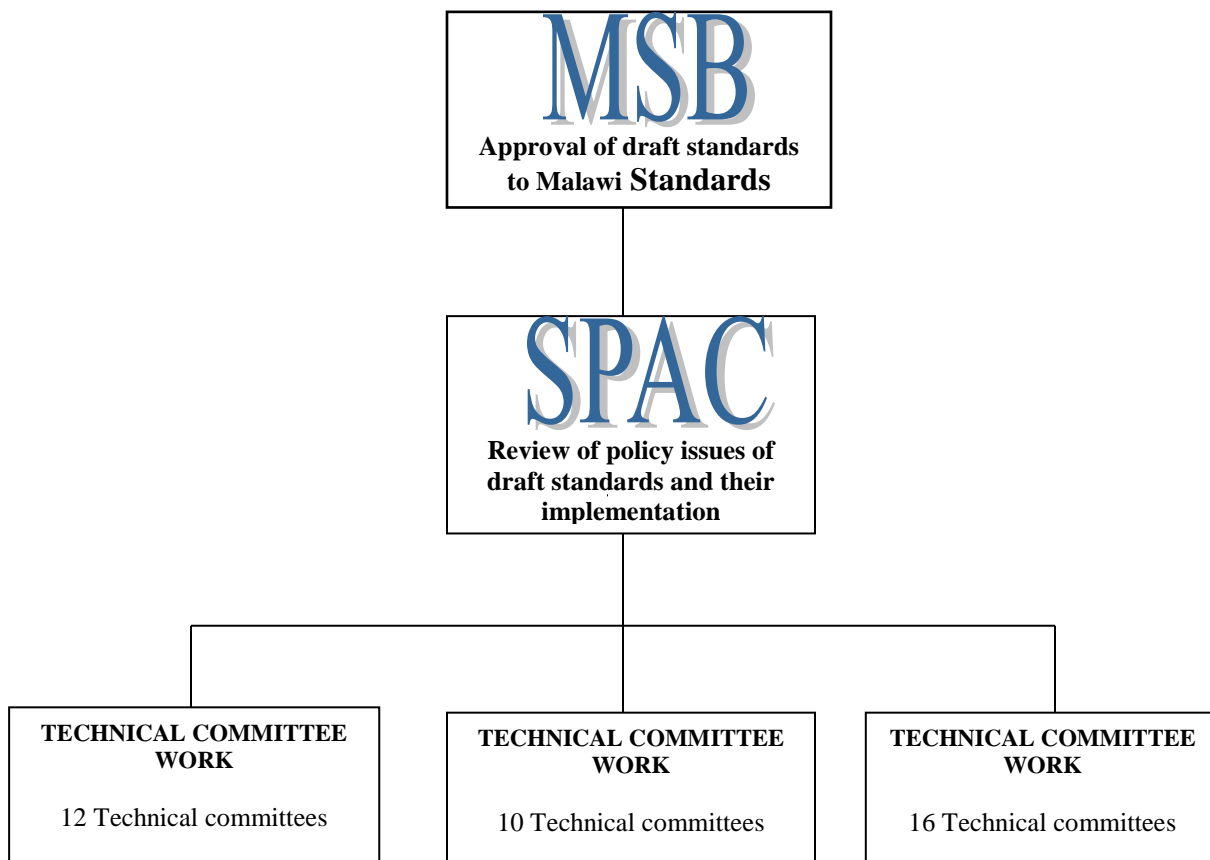
**PRICE LIST FOR MALAWI STANDARDS**

(Effective 1 August 2014)

The following is the price list for Malawi Standards categorized on page number

<b>Category</b>	<b>Number of pages</b>	<b>Local Price (MK)</b>	<b>+ 16.5% Sur-tax (MK)</b>	<b>Total Price</b>
A	1 – 2	772.53	127.47	900.00
B	3 – 4	944.21	155.79	1,100.00
C	5 – 6	1,030.04	169.96	1,200.00
D	7 – 8	1,201.72	198.28	1,400.00
E	9 – 10	1,373.39	226.61	1,600.00
F	11 – 13	1,459.23	240.77	1,700.00
G	14 – 16	1,545.06	254.94	1,800.00
H	17 – 19	1,630.90	269.10	1,900.00
I	20 – 22	1,716.74	283.26	2,000.00
J	23 – 25	1,802.58	297.42	2,100.00
K	26 – 28	1,802.58	297.42	2,100.00
L	29 – 30	1,888.41	311.59	2,200.00
M	31 – 35	1,974.25	325.75	2,300.00
N	36 – 40	2,060.09	339.91	2,400.00
O	41 – 45	2,060.09	339.91	2,400.00
P	46 – 50	2,145.92	354.08	2,500.00
Q	51 – 60	2,231.76	368.24	2,600.00
R	61 – 70	2,317.60	382.40	2,700.00
S	71 – 80	2,403.43	396.57	2,800.00
T	81 – 90	2,403.43	396.57	2,800.00
U	91 – 100	2,575.11	424.89	3,000.00
V	101 – 120	2,660.94	439.06	3,100.00
W	121 – 140	2,746.78	453.22	3,200.00
X	141 – 160	2,832.62	467.38	3,300.00
Y	161 – 180	2,918.45	481.55	3,400.00
Z	181 – 200	3,004.29	495.71	3,500.00
AA	201 – 225	3,004.29	495.71	3,500.00
AB	226 – 250	3,090.13	509.87	3,600.00
AC	251 – 275	3,175.97	524.03	3,700.00
AD	276 – 300	3,261.80	538.20	3,800.00

# STANDARDS DEVELOPMENT PATHWAY



↑  
Direction of work activity

**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 °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) *M***
- 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) *M***
- 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) *M***
- 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 fordii* 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) V**
- Specifies methods of test for vinegar intended for use as condiments.
- MS 13:1981 GLASS-REINFORCED POLYESTER (GRP) LAMINATED PRODUCTS – SPECIFICATION (8 p) M**
- 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 POLYESTER (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 18:2010 CARBONATED SOFT DRINKS – SPECIFICATION (Second edition) (8 p) M**

This Malawi Standard specifies requirements for carbonated soft drinks. The standard does not cover requirements for fruit juices, fruit flavoured drinks and comminuted fruit 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 22:2010 CARBONATED SOFT DRINKS – METHODS OF TEST (Second edition) (20 p) V**

Specifies methods of test for carbonated soft drinks.

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

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 30:2011 FORTIFIED WHEAT FLOUR – SPECIFICATION (Third edition) (4 p) M**  
This standard applies to wheat flour for direct human consumption prepared from common wheat, *Triticum aestivum* L., or club wheat, *Triticum compactum* Host, or mixtures thereof, which is prepackaged ready for sale to the consumer or destined for use in other food products.
- 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 34:2011 FORTIFIED MAIZE FLOUR (UFA) – SPECIFICATION (Third edition) (3 p) M**  
This Malawi standard prescribes requirements and methods of sampling and analysis for maize (*Zea mays* L.) flour or meal, (ufa) 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 36:2012 WOOD ADHESIVES - TERMINOLOGY AND CLASSIFICATION (16p) M**  
This standard covers the definition of terms relating to adhesives for wood and the classification of adhesives for wood according to their inherent properties.

- 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 40:2000      DETERGENT SKIN CLEANSER - SPECIFICATION (12p) M**
- This standard covers two types of detergent skin cleansers for personal hygiene that are suitable for use in detergent dispensers.
- MS 42:2003      BATHING BARS – SPECIFICATION (7p) M**
- This standard prescribes requirements and methods of sampling and test for bathing bars.
- MS 43:2013      BLACK TEA – DEFINITION AND BASIC REQUIREMENTS (3 p) M *third ed***
- 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) (5 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) M**

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 51:2011 FORTIFIED EDIBLE OILS – SPECIFICATION (Third edition) (7 p) M**

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

**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)V**

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)V**

Describes the methods of test for soaps and detergents

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

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 72:1995 FOOTWEAR AND FOOTWEAR MATERIALS – METHODS OF TEST (First edition) (32p) V**

This Malawi Standard covers methods of test for leather and leather products.

**MS 73:2014 RAW COW'S MILK – SPECIFICATION Second ed (13 p) M**

This Malawi standard specifies the quality requirements of raw, normal cow milk.

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

Specifies requirements for pasteurized cow's milk.

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

**Part 1: Chemical Analysis (9 p)V**

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)V**

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) *M***

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

**MS 85-1:2013    LIMES FOR USE IN BUILDING – SPECIFICATION second ed.**

**Part 1: Hydrated lime (3 p) *M***

This part of MS 85 covers specification for hydrated limes for use in building.

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

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) *M***

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

**MS 92:2013      LIMES – METHODS OF TEST (8 p) *V sec ed***

Covers methods of test for the determination of the following properties of lime, calcium oxide content, magnesium oxide content, carbon dioxide content, loss on ignition, insoluble matter including silicon dioxide, residue on slaking of quicklime, fineness of hydrated lime power, soundness of building lime using Le Chatelier methods of measuring its expansion and pat soundness of hydrated lime for use in building.

- MS 93:1986 HIGH PROTEIN BABY FOOD – METHODS OF ANALYSIS (15 p)V**  
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 96:2014 CHILLIES AND CAPSICUMS, WHOLE OR GROUND (POWDERED) – SPECIFICATION (6 p) M second edition**  
Specifies requirements for chillies and capsicums in whole or ground (powdered) form.
- MS 97:2013 CURRY POWDER – SPECIFICATION (11 p) M sec ed**  
Specifies minimum requirements for curry powder which is used as a flavouring ingredient in the preparation of foods.
- MS 99-2:1995 PACKAGING SACKS – VOCABULARY**  
**Part 2 - Sacks made from thermoplastic flexible film (10 p)V**  
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)M**  
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)V**  
This standard presents definitions of terms relating to freight containers.
- MS 102:1995 FREIGHT CONTAINERS (SERIES I): CLASSIFICATION, DIMENSIONS AND RATING – SPECIFICATION (7 p)M**  
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) M**  
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)V**
- Specifies methods of test for alcoholic beverages.
- MS 108:2013 PETROLEUM JELLY (PETROLATUM) – SPECIFICATION SECOND ED. (11p) M**
- This standard specifies requirements for refined petroleum jelly (petrolatum) in two colour grades ( white and yellow ), which is intended for use in pharmaceutical and cosmetic applications.
- 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 110:2014 SINGLE FURROW ANIMAL DRAWN PLOUGH SHARES – SPECIFICATION (7 p) M second edition**
- Specifies the material and dimensions of both upset and straight shares (see **Figure 1** and **Figure 2** ) used in animal drawn ploughs.
- MS 111:1988 DAIRY FARMING – CODE OF HYGIENIC CONDITIONS FOR MILKING (3 p)M**
- 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 113:2011 PETROLEUM INDUSTRY - ABOVE-GROUND NON-PRESSURISED HORIZONTAL CYLINDRICAL STORAGE TANKS FOR PETROLEUM INDUSTRY – SPECIFICATION (11p) M**
- This Malawi standard specifies the requirements for the manufacture and testing of non-pressurised horizontal cylindrical steel storage tanks for petroleum products.
- MS 114:2011 PETROLEUM INDUSTRY – UNDERGROUND NON-PRESSURIZED HORIZONTAL STORAGE TANKS – MANUFACTURING AND TESTING (4p) M**
- This Malawian Standard specifies the requirements for the manufacture and testing of non- pressurised horizontal cylindrical flat or dished ended underground steel storage tanks and their fittings for the storage of petroleum products
- 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) M**

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 general, these appliances are suitable for the destruction of combustible materials 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)M**

Outlines a code of safety in chemical laboratories.

**MS 131:2013    TEXTILES –STANDARD ATMOSPHERES FOR CONDITIONING AND TESTING (5p)**

This Malawi Standard defines the characteristics and use of a standard atmosphere for conditioning, for determining the physical and mechanical properties of textiles and a standard alternative atmosphere that may be used if agreed between parties.

**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 (2p)**

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 ) V**

GIVES THE PRINCIPLE TERMS RELATING TO THE HANGING OF NETTING FOR FISHING NETS, TOGETHER WITH THEIR DEFINITIONS.

**MS 139:2013: SPICES AND CONDIMENTS DETERMINATION OF VOLATILE OIL CONTENT (HYDRODISTILLATION METHOD (4P)**

THIS MALAWI STANDARD SPECIFIES A GENERAL PROCEDURE FOR VISUAL EXAMINATION, OR WITH NOT EXCEEDING 10 TIMES, OF WHOLE SPICES FOR DETERMINATION OF MACRO EXTRANEOUS AND FOREIGN.

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

Specifies methods of sampling for spices and condiments

**MS 141:2013 SPICES AND CONDIMENTS - DETERMINATION OF TOTAL ASH (Second Edition) (4 p) V**

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

**MS 142:2013 SPICES AND CONDIMENTS-DETERMINATION OF FILTH (7p)**

This Malawi Standard specifies a method for the quantitative determination of filth in spices and condiments. As no limit have been prescribed for filth in standard on spices and condiments, this method should be used for collecting more data and for settling disputes.

**MS 144:2007 AGRICULTURAL FOOD PRODUCTS – DETERMINATION OF CRUDE FIBRE CONTENT GENERAL METHOD (8 p) V**

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

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

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) V**

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) V**

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 149:1988 CEREALS, PULSES AND DERIVED PRODUCTS- DETERMINATION OF ASH CONTENT (5p) V**

This Malawi standard specifies two methods for the determination of ash yielded by cereals, pulses and derived products.

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

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)V**

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 153:2014 CORIANDER, WHOLE OR GROUND ( POWDERED) – SPECIFICATION (6 p) M sec ed.**

Specifies requirements for coriander (*Coriandrum sativum* L).in the whole and ground (powdered) forms.

**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)V**

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

**MS 156:1995 IRONS, SOLID FUEL PRESSING – SPECIFICATION (6 p)M**

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) M**

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) M**

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 164:2013 ASPARAGUS –SPECIFICATION (7p)**

This Malawi Standard applies to shoots of commercial varieties of asparagus grown from *Asparagus officinalis* L of the *Liliaceae* family, to be supplied fresh to the consumer, after preparation and packaging. It covers green and violet asparagus of more than 3mm diameter and

white and violet asparagus of more than 8mm diameter, packed in uniform bundles or units packages. Asparagus for industrial processing is excluded.

**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 170:2012 UNLEADED PETROL (THIRD EDITION) – SPECIFICATION (10 p) M**

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

**MS 172-1:2011 THE PETROLEUM INDUSTRY PART: 1: STORAGE AND DISTRIBUTION OF PETROLEUM PRODUCTS IN THE ABOVE-GROUND BULK INSTALLATIONS (63P) M**

This part of MS 172 covers the layout and design of petroleum bulk depots, and the installation of equipment of the types normally used for the handling, storage and distribution of petroleum products and their derivatives, other than equipment that is used for storage and dispensing on consumer premises (including service stations) and for relevant standards exist.

**MS 172-2:2011 THE PETROLEUM INDUSTRY PART 2: ELECTRICAL AND OTHER INSTALLATIONS IN THE DISTRIBUTION AND MARKETING SECTOR (38P)M**

This part of MS 172 covers the recommended safe practices in the design, construction, installation and maintenance of electrical, earthing and systems intended to be used in flammable and combustible liquid storage, pumping, distribution and marketing facilities. It is not intended that this standard should apply to refineries or explorations facilities, unless any of these installations are similar to facilities listed above.

**MS 172-3:2011 THE PETROLEUM INDUSTRY PART 3: THE INSTALLATION OF UNDERGROUND STORAGE TANKS, PUMPS/ DISPENSERS AND PIPE WORKS AT SERVICE STATIONS AND CONSUMER INSTALLATION - CODE OF PRACTICE (26P) M**

This code of practice covers provisions for the installation of underground storage tanks of individual capacity not exceeding 85 000 litres, pumps /dispensers and pipe work at service stations and consumer installations.

**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 for indoors of non-industrial buildings.

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

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 179:2010 RICE – SPECIFICATION (SECOND EDITION) (15 p) M**

This Malawi Standard specifies the requirements for rice (*Oryza sativa L.*). It is applicable to husked rice and milled rice, parboiled or not, intended for direct human consumption. It does not apply to other products derived from rice or to glutinous rice.

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

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)V**

COVERS METHODS OF TEST FOR LEAD-ACID STARTER BATTERIES.

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

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)V**

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 ( $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ ), intended for writing on chalkboards. It does not apply to calcium carbonate type of chalks.

**MS 188:2008 EDIBLE SALT – SPECIFICATION (SECOND EDITION) (23 p) M**

This standard specifies the requirements and methods of test for edible salt meant for human and livestock consumption. It applies to salt used as an ingredient of food, both for direct sale to the consumer and for food manufacture. It applies also to salt used as a carrier of food additives and/or nutrients.

**MS 189:2009 CHEESE – SPECIFICATION (5p) M**

This Malawi standard applies to cheese, intended for direct consumption or further processing. Subject to the provisions of this standard, standards for individual varieties of cheese, or groups of varieties of cheese, may contain provisions which are more specific than those in this standard and in these cases, those specific provisions shall apply

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

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

**MS 191:2014 YOGHURTS – SPECIFICATION (6 p) M *second edition***

**Part 1: Yoghurt and Sweetened yoghurt**

This standard prescribe requirements for yoghurt.

**MS 192:2009 BUTTER – SPECIFICATION (2p) M**

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 (3p) M**

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)M**

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)V**

Describes a method for determination of titratable acidity in milk.

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

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

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

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

**MS 199-1:20014 SAUSAGES – SPECIFICATION (8 p)M second edition**

This Malawi Standard specifies requirements, method of sampling and tests for pork and beef sausages.

**MS 200:1989 MEAT ANIMALS FOR ANTE-MORTEM SLAUGHTER AND POST MORTEM – 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)M**

PRESCRIBES THE ESSENTIAL REQUIREMENTS AND METHODS OF SAMPLING AND TESTS FOR BISCUITS.

**MS 202:2013 FORTIFIED WHITE SUGAR – SPECIFICATION (Third edition) (12p) M (third Ed.**

This standard prescribes the requirements for white sugar derived from sugarcane or beet root intended for human consumption without further processing. The fortification in **Clause 6** apply to sugars sold directly to the final consumer, and are optional to sugars used as ingredients in other foodstuffs..

**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) M**

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 209:2013 FORTIFIED RAW SUGAR – SPECIFICATION (Third Edition) (10 p) M**

This standard prescribes the requirements for fortified raw sugar derived from sugarcane or beet root intended for human consumption without further processing. . The fortification in Clause 6 apply to sugars sold directly to the final consumer, and are optional to sugars used as ingredients in other foodstuffs.

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

Specifies requirements for spirits intended for use as beverages.

**MS 211:2013 LIQUID CARBON DIOXIDE INDUSTRIAL SPECIFICATION (19P)**

This Malawi Standard specifies two types of carbon dioxide for industrial use. Type 1 is suitable for industrial non-food application, e.g. purging, inerting, life inflation. Type 2 is higher quality grade which is also suitable for industrial food application, e.g. beverages, gas packing, food freezing and chilling.

**MS 212:2014 POULTRY FEEDS – SPECIFICATION (14 p) *M sec ed***

Specifies requirements for the following types of poultry feeds. chicken feeds, ducks feeds, turkey feeds.

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

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 214:2013 DRINKING WATER – SPECIFICATION (second edition) (9 p) *M***

This standard specifies the physical, biological, organoleptic and chemical requirements for treated drinking tap water. It does not apply to borehole water, bottled water and natural mineral water.

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

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) *M***

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) *V***

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 225:2013 FAT SPREADS AND BLENDED SPREADS-SPECIFICATION (5p)**

This Malawi Standard applies to fat products containing at least 10% and more than 90% fat, intended primarily for use as spreads. However, this standard does not apply to fat spreads derived exclusively from milk and / or milk products to which only other substances necessary for their manufacture have been added. It only includes margarine and products used for similar purposes and exclude products used for similar purposes and exclude products with a fat content of less than two thirds of the dry matter (excluding salt). Butter and dairy spreads are not covered by this standard.

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

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 228:2014 RAW MACADAMIA KERNELS – SPECIFICATION Second ed (6 p) M**

This Malawi standard specifies requirements for shelled macadamia kernels of varieties grown from *Macadamia tetraphylla*, *macadamia ternifolia* and *integrifolia* and /or their hybrids intended for direct consumption or for food when intended to be mixed with other products for direct consumption without further processing .The standard does not apply to macadamia kernels that are processed by salting, sugaring, flavouring or roasting, or for industrial processing.

**MS 229-1:2014 CEREAL-BASED BREAKFAST FOOD PRODUCTS-SPECIFICATION**

**Part 1: Flaked , puffed or pulverized (ready-to-eat)**

This Malawi Standard prescribes the requirements and methods of test for flaked, puffed or pulverized cereal-based breakfast food products, which are ready- to- eat and are suitable for all in –family consumption.

**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) M**

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 236-1:2011 CODE OF PRACTICE FOR HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS (61P) M**

**Part 1: installations involving gas storage containers of individual water capacity not exceeding 500litres and a combined water capacity not exceeding 3000 litres per installation**

This part of MS 236 specifies requirements for the materials, the methods of construction and the installation of equipment used in the liquefied petroleum gas applications for domestic and commercial installations that involve gas storage containers of individual water capacity not exceeding 500 litres and of a combined water capacity not exceeding 3000 litres.

**MS 236-3:2011 CODE OF PRACTICE FOR HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS (38P) M**

**Part 3: installations involving storage vessels of individual water capacity exceeding 500 litres**

This part of MS 236 specifies requirements for the layout, design and installation of butane, propane and liquefied petroleum gas equipment, and of storage vessels of individual water



capacity exceeding 500 litres and associated vaporizers, pipework and fittings up to the outlet of the first pressure reduction stage in the line.

**MS 236-4:2011 CODE OF PRACTICE FOR HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS (14 P) *M***

**Part 4: transportation in bulk by road**

This part of MS 236 contains recommendations for the design, construction, inspection, fittings and filling ratio of tanks used in the transportation of LPG in bulk by road, the design of vehicles and equipment, and operating practice.

**MS 236-6:2011 CODE OF PRACTICE FOR HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS. (37P) *M***

**Part 6: The application of liquied petroleum and compressed natural gase as engine fuels for internal combustion engines**

This part of MS 236 covers the safe use of liquefied petroleum gas and compressed natural gas as fuels for internal combustion engines and for the safe operation of equipment manufactured for conversions.

**MS 236-7:2011 CODE OF PRACTICE FOR HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATIONS. *M***

**Part 7: storage and filling premises for refillable containers of gas capacity not exceeding 9 kg and the storage of individual gas containers exceeding 48kg (24p)**

This part of MS 236 specifies the minimum requirements for the location and installation of, and operations at , filling premises for the filling of liquefied petroleum gas (LPG) container of gas capacity not exceeding 9 kg, including the storage of individual gas containers not exceeding 48 kg. It identifies safe methods of filing and storing refillable containers and makes recommendations towards safe working procedures that cover all aspects of the storage containers.

**MS 236-8:2011 CODE OF PRACTICE FOR THE HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATION (8P)**

**Part 8: the fuelling of fork lift trucks and other LP gas operated vehicles (8p)**

This code of practice covers recommendations for the equipment used in filling LP gas containers on fork lift trucks and other LP gas operated vehicles from fixed storage, and for the siting and maintenance of the equipment. It also covers safety pre-cautions and fuelling procedure and is intended to supplement MS 236: Part 6.

**MS 236-10:2011 CODE OF PRACTICE FOR THE HANDLING, STORAGE, DISTRIBUTION AND MAINTENANCE OF LIQUEFIED PETROLEUM GAS (LPG) IN DOMESTIC, COMMERCIAL, AND INDUSTRIAL INSTALLATION**

**Part 10: mobile filling stations for refillable LPG containers of capacity not exceeding 9 kg (4p) m**

This part of MS 236 gives recommendations in respect of the location and operation of mobile filling stations suitable for filling of refillable liquefied petroleum gas containers.

**MS 237:2008 FOOD ADDITIVES - GENERAL STANDARD (250p) M**

Only the food additives listed herein are recognized as suitable for use in foods in conformance with the provision of this standard. Only food additives that have been assigned and Acceptable Daily Intake (ADI) or determined, on the basis of other criteria, to be safe by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and an International Numbering System (NIS) designation by Codex will be considered for inclusion in this standard. The use of additives in conformance with this standard is considered to be technologically justified.

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

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

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

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

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

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) M**

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

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

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

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

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 249:2012 FERTILIZERS - MARKING, PRESENTATIONS AND DECLARATIONS. (4 p) V**

This Malawi Standard specifies the procedure for marking containers or labels for fertilizers, where national legislation permits. It is applicable to all fertilizers in containers and is designed to make easy compliance of the fertilizer industry with MS 722.

**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) V**

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) V**

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 271:200 FERTILIZERS, SUPERPHOSPHATE-SPECIFICATION (9 p) M**

This Malawi standard specifies requirements and methods of test for single superphosphate, double superphosphate and triple superphosphate fertilizers.

**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 274:2013 PAINTS AND VARNISHES STANDARD PANELS FOR TESTING (11P)**

THIS MALAWI STANDARD SPECIFIES SEVERAL TYPES OF STANDARD PANEL AND DESCRIBES PROCEDURES FOR THEIR PREPARATION PRIOR TO PAINTING. THESE STANDARD PANELS ARE FOR USE IN GENERAL METHODS OF TEST FOR PAINTS, VARNISHES AND RELATED PRODUCTS.

**MS 275:2013 PAINTS AND VANISHES –COMPARISON OF CONTRAST RATION (CHIDING POWER) OF PAINTS OF THE SAME TYPE AND COLOUR (3P)**

THIS MALAWI STANDARD IS ONE OF A SERIES DEALING WITH THE SAMPLING AND TESTING OF PAINTS, VARNISHES AND RELATED PRODUCTS .IT SHOULD BE READ IN CONJUNCTION WITH ISO 1512, *PAINTS AND VARNISHES-SAMPLING*, AND MS 276, *PAINTS AND VARNISHES-EXAMINATION AND PREPARATION OF SAMPLES FOR TESTING*.

**MS 276:2013 PAINTS AND VANISHES –DETERMINATION OF SPECIAL GLOSS OF NON-METALLIC FILM AT 20,60 AND 85 (9P)**

THIS MALAWI STANDARD SPECIFIES A TEST METHOD FOR DETERMINING THE SPECULAR GLOSS OF PAINT FILMS USING A REFLECTOMETER GEOMETRY OF 20,60 OR 85.THE METHOD IS NOT SUITABLE FOR THE MEASUREMENT OF THE GLOSS OF METALLIC PAINTS.

**MS 277:2013 TEXTILES – TESTS FOR COLOUR FASTNESS**

PART AO2: GREY SCALE FOR ASSESSING CHANGE COLOUR (3P)

THIS MALAWI STANDARD DESCRIBES THE GREY SCALE FOR DETERMINING CHANGES IN COLOUR OF TEXTILES IN COLOUR FASTNESS TESTS, AND ITS USE. A PRECISE COLORIMETRIC SPECIFICATION OF THE SCALE IS GIVE AS A PERMANENT RECORD AGAINST WHICH NEWLY PREPARED WORKING STANDARDS THAT MAY HAVE CHANGED CAN BE COMPARED.

**MS 278:2013 ROAD - MARKING PAINT – SPECIFICATION *second ed(16 p) M***

This Malawi Standard specifies requirements and methods of sampling and test for road marking paint. It covers conventional solvent-borne and water-borne paints suitable for marking traffic-bearing bituminous or concrete road surfaces, and makes provision for white, yellow and other colours.

**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 280:2013 EMULSION PAINTS –SPECIFICATION *second ed(12 p) M***

This Malawi standard specifies the requirements and methods of sampling and test for four grades of emulsion paint that are based on synthetic polymers dispersed in water phase and that are supplied in a matt, semi-gloss finish, for application over interior plaster or other masonry substrates, as one or more coats of the same grade. three grades are suitable for both interior and exterior use, and one grade is suitable for interior use only.

**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 283:1991 PAINTS – METHODS OF TEST (26 p) V**

This standard prescribes the methods of test for paints

**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 (12P) V**

**Part 1: Sampling**

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

**MS 289-2:1991 ANIMAL FEEDS AND FEEDING STUFF - METHODS OF SAMPLING (12P) V**

**Part 2: General Methods**

This part of **MS 209** prescribes the general methods of testing animal feeds and feeding stuffs.

**MS 289-4:1991 ANIMAL FEEDS AND FEEDING STUFFS – METHODS OF TEST – MICROBIOLOGICAL METHOD (5p) V**

**Part 4: Microbiological Methods**

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

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

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)V**
- 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: Coli form 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)V**

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 (46P) M**

THIS STANDARD CONTAINS THE MAIN PRINCIPLES AND PROCEDURES WHICH ARE USED AND RECOMMENDED BY THE CODEX ALIMENTARIUS COMMISSION (CAC) 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 304:2014      CINNAMON (SRI LANKAN TYPE, SEYCHELLES TYPE AND MADAGASCAN TYPE), WHOLE OR GROUND (POWDERED) – SPECIFICATION (7 p) M (second ed)**

Specifies requirements for whole or ground (powdered) cinnamon of the Sri Lankan type, Madagascan type Seychelles type, which is the tree or shrub Cinnamon *Cinnamomum Zeylanicum* 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) M**

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 324:2012 FERTILIZERS – DETERMINATION OF BULK DENSITY (LOOSE) (3P) V**

This standard specifies a method for the determination of the bulk density (loose) of solid fertilizers, except powder fertilizers.

**MS 325:2012 FERTILIZERS - DETERMINATION OF BULK DENSITY (BULK) (6P) V**

This standard specifies two methods for the determination of the bulk density (tapped) of solid fertilizers.

- The machine –tapping method
- The hand-tapping method.

**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<sup>3</sup>.

**MS 328:2013 LOCKS, LATCHES, AND ASSOCIATED FURNITURE (DOMESTIC TYPE)-SPECIFICATION (16P)**

This specification covers the requirements for the materials, essential dimension, finish, and performance for locks and latches, and the associated lock and furniture.

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

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) M**

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) M**
- 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) M**
- 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) M**
- Defines dimensions and specifies a standard procedure for measuring the body.
- MS 334:1991 SKIN CARE PRODUCTS – SPECIFICATION (5 p) M**
- 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) M**
- 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 (2p) M**
- This Malawi standard specifies the requirements for nitrate of soda fertilizer, also known as Sodium nitrate ( $\text{NaNO}_3$ ).
- MS 353:2000 FERTILIZERS – AMMONIUM NITRATE – SPECIFICATION (2 p) M**
- This Malawi Standard specifies requirements for Ammonium nitrate fertilizers ( $\text{NH}_4\text{NO}_3$ ), 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 ( $\text{KCl}$ ).
- 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) V**

Covers methods of test for threads for footwear.

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

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) V**

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) V**

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) V**

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) V**

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.

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

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

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  $20 \pm 5$  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 (7p) V**

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 366:2010 HONEY – SPECIFICATION (30p) M**

This standard applies to all honeys produced by honey bees and covers all styles of honey presentations, which are processed and ultimately intended for direct consumption. It also applies to honey used as an ingredient in other foods, and honey, which is packed for sale in bulk containers, which may be repacked into retail packs.

#### **MS 367:2010 WAX POLISH – METHODS OF TEST (10 p) V**

This standard covers methods of test for wax.

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

Specifies requirements for industrial methylated spirits.

#### **MS 370:1991 METHYLATED SPIRITS – METHODS OF TEST (9 p) V**

PRESCRIBES METHODS TO BE USED FOR ASCERTAINING CONFORMITY WITH SPECIFICATION OF METHYLATED SPIRITS.

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

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) M**

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 °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 °C 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) M**

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 naphthenate concentrates and solutions of metallic naphthenate suitable for the preservation of timber.

**MS 386:1992 BITUMINOUS PAINTS FOR PAINTS FOR COLD APPLICATION EXCLUDING USE IN CONTACT WITH POTABLE WATER – SPECIFICATION (9 p) M *second edition***

This Malawi standard specifies requirements and methods of sampling and test 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 388:2014 DECORATIVE OIL GLOSS PAINT FOR INTERIOR AND EXTERIOR USE – SPECIFICATION (12 p) M second edition**

THIS MALAWI STANDARD SPECIFIES REQUIREMENTS AND METHODS OF SAMPLING AND TEST FOR DECORATIVE OIL GLOSS PAINT (OTHER THAN EMULSION PAINTS) FOR INTERIOR AND EXTERIOR USE AS A FINISHING COAT ON METAL, WOOD, SEALED PLASTER WALLS, COMPOSITION BOARD AND SIMILAR MATERIALS THAT HAVE BEEN PRIMED OR PAINTED PREVIOUSLY.

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

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) M**

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) M**

COVERS TWO TYPES OF VARNISH FOR USE ON INTERIOR WOODEN FLOORS.

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

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) M**

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) M**

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) M**

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) M**

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) V**
- Prescribes methods of test for black polyethylene pipes for the conveyance of liquid.
- MS 408:1992 CREOSOTE FOR WOOD PRESERVATION – SPECIFICATION (6 p) M**
- Specifies requirements for three types of coal tar creosote for wood preservation.
- MS 410:1994 BLACK TEA METHODS OF TEST (6p) V**
- 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) V**
- 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) V**
- 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 428:2013 IMMERSION TYPE HEATING UNITS FOR ELECTRICAL APPLIANCES-SPECIFICATION (22P)**
- This Malawi Standard specifies required for five replaceable for types of replaceable immersion-type heating units (see 4.1) intended for use in portable electrical appliances for electrical appliances for heating water or non –corrosive aqueous solutions at d.c voltages of not less than 42V and a.c voltages of not more than 240V between phase and neutral conductor and at a rate load not exceeding 6 Kw.
- MS 456:1993 UNPLASTICIZED POLYVINYL CHLORIDE (UPVC) PIPES AND FITTINGS – METHODS OF TEST (19 p) V**
- Covers methods of test for unplasticized 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 °C);
  - b) drainage, sewerage and rainwater systems (continuous flow up to 45 °C and intermittent flow up to 95 °C).
- MS 459:1994 BLACK TEA – VOCABULARY (8p) M**
- 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 (4p) V**
- 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) M**
- Prescribes the physical and active ingredients for mosquito coils.
- MS 469:1993 MOSQUITO COILS – METHODS OF TEST (11 p) V**
- 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) V**

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 M**

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 492:2012 POLYWOOD AND COMPOSITE BOARDERS – SPECIFICATION (25P) M**

This specification covers requirements for materials, construction, preservative treatment, dimensions and performance of plywood and composite board.

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

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) M**

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) M**

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

**MS 496:2012    SOFTWOOD BRANDERING AND BATTENS-SPECIFICATION (24P) M**

This standard specifies requirements for one grade of timber suitable for use as brandering and battens intended for being fixed against beams and joists in roofs for the attachment of ceilings and for the boxing in of eaves, and use as supports on roof trusses for fixing of roofing slates, tiles, wooden shingles and thatch

**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) M**

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) M**

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 508:2013    TEXTILES –DETERMINATION OF PH AQUEOUS EXTRACT (5p)**

This Malawi Standard specifies a method for determining the pH of the aqueous extract of textiles. The method is applicable to textiles in any form.

**MS 509:2010    GALVANISED IRON SHEETS – SPECIFICATION (Second edition) (7 p) M**

THIS MALAWI STANDARD SPECIFIES REQUIREMENTS FOR MATERIALS, PROFILE AND DIMENSIONS OF GALVANIZED CORRUGATED AND TROUGHED IRON SHEETS FOR ROOFING, CLADDING AND OTHER GENERAL USES.

**MS 510:1997    FISH MEAL – VOCABULARY (1p) V**

This Malawi standard defines terms relating to fish meal.

**MS 511:2011    ANIMAL FEEDING STUFF – QUANTITATIVE DETERMINATION OF ZEARALENONE CONTENT (8 p) V**

This Malawi Standard specifies a qualitative method for the determination of zearalenone in animal feeding stuffs and in particular, in maize. This method is for screening purposes only.

**MS 512:2009 ANIMAL FEEDING STUFFS-DETERMINATION OF FREE AND TOTAL GOSSYPOL (3p) M**

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 516: 2010 COFFEE AND COFFEE PRODUCTS – VOCABULARY (7p) V**

This Malawi Standard defines the most commonly used terms relating to coffee and its products.

**MS 517:2008 PULSES– DETERMINATION OF GLYCOSIDIC HYDROCYANIC ACID (5p) M**

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 518-1:2010 CEREALS AND PULSES – DETERMINATION OF HIDDEN INSECT INFESTATION**

**Part 1: General Principles. (3p) V**

This part of MS 518 establishes the general principles of methods of determining hidden insect infestation in cereals and pulses.

**MS 518-2:2010 CEREALS AND PULSES-DETERMINATION OF HIDDEN INSECT INFESTATION**

**Part 2: Sampling (5p) V**

This part of MS 518 specifies methods of sampling cereals and pulses, in bags or in bulk, for the determination of hidden insect infestation.

**MS 518-3:2010 CEREALS AND PULSES-DETERMINATION OF HIDDEN INSECT INFESTATION**

**Part 3: Reference Method (4p) V**

This part of MS 518 specifies the reference method for determining the nature and number of hidden insects in a sample of cereals and pulses. Its aim is to count all the individuals, at every stage of life, of every insect species that normally feeds and develops within cereals and pulses.

**MS 518-4:2010 CEREALS AND PULSES-DETERMINATION OF HIDDEN INSECT INFESTATION**

**Part 4: Rapid methods (21p) V**

This part of MS 518 specifies five rapid methods for estimating the degree of or detecting the presence of, hidden insect infestation in a sample of a cereals or pulses.

**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<sub>2</sub> GAS CARTRIDGES (STEEL) – SPECIFICATION (5 p) M**

This Malawi standard specifies the characteristics of refillable, co<sub>2</sub> 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) V**

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) V**

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 527:1999 SOLAR WATER HEATERS – METHODS OF TEST (13p) V**

This Malawi Standard specifies test methods for mechanical qualification, term energy output of solar water heaters.

**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 °C.

**MS 529-1:2005 REPRODUCTION OF RECONDITIONED TYRES**

**Part 1: definitions (3p) v**

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 – ply 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 moulding 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) V**

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

**MS 531:2012 AGRICULTURAL LIMING MATERIALS – SPECIFICATION (7p) M**

This standard prescribes requirements and methods of sampling and test for agricultural liming material (ALM). It covers the various types (or forms) of ALM including limestone (calcitic or dolomitic), dolomite, burnt lime (quicklime), slaked lime (hydrated lime), marl and industrial by-products.

**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 534:2005 DISPOSAL OF EFFLUENTS OF THE DAIRY INDUSTRY – CODE OF PRACTICE (11p) M**

This standard covers methods of treatment and disposal of effluents from dairy and allied industries. It is a compilation of sources, nature, volumes and pollution effects of the effluents, ways of waste prevention and methods of their treatment and disposal.

**MS 538:2008 DIESEL – SPECIFICATION (second edition ) (6 p) M**

This standard prescribes requirements and methods of sampling and test for diesel fuels other than biodiesel suitable for various types of diesel engines.

**MS 539:2013 INDUSTRIAL EFFLUENTS – TOLERANCE LIMITS FOR DISCHARGE INTO INLAND SURFACE WATERS (30 p) M second ed.**

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

**MS 542:2008 SORGHUM GRAINS – SPECIFICATION (3p) M**

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 544:2010 WHOLE AND DECORTICATED PEARL MILLET GRAINS – SPECIFICATION (First edition) (5p) M**

This Malawi Standard applies to whole and decorticated pearl millet grains destined for human consumption which is obtained from *Pennisetum americanum L.*

**MS 546:2009 POULTRY PROCESSING – CODE OF PRACTICE (7p) M**

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) V**

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 560:2004 NATURAL MINERAL WATERS - SPECIFICATION (First edition) (9p) M**

This Malawi Standard specifies description, treatment, packaging and sampling requirements for natural mineral waters intended for human consumption. It does not apply to natural mineral water sold or used for other purposes.

**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 569-2:2013 TISSUE PAPER second ed.**

**Part 2: Toilet paper (9 p) M**

THIS PART OF MS 569 COVERS FOUR GRADES (SEE 4.1) OF CREPED TOILET PAPER SUPPLIED IN ROLLS.

**MS 569-3:2013 TISSUE PAPER FIRST EDITION**

**PART 3: FACIAL TISSUES (9P)M**

THIS PART OF MS 569 COVERS TISSUE PAPER, IN SHEET FORM, FOR USE PRIMARILY FOR FACIAL HYGIENE.

**MS 569-4:2014 TISSUE PAPER FIRST EDITION**

**PART 4: PAPER TOWELS (9P) M**

THIS PART OF MS 569 COVERS PAPER TOWELS, IN ROLLS AND IN SHEETS (SINGLE PLY AND DOUBLE –PLY)-SUITABLE FOR GENERAL AND INDUSTRIAL PURPOSES.

**MS 573:2007 ETHANOL – SPECIFICATION (9P) M**

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).

<b>MS 575:1999</b>	<b>BLEACHING POWDER, STABLE – SPECIFICATION (FIRST EDITION) (8P) M</b>
	THIS STANDARD SPECIFIES THE REQUIREMENTS AND METHODS OF SAMPLING AND TEST FOR STABLE BLEACHING POWDER INTENDED FOR HOUSEHOLD AND/OR INDUSTRIAL USE.
<b>MS 577:2001</b>	<b>BENZENE, CLEANING – SPECIFICATION (1 P) M</b>
	COVERS A HYDROCARBON SOLVENT SUITABLE FOR GENERAL CLEARING PURPOSES AND FOR THE CLEARING OF SILVER PLATINUM CONTACT OF TELECOMMUNICATION SYSTEMS.
<b>MS 588:2003</b>	<b>CHITENJE – SPECIFICATION (3 P) M</b>
	THIS MALAWI STANDARD SPECIFIES THE REQUIREMENTS FOR CHITENJE.
<b>MS 590:2002</b>	<b>POLYVINYL ACETATE DISPERSION ADHESIVES FOR WOOD – SPECIFICATION (5 P) M</b>
	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.
<b>MS 591:1996</b>	<b>CREOSOTE, WOOD PRESERVING (HIGH TEMPERATURE) – SPECIFICATION (5 p) M</b>
	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.
<b>MS 592:1996</b>	<b>CREOSOTE, WOOD PRESERVING (LURGI – GASIFICATION PROCESS) – SPECIFICATION (4 p) M</b>
	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.
<b>MS 593:2012</b>	<b>WOOD PRESERVING MIXTURE OF CREOSOTE AND WAXY OIL (8P)M</b>
	This specification covers two types of wood-preserving mixtures of creosote and waxy oil for use in the preservation of timber.
<b>MS 596:2005</b>	<b>mixtures of copper-chromium arsenic compounds for timber preservatives – specification (5P) M</b>
	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.
<b>MS 597:2005</b>	<b>BORON TIMBER PRESERVATIVES – SPECIFICATION (4P) M</b>
	This 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 ( $Na_2B_8O_{13} \cdot 4H_2O$ ).
<b>MS 598:2002</b>	<b>SAFETY IN THE WOOD PRESERVATION INDUSTRY – CODE OF PRACTICE (5 P) M</b>
	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.
<b>MS 599-1:2002</b>	<b>FIBREBOARD PRODUCTS – SPECIFICATION</b>
	<b>Part 1: Uncoated fibreboards (11 p) M</b>
	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 601:2014 NUTMEG (WHOLE OR BROKEN AND MACE (WHOLE OR IN PIECES) – SPECIFICATION (5 p) M sec ed**

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 of the genus *Pinus*.

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

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) (5P) V**

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) V**

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) (integral 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 623:1995 MAHEWU – SPECIFICATION (first edition) (7p) M**

This Malawi Standard specifies sampling requirements and methods of test for mahewu.

**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)M**

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) V**

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 cyanamide 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 639-2:2011 RETRO-REFLECTIVE REGISTRATION PLATES FOR MOTOR VEHICLES – SPECIFICATION**

**Part 2: Number plates (aluminium) second ed (23 p) M**

This part of MS 639, in addition to the relevant national legislation, specifies requirements for aluminium number plates that are intended for use on motor vehicles (including motor cycles and 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 640:2011 HAND HACKSAW BLADES-SPECIFICATION (14P)**

This specification covers five types of steel hand hacksaw blades of nominal length 300mm and that have a single –toothed edge. The type covered are listed in 4.1

#### **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 643-1:2013 RETRO-REFLECTIVE AND FLOURESENT WARMING SIGNS FOR ROAD VEHICLES-SPECIFICATION**

##### **Part 1: Triangles (21)**

This part of specification covers requirements for two types of triangles that are retro-reflective and fluorescent and intended to be carried in motor vehicles operating on public roads.

#### **MS 643-2:2013 RETRO-REFLECTIVE AND FLOURESCENT WARNING SIGNS FOR ROAD VEHICLES-**

##### **Part 2: Abnormal load vehicles signs (18 p)**

This part of specification covers requirements for abnormal load signs that are retro-reflective and fluorescent, and that are intended for use on motor vehicles on public roads.

#### **MS 643-3:2013 RETRO-REFLECTIVE AND FLOURESCENT WARNING SIGNS FOR ROAD VEHICLES-SPECIFICATION**

##### **Part 3: Signs other than triangles, chevron signs and abnormal load vehicle signs.(18p)**

This part of the specification covers requirements for signs, including decals, that are retro-reflective and fluorescent, and that are intended to indicate, maximum permissible speed, width of motor vehicles operating on public roads and identification of emergency vehicles.

**MS 643-4:2013 RETRO-REFLECTIVE AND FLOURENCENT WARNING SIGNS FOR ROAD VEHICLES-SPECIFICATION**

**Part 4: retro-reflective chevron signs (11p)**

This part of the specification covers requirements for retro-reflective chevron signs that incorporate a substrate and that are intended for use on motor vehicles that operate on public roads.

**MS 643-5:2013 RETRO-RELECTIVE AND FLOURESCENT WARNING SIGNS FOR ROAD VEHICLES-SPECIFICATION**

**Part 5: Retro- reflective chevron decals (12p)**

This part of the specification covers requirements for retro-reflective warning signs manufactured as protective coated chevron decals having self-adhesive bases of pigmented vinyl or other polymeric material and intended for use on motor vehicles operating on public roads.

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

**Part 2: Laminated safety glass for vehicles (1 p) M**

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.

**MS 651:2011 SPADES AND SHOVELS – SPECIFICATION (14p) M**

This specification covers the requirements for dimensions, material, construction and strength of four types of spades and ten types of shovels

**MS 652-1:2012 BRAKING (MOTOR AND TOWED VEHICLES, DESIGNED FOR LOW OR FOR USE OFF PUBLIC ROADS) – SPECIFICATION (8p) M**

**Part 1: Low speed vehicles**

This part of MS 652 applies to the braking systems of low speed motor vehicles with a maximum design speed of between 6km/h and 40km/h , and motor vehicles for use off public roads.

**MS 653:2012 ELECTRICAL CONNECTORS FOR TOWING AND TOWED VEHICLES - SPECIFICATION (12p) M**

This specification covers two types of electrical connectors in the form of a socket and plug that will permit interchangeability of electric connectors in the form of a socket and plug that will permit interchangeability of electrical connectors for towing vehicles having electrical equipment operating at nominal voltage of 6, 12, or 24V.

**MS 654:2014 ADDITIONAL OF ESSENTIAL NUTRIENTS TO FOODS –GENERAL PRINCIPLES First edition (3p) M**

These principles are intended to apply to all foods to which essential nutrients are added.

**MS 655-1:2012 GAMING EQUIPMENT – SPECIFICATION (Second edition)**

**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 655-2:2012 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 655-3:2012 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 655-4:2012 GAMING EQUIPMENT – SPECIFICATION (second edition)**

**Part 4: Chips, plaques 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 655-5:2012 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<sub>2</sub> type extinguishers (13 p) M**

This Malawi Standard specifies the characteristics of portable rechargeable fire extinguishers of the CO<sub>2</sub> 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. cate-

## **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<sub>2</sub>, M<sub>3</sub>, N<sub>1</sub>, N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> and O<sub>4</sub>; 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) M*

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 °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.

**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) M*

***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 °C 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) V**

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) V**

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 670:2001 SODIUM SILICATE - SPECIFICATON (First edition) (12p) M**

This standard prescribes the requirements and methods of sampling and test for sodium silicate in solid and liquid forms intended for use in various industries.



**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 specialty 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 678:2013 DRINKING WATER QUALITY – CONTROL AND SURVEILLANCE OF WATER IN PUBLIC SUPPLY NET WORKS second edition (4p) 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**

**Part 1 – 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 (20p) V**

**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) V**

**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 682-5:2012 WATER QUALITY – SAMPLING (15P) V**

**Part 5: Guidance on sampling drinking water from treatment works and piped distribution systems.**

This part of MS 682 establishes principles to the techniques of sampling water intended for human consumption.

**MS 682-6:2012 WATER QUALITY – SAMPLING (12p ) V**

**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 682-8:2012 WATER QUALITY – SAMPLING (10P) V**

**Part 8: Guidance on sampling of wet deposition**

This part of MS 682 provides guidance on the design of sampling programmes and the choice of instrumentation and techniques for the sampling of wet deposition. It does not cover measurement of the quantity of rain.

**MS 682-11:2012 WATER QUALITY – SAMPLING (10P)**

**Part 11: Guidance on sampling of groundwaters**

This part of MS 682 provides guidance on the design of sampling programmes, sampling techniques and the handling of water samples taken from groundwater for physical, chemical and micro-biological assessment .It does not cover sampling related to the day-to-day operational control of groundwater abstractions for potable or other purposes, but is concerned with the general surveillance of groundwater quality. Because of the complexity of groundwater systems, many specific sampling applications will require specialist hydrogeological advice which cannot be detailed in this part of MS 682

**MS 682-12:2012 WATER QUALITY - SAMPLING (33P) V**

**Part 12: Guidance on sampling of bottom sediments**

This part MS 682 provides guidance on the sampling of sedimentary materials from

- Inland rivers and streams;
- Lakes and similar standing bodies; and
- Estuarine and harbour areas.
- 

**MS 682-13:2013 WATER QUALITY - SAMPLING (16P) V**

### **Part 3: Guidance on sampling sludge's from sewage and water treatment work.(16p)**

This part of MS 682 gives guidance on the sampling of sludge from wastewater treatment works, water treatment works and industrial processes. It is applicable to all types of sludge arising from these works and also to sludge of similar characteristics, for example septic tank sludge. Guidance is also given on the design of sampling programmes and techniques for the collection of samples.

## **MS 682-16:2012 WATER QUALITY - SAMPLING (26P) V**

### **Part 16: Guidance on biotesting of samples**

This part of MS 682 gives practical guidance on sampling, pretreatment, performance and evaluation of waters in the context of biotesting .Information is given on how to cope with the problems for biotesting arising from the nature of the water sample and suitability of the test design.

## **MS 682-17:2012 WATER QUALITY – SAMPLING (9p) V**

### **Part 17: Guidance on sampling suspended sediments**

This part of MS 682 is applicable to the sampling of suspended solids for the purpose of monitoring and investigating freshwater quality, and more particularly to flowing freshwater systems such as rivers and streams. Certain elements of this part MS 682 may differ and are not necessarily covered here.

## **MS 682-19:2012 WATER QUALITY – SAMPLING (11p) V**

### **Part 19: Guidance on sampling of marine sediments**

This part of MS 682 provides guidance for the sampling of sediments in marine areas for analyses of their physical and chemical properties for monitoring purposes and environmental assessments.

## **MS 682-21:2012 WATER QUALITY – SAMPLING V**

### **Part 21: Guidance on sampling of drinking water distributed by tankers or means other than distribution pipes.(13p)**

Part 21: Guidance on sampling of drinking water distributed by tankers or means other than distribution pipes

This part of MS 682 establishes principles to be applied to the techniques of sampling water provided for drinking and for use in the manufacture of food and beverage products.

## **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°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 °C 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)v**

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 701:2005 NATURAL MINERAL WATER-CODE OF PRACTICE (first edition) (7p) M**

This standard recommends general hygiene and technical practices for use in collecting natural mineral water, its treatment, bottling and packaging, storage, transport, distribution and sale for direct consumption so as to ensure a safe, healthy and wholesome product.

**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 – SPECIFICATION (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) v**
- 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) V**

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) V**

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 50kg, 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 (59p) M**

This standard provides guidelines for classification, management, treatment and disposal of hazardous waste. Requirements for transportation are also specified.

#### **MS 720-2:2011 PACKAGING OF DANGEROUS GOODS - PACKAGING AND LARGE PACKAGING FOR ROAD AND RAIL TRANSPORT (25p) (M)**

##### **Part 2: Large packaging**

This standard identifies the various types of large packaging that are suitable for the transport of dangerous goods by road and rail. It describes minimum performance requirements for the large packaging, the procedures to be followed to obtain approval from test stations or certification authorities and gives details of the marking and labelling to be displayed on the large packaging

#### **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 (9 p) *M***

This specification covers requirements for the materials and construction of corrugated board containers.

**MS 726:2009 STAPLES FOR OFFICE USE – SPECIFICATION (30p) *M***

This specification covers pre-formed staples for use in standard-duty office stapling machines.

**MS 727:2009 OFFICE STAPLERS – SPECIFICATION (5 p) *M***

This specification covers the requirements for two types of general purpose hand operated staplers (using size 26/6 staples complying with **MS 726**) suitable for use either on a desk or held in the hand, and suitable for severe or moderate service.

**MS 728:2009 PAPER CLIPS – SPECIFICATION (4p) *M***

This specification covers steel wire clips intended for clipping together sheets of paper.

**MS 729:2009 PAPER PUNCHES (DESK TOP TYPES) – SPECIFICATION (8 p) *M***

This standard covers the requirements for three grades of paper punches in two-hole and four hole configuration, suitable for use on desk tops.

**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 (4 p) *M***



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 734:2013 PLASTIC CARRIER BAGS AND FLAT BAGS – SPECIFICATION (3 p) *M sec Ed.***

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 (4 p) *V***

This standard specifies the method for the determination of the gravimetric thickness of a sample of plastics film or sheeting (see section 2).

**MS 736:2011 TRANSPORTATION OF DANGEROUS GOODS – INTERMEDIATE BULK CONTAINERS FOR ROAD AND RAIL TRANSPORT (47 p) *M***

This standard establishes the requirements for various types of intermediate bulk container (IBC) suitable for the transport of dangerous goods by road and rail. It describes minimum performance requirements for the IBCs, the procedures to be followed to obtain approval from testing or certification authorities and gives details of the marking and labelling to be displayed on the IBCs

**MS 737:2011 INDUSTRIAL EMISSIONS – EMISSIONS FROM MOBILE STATIONERY SOURCES - SPECIFICATION (30 p) *M***

This standard specifies maximum allowable limits for particulate matter and other common air pollutants in gaseous emissions from stationary and mobile sources. The standard also suggests the mechanisms for reduction or removal of the pollutants.

**MS 739:2005 WORKPLACE AIR – DETERMINATION OF MASS CONCENTRATION OF CARBON MONOXIDE- METHOD USING DETECTOR TUBES FOR SHORT-TERM SAMPLING WITH DIRECT INDICATION (5 p) *V***

This Malawi standard specifies a method for the determination of mass concentration of carbon monoxide present in the air at work places in concentrations greater than 10mg/m<sup>3</sup> using detector tubes.

**MS 740:2005 AMBIENT AIR - METHODS OF SAMPLING AND TEST (88 p) *V***

This standard specifies methods of test for air pollution in ambient air

**MS 742:2005 WORKPLACE AIR- DETERMINATION OF PARTICULATE LEAD AND LEAD COMPOUNDS –FLAME OR ELECTROTHERMAL ATOMIC ABSORPTION SPECTROMETRIC METHOD (20 p) *V***

This standard specifies flame and electrothermal atomic absorption spectrometric methods for the determination of the –weighted average mass concentration of particulate lead and lead compounds in workplace air.

**MS 743:2009 CANNED BABY FOODS- SPECIFICATION (first edition) (4p) *M***

This standard specifies requirements for baby foods intended primarily for use during the normal infant's weaning period and also for the progressive adaptation of infants and children to ordinary food. They may be either in ready-to-eat form or in dry form requiring reconstitution with water or other suitable liquid. Do not include products covered by the Malawi Standard for Infant Formula (ms 541) or by the Malawi Standard for High protein baby foods (MS 90)

**MS 744:2007 USE OF DAIRY TERMS – GENERAL STANDARDS (2p) V**

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 745:2014 MAYONNAISE – SPECIFICATION (4 p) M**

This Malawi standard prescribes the requirements for mayonnaise as described in clause 3.

**MS 747:2010 FRUIT FLAVOURED DRINKS - SPECIFICATION (15p) M**

This Malawi Standard prescribes the requirements and methods of test for fruit flavoured drinks. It covers fruit flavoured drinks made from natural or synthetic colourings, flavourings, emulsions, water, sugar and other permitted optional ingredients. It also applies to products referred to as fruit flavoured cordials.

**MS 748:2007 SOYA BEAN MILK AND DRINK – SPECIFICATION (First edition) (13p) M**

This standard specifies the requirements and methods of sampling and test for soya bean milk and drink for human consumption.

**MS 749-1:2014 STORAGE OF CEREALS AND PULSES**

**Part 1: General recommendations for the storage of cereals (19p)**

This part of MS 749 gives general guidance related to the problems of storing cereals. Other aspects of the storage of cereals are dealt with in MS 749-2 and MS 749-3.

**MS 749-2:2013 STORAGE OF CEREALS AND PULSES**

**Part 2: Pesticides recommendation (8p)**

This part of MS 749 gives guidance on the choice of a method of storage of cereals and pulses, and on the practical recommendations for good storage, according to the method chosen. Other aspects of storage of cereals and pulses are dealt with in MS 749-1 and MS 749-3.

**MS 749-3:2013 STORAGE OF CEREALS AND PULSES**

**Part 3: control of attack pest (7p)**

This part of MS 749 gives guidance on means of controlling attack by pests on cereals and pulses during storage.

**MS 751:2006 SWEETENED CONDENSED MILK – SPECIFICATION (3p) M**

This Malawi standard applies to sweetened condensed milk, intended for direct consumption or further processing.

**MS 752:2006 EVAPORATED MILKS – SPECIFICATION (3p) M**

Applies to evaporated milks, intended for direct consumption or further processing, in conformity with the description in clause 3 of this Malawi Standard.

**MS 753:2008 RAISINS – SPECIFICATION (5p) M**

This standard applies to dried grapes of varieties conforming to the characteristics of *Vitis vinifera* L. which have been suitably treated or processed and which are offered for direct consumption as raisins or sultanas. It also covers raisins packed in bulk containers which are intended for repacking into consumer size containers. This standard does not include a similar dried vine fruit known as dried currant.

**MS 754:2013 PROCESSED CEREAL BASED FOODS FOR INFANTS AND YOUNG CHILDREN- SPECIFICATION (8p)**

This Malawi Standard covers processed cereal-based foods intended for feeding infants generally from the age of six months onwards as a complementary food, taking into account infant's individual nutritional requirements, and for feeding young children as part of a progressively diversified diet.

**MS 755:2007 GYPSUM ROCK FOR THE MANUFACTURE OF BINDERS – SPECIFICATION (4p) M**

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) M**

This specification covers gypsum core cornice for use in buildings.

**MS 758:2006 DOMESTIC SOLAR WATER HEATERS – SPECIFICATION (10p) M**

Specifies the characteristics of domestic solar water heaters.

**MS 759:2006 SOLAR WATER HEATERS – CODE OF PRACTICE (19 p) M**

This code covers the construction and installation for solar water heater systems.

**MS 760:2006 DOMESTIC SOLAR WATER HEATERS – MECHANICAL QUALIFICATIONS TESTS (3 P) M**

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 (10 p) M**

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<sup>3</sup>.

**MS 767:2006 CORRUGATED BOARD CONTAINERS – METHODS OF TEST (14p) V**

This standard prescribes methods of test for corrugated board containers.

**MS 768:2006 LINERS- SPECIFICATION (7p) M**

This specification covers liners of nominal grammage in the range 120-180g/m<sup>2</sup> and fluting of nominal grammage in the range 112-180g/m<sup>2</sup> that are used in the manufacture of corrugated containers for packaging purposes.

**MS 769:2007 MEAT BURGERS – SPECIFICATION (4 p) M**

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 (3p) M**

This Malawi standard establishes quality requirements for fish and permissible temperatures and times for the handling, preparation, distribution and packaging of fresh fish.

**MS 771:2014 CHOCOLATE AND CHOCOLATE PRODUCTS-SPECIFICATION first edition (7p) M**

This Malawi Standard applies to chocolate and chocolate products intended for human consumption and listed in clause 4 of this standard. Chocolate products shall be prepared from cocoa and cocoa materials with sugars and may contain sweeteners, milk products, flavouring substances and other food ingredients.

**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, and 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) M**

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) M**

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) M**

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) M**

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) M**

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 (10 p) M**

Covers minimum requirements for domestic stand alone solar photovoltaic (pv)-wind hybrid systems.

## **MS 780:2007 SOLAR PHOTOVOLTAIC (PV) WATER PUMPING SYSTEM – SPECIFICATION (15p) M**

Covers specifications for solar photovoltaic (PV) water pumping systems for domestic use

## **MS 782-1:2011 GLASS IN BUILDING – BASIC SODA LIME SILICATE GLASS PRODUCTS**

### **Part 1: Definitions and general physical and mechanical properties (4.p) M**

This Malawi standard defines and classifies basic glass products, indicates their chemical composition, their main physical and chemical characteristics and defines their general quality criteria.

## **MS 782-2:2011 GLASS IN BUILDING – BASIC SODA LIME SILICATE GLASS PRODUCTS (6p)**

### **Part 2: Float glass**

This part of MS 782 specifies dimensional and minimum quality requirements (in respect of optical and visual faults) for float glass, as defined in MS 782-1, for use in building.

## **MS 782-3:2011 GLASS IN BUILDING – BASIC SODA LIME SILICATE GLASS PRODUCTS (6.p) M**

### **Part 3: Polished wire glass**

This part of MS 782 specifies dimensional and minimum quality requirements (in respect of optical and visual and wire faults) for polished wire glass, as defined in **MS 782-1**, for use in building.

## **MS 782-4:2011 GLASS IN BUILDING – BASIC SODA LIME SILICATE GLASS PRODUCTS (4.p) M**

#### **Part 4: Drawn sheet glass (4 p) M**

This part of MS 782 specifies dimensional and minimum quality requirements (in respect of optical and visual and wire faults) for drawn sheet glass, as defined in **MS 782-1**, for use in building

### **MS 782-5:2011 GLASS IN BUILDING – BASIC SODA LIME SILICATE GLASS PRODUCTS**

#### **Part 5: Patterned glass (6 p) M**

This part of MS 782 specifies dimensional and minimum quality requirements (in respect of optical and visual faults) for patterned glass, as defined in **MS 782-1**, for use in building.

### **MS 785-1:2008 STEEL FOR THE REINFORCEMENT OF CONCRETE**

#### **Part 1: Plain bars (8 p) M**

This part of MS 785 specifies technical requirements for plain bars to be used as reinforcement in concrete.

### **MS 785-2:2008 STEEL FOR THE REINFORCEMENT OF CONCRETE**

#### **Part 2: Ribbed bars (19 p) M**

This part of MS 785 specifies technical requirements for ribbed bars to be used as reinforcement in concrete.

### **MS 785-3:2008 STEEL FOR THE REINFORCEMENT OF CONCRETE**

#### **Part 3: Welded fabric (8 P) M**

This part of MS 785 specifies technical requirements for factory made sheets or rolls of welded fabric, manufactured from steel wires or bars with diameters from 4 mm to 16 mm and designed for the reinforcement of concrete structures and the ordinary reinforcement of prestressed concrete structures.

### **MS 786:2008 CIGARETTES – SPECIFICATON (First edition) (7p) M**

This standard specifies the requirements and the methods of sampling and test for cigarettes processed or sold in Malawi.

### **MS 787:2007 TOBACCO AND TOBACCO PRODUCTS – METHODS OF TEST (43 p) V**

This standard prescribes the methods of test commonly used for testing of tobacco and tobacco products.

### **MS 789-2:2009 SAFETY AND SECURITY GLAZING MATERIALS FOR BUILDINGS M**

#### **Part 2: Burglar- resistant and vandal-resistant glazing materials (5p)**

This part of MS 789 covers requirements for the performance of burglar-resistant glazing materials intended for use in areas of buildings that may be subjected to manual attack.

### **MS 798:2009 INSTANT NOODLES – SPECIFICATION (First edition) (7p) M**

This standard applies to various kinds of noodles. The instant noodle may be packed with noodle seasonings, or in the form of seasoned noodle and with or without noodle garnish (s) in

separate pouches, or sprayed on noodle and ready for consumption after dehydration process. This standard does not apply to pasta.

**MS 801:2010 HONEY - SPECIFICATION (21p)**

This Malawi standard prescribes the methods of test for the analysis of honey.

**MS 802:2009 CHEDDAR – SPECIFICATION (5p) M**

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 805:2009 BIODIESEL FUEL – SPECIFICATION (First edition) (10p) M**

This Malawi Standard specifies requirements and test methods for marketed and delivered biodiesel to be used either as automotive fuel for diesel engines at 100% concentration, or as an extender for automotive fuel for diesel engines.

At 100 % concentration it is applicable to fuel for use in diesel engine vehicles designed or subsequently adapted to run on 100 % biodiesel.

**MS 807:2011 LUNCHEON MEAT – SPECIFICATION (First edition) (5p) M**

This Malawi Standard applies to products designated as “Luncheon meat” which have been packed in any suitable packing material.

**MS 808:2011 COOKED CURED CHOPPED MEAT – SPECIFICATION (First edition) (5p) M**

This Malawi Standard applies to products designated as “chopped meat” which have been packed in any suitable packaging material.

**MS 809:2011 UHT MILK – SPECIFICATION (First edition) (7p) M**

This Malawi Standard specifies the requirements and methods of sampling and tests for UHT milk.

**MS 811:2009 POTATO CRISPS - SPECIFICATION (First edition) (8p) M**

This standard specifies requirements for potato crisps made from tubers of the potato (*Solanum tuberosum* L.)

**MS 812:2012 BOTTLED DRINKING WATER OTHER THAN NATURAL MINERAL WATER-CODE OF PRACTICE (8p)**

This code recommends general techniques for collecting, processing, packaging, storing, transporting, distributing, and offering for sale a variety of drinking waters( other than natural mineral water) for direct consumption. A bottled/packageged drinking waters other than nature mineral water are covered by this code. This code does not cover recommendations for collecting, processing and marketing of natural mineral water.

**MS 813:2009 SULPHURIC ACID FOR USE IN LEAD-ACID BATTERIES - SPECIFICATION (First edition) (17p) M**

This standard specifies the limit for impurities in sulphuric acid suitable for use in lead-acid batteries.

**MS 815:2010 ORGANIC PRODUCTS - GENERAL STANDARD (37 p) V**

This standard provides general requirements for organic agricultural products. It covers care for the environment, plant production, livestock production, beekeeping, the collection of wild organic products and the processing and labelling and verification (inspection and certification) of the product there from. It does not apply to wild mushrooms.

**MS 816:2011 DAIRY FAT SPREADS - SPECIFICATION (3p) M**

This Malawi standard applies to dairy fat spreads intended for use as spreads for direct consumption or for further processing.

**MS 817:2011 DRIERS FOR PAINTS AND VANISHES-SPECIFICATION (5p)**

This Malawi Standard specifies requirements and methods of sampling and test for solid and liquid driers for paints, varnishes and related products. The requirements relate to driers in solid or liquid form.

**MS 819-1:2014 TITANIUM DIOXIDE PIGMENTS FOR PAINTS**

**Part 1: specifications and methods of test (10p)**

**This part of MS 819 specifies the requirements and corresponding methods of test for titanium dioxide pigments for paints.**

**MS 820:2010 CODE OF PRACTICE FOR DESIGN LOADINGS FOR BUILDINGS (first edition) (49p)**

The aim of this code is to provide general structural design procedures and minimum design loads to be used in the design of buildings and their structural elements. This code does not cover dynamic loading due to plant and machinery nor loads incidental to construction methods.

**MS 823:2011 DRIERS FOR PAINTS AND VARNISHES-METHOD OF TEST (17P) V**

This Malawi standard specifies methods of test for driers for paints, varnishes and related products. Some methods of test apply to driers in solid form only while others apply to driers in liquid form only and while yet others apply to both solid driers and liquid driers.

**MS 833:2013 THERMOSTATS FOR ELECTRIC STORAGE WATER HEATERS-SPECIFICATION (10p)**

This Malawi Standard covers two types of thermostats that have contact breakers of the air-break type, for use in thermostatically controlled electric storage water heaters. The thermostats are intended for use in circuits at voltages not exceeding 240 V between phase and neutral and current ratings not exceeding 30 A.

**MS 834:2013 ENERGY REGULATORS FOR ELECTRIC HEATING UNITS-SPECIFICATION (8p)**

This Malawi Standard specifies requirements for energy regulators for electric heating units for household and similar use. It covers class 1 and II regulators that have rated currents not exceeding 20 A and that are suitable for use in a.c circuits for substantially resistive loads with a power factor not less than 0.95 at voltage between 220 V and 240 V between phase and neutral conductors.

**MS 837:2011 QUICK FROZEN FISH FILLETS-SPECIFICATION (6p) M**

This Malawi Standard provides requirements for quick frozen fillets of fish as defined below and offered for direct consumption. It does not apply to products indicated as intended for further processing or for other industrial purposes.



**MS 838:2011 CONCRETE WORKS - CODE OF PRACTICE FOR MINOR WORKS (First edition) (16 p)**

This Malawi Standard covers concrete works in foundations, slabs, stairways, masonry walls, pipelines, manholes, latrines, conservancy tanks, septic tanks and the like, where the design and supervision of plain, reinforced and precast concrete are not necessarily under the direct control of appropriately qualified engineers and technologists and no special finishes to the concrete are required.

**MS 839:2013 QUICK FROZEN SHRIMPS OR PRAWNS-SPECIFICATION (6p) M**

This Malawi Standard provides requirements for quick frozen raw or partially or fully cooked shrimps or prawns peeled or unpeeled.

**MS 840:2011 ABOVE-GROUND STORAGE TANKS FOR PETROLEUM PRODUCTS.(58P) M**

This standard contains recommendations for the above-ground storage and handling of petroleum products at consumer installations with a total storage capacity not exceeding 200 m<sup>3</sup>

**MS 841:2011 D-IRON BRACKET AND INSULATOR ASSEMBLY - CHARACTERISTICS AND TEST METHOD (12p) M**

This Malawi standard specifies the requirements of D-iron bracket galvanized complete with bolt and nut with ceramic insulator assemblies for a,c overhead lines. Electrical, mechanical and dimensional characteristics are covered in this standard.

**MS 842:2011 AGGREGATES FROM NATURAL SOURCES - AGGREGATES FOR CONCRETE - REQUIREMENTS AND TEST METHODS (13p) M**

This standard specifies requirements and test methods for fine and coarse aggregates from natural sources for use in concrete.

**MS 843:2013 CODE OF PRACTICE FOR THE PREVENTION AND REDUCTION OF AFLATOXIN CONTAMINATION IN GROUNDNUTS (7P) M**

This Malawi Standard provides guidance for all interested parties producing and handling groundnuts for human consumption, and all other users feeding into the food chain .All groundnuts should be prepared and handled in accordance with MS 21, which is relevant for all

foods being prepared for human consumption. This code of practice indicates the measures that should be implemented by all persons that have the responsibility for assuring that food is safe and suitable for consumption, in order to prevent or reduce aflatoxin contamination in groundnuts.

**MS 844:2011 COAL MINING AND PROCESSING - HEALTH SAFETY, AND ENVIRONMENTAL PROTECTION – CODE OF PRACTICE (15 p)**

This Malawi Standard covers the requirements for the health and safety for the workers and the general public and the environmental protection in the mining and processing of coal.

**MS 845-2:2011 TRANSPORT OF DANGEROUS GOODS - EMERGENCY INFORMATION SYSTEMS**

**Part 2: Emergency information system for rail transport (15 p) M**

This part of MS 845 covers the rules and procedures that govern the implementation of an emergency information system for rail transportation of dangerous goods, in quantities that exceed the exempt quantity.

**MS 845-3:2011 TRANSPORT OF DANGEROUS GOODS - EMERGENCY INFORMATION SYSTEMS**

**Part 3: Emergency response guides (5p) M**

This part of MS 845 covers standard procedures of initial response, in the form of Emergency Response Guides (ERGs) that are to be followed by a first responder upon arrival at the scene of an incident that involves the transport of materials that are classified as dangerous goods in accordance with DMS 848. The ERGs are intended to be used by the first responder or by the emergency services until more detailed information on the properties of each material and its treatment becomes available. An ERG is compiled for a group of materials that share the same emergency response. ERGs facilitate the early assessment of the potential hazards and indicate the response that should be taken to mitigate the incident.

**MS 847:2011 TRANSPORT OF DANGEROUS GOODS OPERATIONAL REQUIREMENTS FOR ROAD VEHICLES (131 p) M**

This standard establishes rules and procedures for the safe operation and handling of all road vehicles that are used for the transport of dangerous goods in accordance with the load constraints. The procedures include requirements for the consignor, the consignee, the operator, the driver and the qualified person as well as en route procedures and cargo handling.

**MS 849:2011 TRANSPORT OF DANGEROUS GOODS- DESIGNED, CONSTRUCTION, TESTING APPROVAL AND MAINTENANCE OF ROAD VEHICLES AND PORTABLE TANKS (12p) M**

This standard covers requirements for the design, construction, testing, approval and maintenance of road vehicles of GVM equal to or above 3500 kg, and portable tanks used to transport dangerous goods as classified in MS 848 and as required by the relevant national legislation.

**MS 850:2011 CLASSIFICATION OF COALS (7P)**

This Malawi Standard describes a simple classification system for coals providing guidance on the selection of the appropriate standard procedures for the analyses and testing of coals, international comparison of coals in terms of some key characteristics, descriptive categorization of coals.

**MS 851:2011 COAL AND COKE, ANALYSIS AND TESTING – DETERMINATION OF TRACE ELEMENT - GUIDANCE TO THE DETERMINATION OF TRACE ELEMENTS (15p) V**

This standard compares methods used for the determination of trace elements in coal ash. The trace elements include: arsenic, beryllium, boron, cadmium, chlorine, chromium, cobalt, copper, fluorine, lead, manganese, mercury, nickel, selenium and zinc. Also included are vanadium and molybdenum.

**MS 852:2011 COAL AND COKE , ANALYSIS AND TESTING – DETERMINATION OF TRACE ELEMENTS- GUIDANCE TO THE DETERMINATION OF TRACE ELEMENTS-COAL COKE AND FLY – ASH-DETERMINATION OF ELEVEN TRACE ELEMENTS-FLAME ATOMIC ABSORPTION SPECTROMETRIC METHODS ( 18p) V**

This standard sets out a method for the preparation of the ash and a flame atomic absorption spectrometric method for the determination of barium, beryllium, chromium, copper, lead, lithium, manganese, nickel, strontium, vanadium and zinc ash prepared in the laboratory from higher rank coal, coke and fly-ash.

**MS 853:2011 COAL AND COKE –ANALYSIS AND TESTING –DETERMINATION OF TRACE ELEMENTS–DETERMINATION OF ARSENIC, ANTIMONG AND SELENIUM HYDDRIDE GENERATION METHODS (5p)**

This standard sets out a method for the determination of arsenic, antimony and selenium in higher rank coal and coke by hydride generation.

**MS 854:2011 COAL AND COKE-ANALYSIS AND TESTING - DETERMINATION OF TRACE ELEMENTS- DETERMINATION OF BORON CONTENT - ICP AES METHODS (5p) V**

This standard sets out a method for the determination of boron in higher rank coal and coke using an inductively-coupled plasma atomic emission spectrometer after ashing of the coal or coke in the presence of Eschka mixture.

**MS 855:2011 COAL AND COKE-ANALYSIS AND TESTING- HIGHER RANK COAL ASH AND COKE ASH MAJOR AND MINOR ELEMENTS – ACID DIGESTION/FLAME ATOMIC ABSORPTION SPECTROMETRIC METHOD. (12p) V**

This standard sets out methods for determination of silicon , aluminium, iron, calcium, magnesium, sodium, potassium, titanium and manganese in higher rank coal ash and coke ash by flame atomic absorption spectrometry after acid digestion.

**MS 856: 2011 HARD COAL - DETERMINATION OF CAKING POWER - ROGA TEST (5 p) V**

**MS 857:2011 This standard specifies a method of determining the caking power of hard coal by the Roga test. COAL - BURNING APPLIANCES (REDUCED SMOKE EMISSION TYPE) – REQUIREMENT AND TEST METHODS (13 p) V**

This specification covers the constructional and performance requirements for coal-burning appliances of three types that are free-standing and that operate with minimum smoke emission.

**MS 858:2011 WOOD CHARCOAL AND CHARCOAL BRIQUETTES FOR HOUSEHOLD USE - REQUIREMENTS AND TEST METHODS (13p) M**

This standard specifies requirements for charcoal and charcoal briquettes that is derived entirely from wood, in lump or briquette form, and that is intended for household use.

**MS 859:2011 MOISTURE CONTENT OF COAL SAMPLES INTENDED FOR GENERAL ANALYSIS (VACUUM WOVEN-COAL METHODS) (2 p) V**

This standard specifies the vacuum-oven method for the determination of the moisture content of coal samples intended for general analysis.

**MS 860:2011 MOISTURE CONTENT OF COAL SAMPLES INTENDED FOR GENERAL ANALYSIS (3 p) V**

This standard specifies a method for the determination of the moisture content of coal samples intended for general analysis.

**MS 861:2011: CARBON DIOXIDE CONTENT OF COAL (TITRIMETRIC METHOD) (4 p) V**

This standard specifies a volumetric method for the determination of the carbon dioxide content of coal.

**MS 862:2011 COKING PROPERTIES OF COAL (RUHR DILATOMETER TEST) (10p) V**

This standard specifies a method for the determination of the coking properties of coal by using the Ruhr dilatometer.

- MS 867:2011 YIELDS OF TAR, WATER, GAS AND COKE RESIDUE FROM COAL BY LOW TEMPERATURE DISTILLATION (6P)**
- This standard outlines the methods for determining the yields of tar, water, gas, and coke residues from coal by temperature distillation.
- MS 870:2011 COAL – DETERMINATION OF FORMS OF SULPHUR (14P) V**
- This standard specifies methods of determining the sulphate and pyritic sulphur contents of coals, including brown coals and lignites, and of calculating the amount of organic sulphur present.
- MS 871:2011 HARD COAL – DETERMINATION OF MOISTURE-HOLDING CAPACITY (8p) V**
- This standard specifies a method of determining the moisture-holding capacity of hard coals.
- MS 872:2011 HARD COAL – DETERMINATION OF THE CRUCIBLE SWELLING NUMBER (6 p) V**
- This Malawi standard specifies a method for determining the swelling properties of hard coal when heated in a covered crucible.
- MS 873:2011 HARD COAL - DETERMINATION OF TOTAL MOISTURE (6p) V**
- This Malawi standard describes two methods for determination of total moisture content of hard coals, a two-stage method and a single-stage method. For either method there is a choice between drying in a nitrogen atmosphere. Depending on the coal rank, there may be systematic differences between the results obtained by drying in the different atmospheres on subsamples of same sample. Drying in the nitrogen atmosphere is suitable for all hard coals, while drying in air is only suitable for hard coals not susceptible to oxidation.
- MS 874:2011 COAL – DETERMINATION OF PLASTIC PROPERTIES-CONSTANT-TORQUE - GIESELER PLASTOMETER METHOD (11p) V**
- This standard specifies a method for obtaining a relative measure of the plastic behaviour of coal when heated under prescribed conditions. The method may be used to obtain values of plastic properties of coals and blends used in carbonization and in other situations where determination of plastic behaviour of coals is of practical importance.
- MS 875:2011 BUILDING ENVIRONMENT DESIGN-INDOOR ENVIRONMENT – GENERAL PRINCIPLES (11p) M**
- This Malawi standard establishes the general principles of building environment design taking into account healthy indoor environment for the occupants, and protecting the environment for future generations. This Malawi Standard promotes an approach in which the various parties involved in building environmental design collaborate with one another to provide a sustainable building environment.
- MS 876:2011 BUILDING ENVIRONMENT DESIGN GUIDELINES TO ASSESS ENERGY EFFICIENCY OF NEW BUILDING (15P) V**
- This standard gives guidelines related to energy efficiency in buildings as introduced in MS 875
- MS 877:2011 ENERGY MANAGEMENT SYSTEMS REQUIREMENTS WITH GUIDANCE FOR USE (22p) V**
- This specifies requirements for establishing, maintaining and improving an energy management systems, whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy use and consumption.

**MS 878:2011 HARD COAL AND COKE - DETERMINATION OF VOLATILE MATTER (7 p) V**

This standard specifies a method of determining the volatile matter of hard coal and coke. It is not applicable to brown coals and lignites

**MS 879:2013 POTATOES - SPECIFICATION (4p) M**

This Malawi Standard defines the quality requirements for baby (early) and ware potatoes of varieties (cultivars) grown from *Solanum tuberosum* L. and its hybrids, to be supplied fresh to consumer .It excludes baby and ware potatoes for industrial processing

**MS 882:2012 SELF-BALLASTED LIGHT EMITTING DIODES LAMPS FOR GENERAL LIGHTING PURPOSES-PERFORMANCE REQUIREMENTS (8p)**

This Malawi standard specifies the performance requirements for self-ballasted Light Emitting Diodes (LED) lamps with a supply voltage up to 250 v, together with the test methods and conditions required, intended for domestic and similar general lighting purposes.

**MS 883:2012 SELF-BALLASTED LAMPS FOR GENERAL LIGHTING PURPOSES-SAFETY REQUIREMENTS (11p )**

This Malawi standard specifies the safety and interchangeability requirements together with the test methods and conditions required to show compliance of tubular fluorescent and other gas-discharged lamps with integrated means for controlling starting and stable operation ( self-ballasted lamps) intended for domestic and similar general lighting purpose.

**MS 884:2012 SELF – BALLASTED FLUORESCENT LAMPS FOR GENERAL PURPOSES-PERFORMANCE REQUIREMENTS (8P)**

This Malawi Standard specifies the performance requirements together with the test methods and conditions required to show compliance of tubular fluorescent and other gas-discharged lamps with integrated means for controlling starting and stable operation (self-ballasted lamps) intended for domestic and similar general lighting purposes.

**MS 886:2012 SELF – BALLASTED COMPACT FLUORESCENT LAMPS FOR GENERAL LIGHTING PURPOSES-SPECIFICATION (11p) M**

This Malawi standard provides requirements for compact fluorescent lamps for domestic and general lighting purposes and applies exclusively to self –ballasted compact fluorescent lamps (CFLs) with or without any cover, and without any reflector element. These lamps have an integrated means for controlling starting and stable operation and are intended for general lighting purposes: They have:

- Screw or bayonet caps,
- A rated power up to 60w, and
- A rated voltage of 230v.

**MS 887:2012 SELF - BALLASTED LIGHT EMITTING DIODE LAMPS FOR GENERAL LIGHTING PURPOSES – SAFETY SPECIFICATION. (25P) M**

This Malawi Standard specifies the test methods and conditions required for electronic self-ballasted, compact fluorescent lamps (CFLs), with integrated means for starting, controlling and stable operation.

**MS 888:2012 JATROPHA STRAIGHT VEGETABLE OIL - REQUIREMENTS AND TEST METHODS (9 p)**

This Malawi standard specifies requirements and test methods for marketed and delivered straight vegetable oil extracted from *jatropha carcus* to be used at an agreed and approved percentage either as diesel or illuminating paraffin blend.

**MS 889-1:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION V**

**Part 1: General introduction to rural electrification (5p)**

This series of documents intends to provide to different players involved in rural electrification projects (such as project developers implementers , installers, etc) documents for the setting up of renewable energy and hybrid systems with AC voltage below 500 V, DC voltage below 50 V and power below 50 kVA.

**MS 889-2:2011 RECOMMENDATION FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION (51P) V**

**Part 2: From requirements to a range of electrification systems.**

The scope of this part of MS 889 series is to propose a methodological approach for the setting up and carrying out of socio-economic studies as part of the framework of decentralized rural electrification projects. It is addressed to project teams and particular to experts in charge of socio-economic studies in international projects.

**MS 889-3:2011 RECOMMENDATION FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 3: Protect development and management (37p)**

This part of MS 889 provides information on the responsibilities involved in the implementation of rural power systems .In Clause 5, this technical specification presents contractual relationships to be built between the different participants to the project. Throughout the project, responsibilities are to be clearly defined and contractual commitments controlled. Clause 6 provides relevant tests to be applied to small renewable energy and hybrid electrification systems. Clause 7 provides proposed quality assurance principles to be implemented .In Clause 8, requirements are proposed for recycling and protection of environment. In Annex A of this technical specification, further technical considerations for contractual liabilities are provided.

**MS 889-4:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 4: Systems selection and design (56p)**

This part of MS 889 provides a method for describing the results to be achieved by the electrification system independently of the technical solutions that could be implemented.

**MS 889-5:2011 RECOMMENDATION FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION (25P) M**

**Part 5: Protection against electrical hazards.**

Decentralized Rural Electrification Systems (DRES) are designed to supply electric power for sites which are not connected to a large interconnected system, or a national grid, in order to meet basic needs.

**MS 889-7:2011 RECOMMENDATION FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION PART 7: GENERATORS (5p) V**

Part 7: The purpose of this part of MS 889 is to specify the general requirements for generators (maximum power=100 k V A) in decentralized rural electrification systems

**MS 889-7-1:2012 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 7-1: Generators-Photovoltaic arrays. (66p)**

This part of MS 889 specifies the general requirements for erection and operation of PV arrays in decentralized rural electrification systems.

**MS 889-8-1:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 8-1: selection of batteries and battery management systems for stand-alone electrification systems - specific case of automotive flooded lead-acid batteries available in developing countries (16 p)**

This specification proposes simple, cheap, comparative tests in order to discriminate easily, in a panel of flooded lead; acid batteries, the most acceptable model for PV individual Electrification Systems.

**MS 889-9-2:2011 RECOMMENDATION FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION PART 9-2 MICRO GRIDS (42p) M**

**Part 9-2: Microgrids**

The purpose of this part of MS 889-9 is to specify the general requirements for the design and the implementation of micro grids used in decentralized rural electrification to ensure the safety of persons and property and their satisfactory operation according to the scheduled use.

**MS 889-9-3:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 9-3: Integrated system - user Interface (7p)**

This part of IEC 62257 provides information on the responsibilities involved in the implementation of rural power systems. In Clause 5, this technical specification presents contractual relationships to be built between the different participants to a

project. Throughout the project, responsibilities are to be clearly defined and contractual commitments controlled.

**MS 889-9-4:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION. (14 P)**

**Part 9-4: Integrated systems – user installation.**

The purpose of this part of MS 889 is specify the general requirements for the design and the implementation of a user`s installation.

This part of MS 889-9 applies to single phase user`s electrical installations with maximum power of 500VA, in Decentralized Rural Electrification Systems (DRES)

**MS 889-9-5:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 9-5: Integrated system-Selected of portable PV lanterns for rural electrification projects (23p)**

This standard applies to portable solar lanterns (portable PV lantern). This specification is independent of the technology used to provide the light.

**MS 889-9-6:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 9-6: Integrated systems-selection of photovoltaic individual electrification systems (PV-IEC) (26P)**

This purpose of this part of MS 889 is to propose simple selection procedure and cheap, comparative tests which can be performed in laboratories of developing countries, in order to identify the most suitable model of small Photovoltaic Individual Electrification Systems (PV-IES) up to 500 Wp for a particular rural electrification project from a number of products submitted for test.

**MS 889-12-1:2011 RECOMMENDATIONS FOR SMALL RENEWABLE ENERGY AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION**

**Part 12-1: selection of self-ballasted lamps (CFL) for rural electrification systems and recommendations for household lighting equipment (11 p) V**

Decentralized Rural Electrification Systems (DRES) are designed to supply electric power to sites which are not connected to a large interconnected system, or a national grid.

**MS 891:2013 PAINTS AND VARNISHES – VISUAL COMPARISON OF THE COLOUR OF PAINTS (8P)**

This Malawi Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products.

**MS 892:2013 PAINTS AND VARNISHES –EXAMINATION AND PREPARATION OF TEST SAMPLES (4P)**

This Malawi Standard specifies both the procedure for preliminary examination of a single sample, as received for testing, and the procedure for preparing a test sample by blending and reduction of series of samples representative of a consignment or bulk of paint, varnishes or related product

**MS 893:2013 PAINTS AND VARNISHES-NATURAL WEATHERING OF COATINGS-EXPOSURE AND ASSESSMENT (9P)**

This Malawi Standard specifies the conditions which need to be taken into consideration in the selection of the type of natural weathering and the natural weathering procedure to be used to determine the resistance of coatings or coating systems (direct weathering or weathering behind window glass)

**MS 896:2013 GREEN TEA-DETERMINATION AND BASIC REQUIREMENTS (3p)**

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

**MS 897-2:2013 DETERMINATION OF SUBSTANCES CHARACTERISTICS OF GREEN AND BLACK TEA**

**Part 1: Content of total polyphenol in tea –colorimetric methods using folin - Ciocaltey reagent (19p)**



This Malawi Standard specifies a high-performance liquid chromatographic (HPLC) methods for the determination of the total catechin of tea from the summation of the individual catechins. It is applicable to both leaf and instant green tea, and with precision limitations to black tea (see Annex A)

**MS 912-1:2014 PLASTICS PIPING SYSTEMS FOR HOT AND COLD WATER INSTALLATIONS-POLYPROPYLENE (PP)**

**Part 1: General (9p)**

This part of MS 912 specifies the general aspects of polypropylene (PP) piping systems intended to be used for hot and cold water installations within buildings for the conveyance of water whether or not intended for human consumption ( domestic systems) and for heating systems, under design pressures and temperatures according to the class of application (see **Table 1**)

**MS 912-7:2014 PLASTICS PIPING SYSTEMS FOR HOT AND COLD WATER INSTALLATIONS-POLYPROPYLENE (PP)**

**Part 7: Guidance for the assessment of conformity (12 p)**

This Malawi Standard gives guidance for the assessment of conformity to be included in the manufacture`s quality plan as part of his quality system.

**MS 918:2013 SPICES AND CONDIMENTS –DETERMINATION OF MOISTURE CONTENT ENTRAINMENT METHOD (5p)**

This Malawi standard specifies an entrainment method for the determination of the moisture content of spices and condiments.

**MS 919:2013 SPICES AND CONDIMENTS-DETERMINATION OF ACID-INSOLUBLE ASH (4p)**

This Malawi Standard specifies a method for the determination of acid-insoluble ash in spices and condiments.

**MS 920:2013 SPICES, CONDIMENTS AND HERBS-DETERMINATION OF VOLATILE OIL CONTENT CHYDRODISTILLATION METHOD (9p)**

This Malawi Standard specifies a method for the determination of the volatile oil content of spices, condiments and herbs.

**MS 923:2014 PEPPER AND PEPPER OLEORESINS-DETERMINATION OF PIPERINE CONTENT, METHODS USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) (6p)**

This Malawi Standard specifies a method for the determination, by high-performance liquid chromatography, of the pipeline content of peppers (*Piper nigrum* Linnaeus) whole or powdered, as well as their extracts (oleoresins)

**MS 924-2:2014 CHILLIES AND CHILL OLEORESINS-DETERMINATION OF TOTAL CAPSAICINOID CONTENT**

**PART 2: METHOD USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) (6p)**

This Malawi Standard specifies a method for the determination, by high-performance liquid chromatography(HPLC) , of the total capsaicinoid content of whole or powdered chillies (usually

capsicum frutescens l) and their extracts (oleoresins). This content is calculated from the total of capsaicin, nordihydrocapsaicin and dihydrocapsaicin, expressed as nonyl acid vanillylamide, which is the chosen reference substance.

**MS 925:2014 GINGER AND GINGER OLEORESINS-DETERMINATION OF THE MAIN PUNGENT COMPONENTS (GINGEROLS AND SHOGAOLS) METHODS USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) (11p)**

This Malawi Standard describes a method for the determination of gingerols [6] – G, [8]- G and [10] – G and the corresponding shogaols [ 6] – S, [8]- S and [10] – S in dried ginger or in oleo-resins of ginger , by High-Performance Liquid Chromatography (HPLC) in the reverse phase.

**MS 937:2014 DEGERMED MAIZE (CORN) MEAL AND MAIZE (CORN) GROTS-SPECIFICATION (4p)**

This Malawi Standard applies to degermed maize (corn) meal and to degermed maize (corn) grits for direct human consumption milled from kernels of common maize, *Zea mays* L.

**MS 990:2014 LUBRICANTS, INDUSTRIAL OILS AND RELATED PRODUCTS (CLASS L) – FAMILY H (HYDRAULIC SYSTEMS) – SPECIFICATIONS FOR HYDRAULIC FLUIDS IN CATEGORIES HFAE, HFAS, HFC, HFDR AND HFDU (10 P)**

This standard specifies the minimum requirements of unused fire-resistant and less-flammable hydraulic fluids for hydrostatic and hydrodynamics systems in general industrial applications. It is not intended for use in aerospace or power-generation applications, where different requirements apply. It provides guidance for suppliers and end users of these less hazardous fluids and to the manufacturers of hydraulic equipment in which they are used.

**MS 986:2014 PETROLEUM PRODUCTS-FUELS (CLASS F) - GAS TURBINE FUELS FOR INDUSTRIAL AND MARINE APPLICATIONS-SPECIFICATION (16P)**

This Standard specifies the requirements for petroleum fuels for gas turbines (see ISO 3977) use in public utility, industrial, and marine applications. It does not cover requirements for gas turbine fuels for aviation use. This International Standard is intended for the guidance of users such as turbine manufacturers, suppliers, and purchasers of gas turbine fuels.

**MS 990:2014 LUBRICANTS, INDUSTRIAL OILS AND RELATED PRODUCTS (CLASS L) – FAMILY H (HYDRAULIC SYSTEMS) – SPECIFICATIONS FOR HYDRAULIC**

This Standard specifies the minimum requirements of unused fire-resistant and less-flammable hydraulic fluids for hydrostatic and hydrodynamic systems in general industrial applications. It is not intended for use in aerospace or power-generation application, where different requirements apply. It provides guidance for suppliers and end users of these less hazardous fluids and to the manufacturers of hydraulic equipment in which they are used.

**MS 991:2014 LUBRICANTS, INDUSTRIAL OILS AND RELATED PRODUCTS (CLASS L) – FAMILY X (GREASES) – SPECIFICATION (5p)**

This standard specifies the requirements of greases used for lubrication of equipment, components of machines, vehicles, etc. The purpose of this Standard is to provide guidance to suppliers and end users of greases and to equipment manufacturers of grease-lubricated equipment.

**MS 1068:2014 SPICES AND CONDIMENTS –BOTANICAL NOMENCLATURE (15p)**

This Malawi Standard gives a non-exhaustive list of botanical names and common names in English of plants or parts of plants used as spices or condiments.

**MS-ISO/TS 4949:2003 STEEL NAMES BASED ON LETTER SYMBOLS (8 p)**

This Technical Specification sets out rules for the designation of internationally standardized steel grades by means of symbolic letters and numbers to express application and principal characteristics (e.g. mechanical, physical, chemical) so as to provide an abbreviated identification of steel grades

**MS-ISO 5725: ACCURACY (TRUENESS AND PRECISION) OF MEASUREMENTS METHODS AND RESULTS: GENERAL PRINCIPLES AND DEFINITIONS. (17p)**

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) V**

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 PERFORMANCE IMPROVEMENTS (Second edition) (56 p) V**

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) V**

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.

**MS-ISO 10005:2005      QUALITY MANAGEMENT SYSTEMS – GUIDELINES FOR QUALITY PLANS (23p) V**

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.

**MS-ISO 10006:2006      QUALITY MANAGEMENT SYSTEMS – GUIDELINES FOR QUALITY MANAGEMENT IN PROJECTS (13p) V**

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.

**MS-ISO/TR 10013:2001 GUIDELINES FOR QUALITY MANAGEMENT SYSTEMS DOCUMENTATION (14 p) V**

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.

**MS-ISO 10015:1999 QUALITY MANAGEMENT – GUIDELINES FOR TRAINING (14 p) V**

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.

**MS-ISO 10144:2008 CERTIFICATION SCHEME FOR STEEL BARS AND WIRES FOR THE REINFORCEMENT OF CONCRETE STRUCTURES (5p) V**

This International Standard specifies rules for a certification scheme for continuous production of steel bars and wires for ordinary reinforcement of concrete structures in order to verify the conformity with requirements specified in product standards such as ISO 6935-2

**MS-ISO 10544:1992 COLD REDUCED STEEL WIRE FOR THE REINFORCEMENT OF CONCRETE AND THE MANUFACTURE OF WELDED FABRIC. ( p) M**

This International Standard specifies technical requirements for cold-reduced steel wire designed for the reinforcement of concrete or for use in welded fabric.

**MS-ISO 14001:2004 ENVIRONMENTAL MANAGEMENT SYSTEMS – SPECIFICATION WITH GUIDANCE FOR USE (23 p) V**

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) V**

This Malawi Standard provides guidance on the establishment, implementation, maintenance and improvement of an environmental management system and its coordination with other management systems.

**MS-ISO 14015:2001 ENVIRONMENTAL MANAGEMENT SYSTEMS – GENERAL GUIDELINES ON PRINCIPLES SYSTEM AND SUPPORT TECHNIQUES (19p) VG**

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.

**MS-ISO 14020:2000 ENVIRONMENTAL LABELS AND DECLARATIONS – GENERAL PRINCIPLES (5p) V**

***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.***

**MS 14024:2014 ENVIRONMENTAL LABELS AND DECLARATIONS –TYPE I ENVIRONMENTAL LABELLING-PRINCIPLES AND PROCEDURES (12P)**

***This International Standards establishes the principles and procedures for developing Type I environmental labelling programmes, including the selection of product categories, product environmental criteria and product function characteristics; and for assessing and demonstrating***

***compliance. This International Standard also establishes the certification procedures for awarding the label.***

**MS-ISO 14031:1999 ENVIRONMENTAL MANAGEMENT ENVIRONMENTAL PERFORMANCE EVALUATION – GUIDELINES (32p) V**

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.

**MS-ISO 14032:1999 ENVIRONMENTAL MANAGEMENT – EXAMPLES OF ENVIRONMENTAL PERFORMANCE EVALUATION (EPE) (92p) V**

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.

**MS-ISO 14040:1997 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT PRINCIPLES AND FRAMEWORK (12p) V**

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) V**

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) V**

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) V**

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 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT REQUIREMENT AND GUIDELINES ( 4 6p) V**

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.

**MS-ISO14048:2000 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE IMPACT ASSESSMENT – DATA DOCUMENTATION FORMAT (41 p) V**

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.

**MS-ISO 14050:2005 ENVIRONMENTAL MANAGEMENT VOCABULARY (29 p) V**

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) V**

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 15189:2007 MEDICAL LABORATORIES – PARTICULAR REQUIREMENTS FOR QUALITY AND COMPETENCE (39 p) V**

This International Standard specifies requirements for quality and competence particular to medical laboratories.

**MS-ISO/IEC 17021:2011 CONFORMITY ASSESSMENT.-. REQUIREMENTS FOR BODIES PROVIDING AUDIT AND CERTIFICATION OF MANAGEMENT SYSTEMS (44 p) V**

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.

**MS-ISO 17025:2005 GENERAL REQUIREMENTS FOR THE COMPETENCE OF TESTING AND CALIBRATION LABORATORIES (28p) V**

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 19011:2011 GUIDELINE FOR AUDITING MANAGEMENT SYSTEMS (49p) V**

This international standard provides guidance on auditing management systems, including the principles of auditing, managing an audit programme and conducting management system audits, as well as guidance on the evaluation of individuals involved in the audit process, including the person managing the audit programme, auditors and audit team.

It is applicable to all organizations that need to conduct internal or external audits of management systems or manage an audit programme.

The application of this international standard to other types of audits is possible, provided that special consideration is given to the specific competence needed.

**MS-ISO 21569:2005 FOODSTUFFS - METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – QUALITATIVE NUCLEIC ACID BASED METHODS (69p) V**

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.

**MS-ISO 21570:2005 FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – QUANTITATIVE NUCLEIC ACID BASED METHODS (103p) V**

This international standard provides the overall framework of quantitative methods 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.

**MS-ISO 21571:2005 FOODSTUFFS-METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – NUCLEIC ACID EXTRACTION (43p) V**

This International Standard provides general requirements and specific methods for DNA extraction/purification and quantification. This International Standard has been established for food matrices, but could also be applicable to other matrices, such as grains and feed.

**MS-ISO 21572:2004 FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – PROTEIN BASED METHODS (21p) V**

This standard provides general guidelines and performance criteria for methods for the detection and/or quantification of special proteins derived from genetically modified (GM) plant material in a specified matrix.

**MS-ISO 22000:2005 FOOD SAFETY MANAGEMENT SYSTEMS – GENERAL GUIDELINES ON PRINCIPLES SYSTEM AND SUPPORT TECHNIQUES (19p) V**



The Malawi 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 22002-1:2009 PREREQUISITES PROGRAMMES ON FOOD SAFETY**

### **Part 1: Food manufacturing (19p) V**

This Technical Specification specifies requirements for establishing, implementing and maintain prerequisite programmes (PRP) to assist in controlling food safety hazards.

## **MS-ISO 22002-3:2013 PREREQUISITE PROGRAMMES ON FOOD SAFETY**

### **Part 3: Farming (22 p) V**

This part of ISO 22002 specifies requirements and guidelines for the design, implementation, and documentation of prerequisite programmes (PRPS) that maintain a hygienic environment and assist in controlling food safety hazard in food chain.

## **MS-ISO 22002-4:2014 PREREQUISITE PROGRAMMES ON FOOD SAFETY**

### **Part 4: Food packaging manufacturing (17 p) V**

This Technical Specification specifies requirements for the establishing, implementing and maintaining prerequisite programmes (PRPs) to assist in controlling food safety hazards in the manufacture food packaging.

## **MS-ISO 22003:2014 FOOD SAFETY MANAGEMENT SYSTEMS- REQUIREMENTS FOR BODIES PROVIDING AUDIT AND CERTIFICATION OF FOOD SAFETY MANAGEMENT SYSTEMS (16p) V**

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) V**

This Technical Specification provides generic guidance that can be applied in the use of ISO 22000.

## **MS-ISO 24276:2005 FOODSTUFF – METHODS OF ANALYSIS FOR THE DETECTION OF GENETICALLY MODIFIED ORGANISMS AND DERIVED PRODUCTS – GENERAL REQUIREMENTS AND DEFINITION (16p) V**

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.

**MS-ISO 26000:2011 GUIDANCE ON SOCIAL RESPONSIBILITY (106 p) V**

This International Standard provides guidance to all types of organizations, regardless of their size or location

**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**

**MS-IEC60050-826 INTERNATIONAL ELECTROTECHNICAL VOCABULARY – CHAPTER 826: ELECTRICAL INSTALLATION (2<sup>nd</sup> edition, 117p)**

**MS-IEC60050-851:1991 INTERNATIONAL ELECTROTECHNICAL VOCABULARY – CHAPTER 851: ELECTRIC WELDING (1<sup>st</sup> 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

<b>MS-IEC 60061-DB-2:2006</b>	<b>LAMP CAPS AND HOLDERS TOGETHER WITH GAUGES FOR THE CONTROL OF INTERCHANGEABILITY AND SAFETY - PART 2: LAMP HOLDERS (M)</b>
<b>MS-IEC 60061-DB-3:2006</b>	<b>LAMP CAPS AND HOLDERS TOGETHER WITH GAUGES FOR THE CONTROL OF INTERCHANGEABILITY AND SAFETY – PART 3: GAUGES (M)</b>
<b>MS-IEC 60064:2005</b>	<b>TUNGSTEN FILAMENT LAMPS FOR DOMESTIC AND SIMILAR GENERAL LIGHTING PURPOSES - PERFORMANCE REQUIREMENTS (M)</b>  Applies to tungsten filament incandescent lamps for general lighting services (GLS) which comply with the safety requirements in IEC 60432-1.1
<b>MS-IEC 60076-SER-1:2000</b>	<b>POWER TRANSFORMERS – PART 1: GENERAL (2<sup>nd</sup> edition, 87p)(M)</b>  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: <ul style="list-style-type: none"> <li>- Single-phase transformers with rated power less than 1 kVA and three-phase transformers less than 5 kVA.;</li> <li>- Instrument transformers;</li> <li>- Transformers for static convertors;</li> <li>- Traction transformers mounted on rolling rocks;</li> <li>- Starting transformers;</li> <li>- Testing transformers;</li> <li>- Welding transformers.</li> </ul>
<b>MS-IEC 60076-SER-4:2002</b>	<b>POWER TRANSFORMERS - PART 4: GUIDE TO THE LIGHTNING IMPULSE AND SWITCHING IMPULSE TESTING – POWER TRANSFORMERS AND REACTORS (1<sup>st</sup> edition, 123p)(M)</b>  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.
<b>MS-IEC 60076-SER-5:2000</b>	<b>POWER TRANSFORMERS - PART 5: ABILITY TO WITHSTAND SHORT CIRCUIT (M)</b>  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
<b>MS-IEC 60076-SER-11</b>	<b>POWER TRANSFORMERS – PART 11: DRY – TYPE TRANSFORMERS (M)</b>  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.
<b>MS-IEC 60083:2006</b>	<b>PLUGS AND SOCKET – OUTLETS FOR DOMESTIC AND SIMILAR GENERAL USE STANDARDIZED IN MEMBER COUNTRIES OF IEC (M)</b>  The object of this technical report is to give general information about the systems of plugs and socket-outlets for households 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.

<b>MS-IEC 60086-1:2000</b>	<b>PRIMARY BATTERIES – PART 1: GENERAL</b>  Standardizes primary batteries based on standardized electro-chemical systems, it specifies the physical dimensions, the discharge test conditions, and the discharge performance requirements.
<b>MS-IEC 60086-2:2001</b>	<b>PRIMARY BATTERIES - PART 2: PHYSICAL AND ELECTRICAL SPECIFICATIONS (M)</b>  Applicable to primary batteries based on standardized electro-chemical systems, it specifies the physical dimensions. The discharge test conditions, and the discharge performance requirements.
<b>MS-IEC 60086-3:1995</b>	<b>PRIMARY BATTERIES – PART 3: WATCH BATTERIES (M)</b>  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
<b>MS-IEC 60086-4:2000</b>	<b>PRIMARY BATTERIES – PART 4: SAFETY OF LITHIUM BATTERIES (M)</b>  Specifies tests and requirements for primary lithium batteries to ensure their safe operation under intended use or reasonably foreseeable misuse.
<b>MS-IEC 60086-5:2005</b>	<b>PRIMARY BATTERIES – PART 5: SAFETY OF BATTERIES WITH AQUEOUS ELECTROLYTE (M)</b>  Specifies tests and requirements for primary batteries with aqueous electrolyte to ensure their safe operation under normal use and reasonably foreseeable misuse.
<b>MS-IEC 60095-1:2000</b>	<b>LEAD-ACID STARTER BATTERIES – PART 1: GENERAL REQUIREMENTS AND METHODS OF TEST (M)</b>  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 batteries are commonly called "starter batteries"
<b>MS-IEC 60095-2:1984</b>	<b>LEAD-ACID STARTER BATTERIES – PART 2: DIMENSIONS OF BATTERIES AND DIMENSIONS AND MARKING OF TERMINAL (M)</b>  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: <ul style="list-style-type: none"><li>– the main dimensions of starter batteries of four standard series;</li><li>– the location of the positive and negative terminals with respect to</li><li>– the fastening system;</li><li>– the dimensions of tapered terminal of starter batteries;</li><li>– the making of the polarity.</li></ul>

<b>MS-IEC 60095-4:1989</b>	<b>LEAD-ACID STARTER BATTERIES – PART 4: DIMENSIONS OF BATTERIES FOR HEAVY TRUCKS (M)</b>  Applies to lead-acid batteries for starting, lighting and igniting of heavy trucks.
<b>MS-IEC 60096-0-1:2000</b>	<b>RADIO-FREQUENCY CABLES. PART 0-1: GUIDE TO THE DESIGN OF DETAIL SPECIFICATION – COAXIAL CABLES (M)</b>  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)
<b>MS-IEC 60096-1:1986</b>	<b>RADIO-FREQUENCY CABLES. PART 1: GENERAL REQUIREMENTS AND MEASURING METHODS (M)</b>  Relates to flexible or semi-flexible radio-frequency 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 or 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.
<b>MS-IEC 60096-2:1961</b>	<b>RADIO-FREQUENCY CABLES. PART 2: RELEVANT CABLE SPECIFICATIONS (CONSOLIDATED EDITION) (M)</b>  Consolidated reprint consisting of IEC 60096-2 (1961) and supplements 60096-2A (1965), 60096-2B (1966), 60096-2C (1976) and 60096D (1986)
<b>MS-IEC 60096-3:1982</b>	<b>RADIO-FREQUENCY CABLES. PART 3: GENERAL REQUIREMENTS AND TESTS FOR SINGLE-UNIT COAXIAL CABLES FOR USE IN CABLED DISTRIBUTION SYSTEMS (M)</b>  Specifies the general requirements and tests applicable to single-unit coaxial cables for use in cabled distribution systems.
<b>MS-IEC 60096-4-1:1990</b>	<b>RADIO-FREQUENCY CABLES. PART 4: SPECIFICATION FOR SUPERSCREENED CABLES – SECTION ONE: GENERAL REQUIREMENTS AND TEST METHODS (M)</b>  Covers the requirements of superscreened cables and is divided into two sections. This section (Section 1) specifies general requirements and test methods.
<b>MS-IEC 60155:1993</b>	<b>GLOW-STARTERS FOR FLUORESCENT LAMPS (M)</b>  Specifies interchangeable starters used with pre-heat tubular fluorescent lamps and should be used in conjunction with corresponding publications for fluorescent lamps and their ballasts.
<b>MS-IEC 60167:1964</b>	<b>METHOD OF TEST FOR THE DETERMINATION OF THE INSULATION RESISTANCE OF SOLID INSULATING MATERIAL (1<sup>st</sup> edition, 21p) V</b>  These test methods cover procedures for the determination of insulation resistance without discrimination between the volume and surface resistances involved. Because the test specimens 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.

<b>MS-IEC 60173:1964</b>	<p><b>COLOURS OF THE CORES OF FLEXIBLE CABLES AND CORDS (M)</b></p> <p>Lays down a standard colour identification for the earthing core in flexible cables and cords with not more than five cores.</p>
<b>MS-IEC 60189-1:1989</b>	<p><b>LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH. PART 1: GENERAL TEST AND MEASURING METHODS (2<sup>nd</sup> edition, 33p)</b></p> <p>This standard specifies mechanical 0.00, 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.</p>
<b>MS-IEC 60189-2:1989</b>	<p><b>LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH. PART 2: CABLES IN PAIRS, TRIPLES, QUADS AND QUINTUPLES FOR INSIDE INSTALLATIONS (M)</b></p> <p>Deals with cables construction and dimensions, mechanical requirements, thermal stability and electrical requirements.</p>
<b>MS-IEC 60215:1987</b>	<p><b>SAFETY REQUIREMENTS FOR RADIO TRANSMITTING EQUIPMENT (M)</b></p> <p>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 of 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.</p>
<b>MS-IEC 60227-1:1998</b>	<p><b>POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 1: GENERAL REQUIREMENTS (M)</b></p> <p>Specifies marking, core identification and general requirements for the construction of cables. Appendix describes code designation of cables.</p>
<b>MS-IEC 60227-3:1997</b>	<p><b>POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V– PART 3: NON-SHEATHED CABLES FOR FIXED WIRING (M)</b></p> <p>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)</p>
<b>MS-IEC 60227-4:1997</b>	<p><b>POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 4: SHEATHED CABLES FOR FIXED WIRING (M)</b></p> <p>Details the particular specification for light polyvinyl chloride sheathed cables of rated voltage of 300/500 V</p>
<b>MS-IEC 60227-5:1998</b>	<p><b>POLYVINYL CHLORIDE INSULATED CABLES OF RATED VOLTAGES UP TO AND INCLUDING 450/750 V– PART 5: FLEXIBLE CABLES (CORDS) (M)</b></p> <p>Details the particular specifications for polyvinyl chloride insulated flexible cables</p>

(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<sup>2</sup> to 2 000 mm<sup>2</sup>, 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  $k_t$  for conductor resistance to correct the measured resistance at 1 °C to 20 °C. 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 unusually 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 (2<sup>nd</sup> 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.

<b>MS-IEC 60245-1:2003</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 1: GENERAL REQUIREMENTS (4<sup>th</sup> edition, 49p)(M)</b>  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.
<b>MS-IEC 60245-2:</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V – PART 2: TEST METHODS (M)</b>  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.
<b>MS-IEC 60245-3:1994</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 3: HEART RESISTANT SILICONE INSULATED CABLES (M)</b>  Details the particular specifications for silicone rubber insulated cables of rated voltage of 300/500 V.
<b>MS-IEC 60245-4:2004</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 4: CORDS AND FLEXIBLE CABLES (M)</b>  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.
<b>MS-IEC 60245-5:1994</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 5: LIFT CABLES (2<sup>nd</sup> edition, 17p)(M)</b>
<b>MS-IEC 60245-6:1994</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 6: ARC WELDING ELECTRODE CABLES (M)</b>  Details the particular specifications for rubber insulated lift arc welding electrode cables.
<b>MS-IEC 60245-8:2004</b>	<b>RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V - PART 8: CORDS FOR APPLICATIONS REQUIRING HIGH FLEXIBILITY (M)</b>  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.
<b>MS-IEC 60254-1:1997</b>	<b>LEAD-ACID TRACTION BATTERIES – PART 1: GENERAL REQUIREMENTS AND METHODS OF TESTS (M)</b>  Is applicable to lead-acid traction batteries used as power sources for electric propulsion.
<b>MS-IEC 60254-2:2000</b>	<b>LEAD-ACID TRACTION BATTERIES – PART 2: DIMENSIONS OF CELLS AND TERMINAL AND MARKING OF POLARITY ON CELLS (M)</b>  Defines 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.



<b>MS-IEC 60269-1:1998</b>	<p><b>LOW-VOLTAGE FUSES – PART 1: GENERAL REQUIREMENTS (M)</b></p> <p>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).</p>
<b>MS-IEC 60269-2:1986</b>	<p><b>LOW-VOLTAGE FUSES – PART 2: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY AUTHORIZED PERSONS (FUSES MAINLY FOR INDUSTRIAL APPLICATIONS) (M)</b></p> <p>The following characteristics of fuses are specified in addition to IEC Publication 269-1:</p> <ul style="list-style-type: none"> <li>– Minimum rated breaking capacities;</li> <li>– Time-current characteristics;</li> <li>– 12t characteristics;</li> <li>– Standard conditions of constructions;</li> <li>– Power dissipation and acceptance</li> </ul>
<b>MS-IEC 60269-2-1:2004</b>	<p><b>LOW VOLTAGE FUSES – PART 2-1: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY AUTHORIZED PERSONS (FUSES MAINLY FOR INDUSTRIAL APPLICATIONS) – SECTION I TO V : EXAMPLES OF TYPES OF STANDARDIZED FUSES (M)</b></p> <p>This standard is divided into five sections, each dealing with a specific example of standardized fuse for use by authorized persons:</p> <ul style="list-style-type: none"> <li>– Section I: Fuses with fuse-links with blade contacts.</li> <li>– Section II: Fuses with fuse-links with bolted connections.</li> <li>– Section III: Fuses with fuse-links having cylindrical contact caps.</li> <li>– Section IV: Fuses with fuse-links with offset blade contacts.</li> <li>– Section V: Fuses with fuse-links having “gD” and “gN” characteristics.</li> </ul>
<b>MS-IEC 60269-3:2003</b>	<p><b>LOW-VOLTAGE FUSES – PART 3: SUPPLEMENTARY REQUIREMENTS FOR FUSES FOR USE BY UNSKILLED PERSONS (FUSES MAINLY FOR HOUSEHOLD AND SIMILAR APPLICATIONS) (M)</b></p> <p>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)</p>
<b>MS-IEC 60269-3-1:1999</b>	<p><b>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</b></p> <p>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.</p>
<b>MS-IEC 60287-1-1:2001</b>	<p><b>ELECTRIC CABLES – CALCULATION OF THE CURRENT RATING – ART 1-1: CURRENT RATING EQUATIONS (100% LOAD FACTOR) AND CALCULATION OF LOSSES - GENERAL (1<sup>st</sup> edition, 67p)</b></p> <p>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</p>

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.

**MS-IEC 60287-2-1:2001 ELECTRIC CABLES – CALCULATION OF THE CURRENT RATING – PART 2-1: THERMAL RESISTANCE – CALCULATION OF THERMAL RESISTANCE (2<sup>nd</sup> 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.

**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.

**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.

<b>MS-IEC 60335-2-15:2005</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2-15: PARTICULAR REQUIREMENTS FOR APPLIANCES FOR HEATING LIQUIDS (M)</b>  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.
<b>MS-IEC 60335-2-21:2004</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2-21: PARTICULAR REQUIREMENTS FOR STORAGE WATER HEATERS (M)</b>  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.
<b>MS-IEC 60335-2-29:2004</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY– PART 2-29: PARTICULAR REQUIREMENTS FOR BATTERY CHARGERS (M)</b>  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.
<b>MS-IEC 60335-2-3:2005</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2-3: PARTICULAR REQUIREMENTS FOR ELECTRIC IRONS (M)</b>  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.
<b>MS-IEC 60335-2-39:2004</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY - PART 2-39: PARTICULAR REQUIREMENTS FOR COMMERCIAL ELECTRIC MULTI-PURPOSE COOKING PANS (M)</b>  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.
<b>MS-IEC 60335-2-45:2002</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY - PART 2-45: PARTICULAR REQUIREMENTS FOR PORTABLE HEATING TOOLS AND SIMILAR APPLIANCES (M)</b>  Deals with the safety of portable electric heating tools and similar appliances, their rated voltage being not more than 250 V.
<b>MS-IEC 60335-2-47:2002</b>	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY - PART 2-47: PARTICULAR REQUIREMENTS FOR COMMERCIAL ELECTRIC BOILING PANS (M)</b>  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	<b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY - PART 2-59: PARTICULAR REQUIREMENTS FOR INSECT KILLERS (M)</b>
MS-IEC 60335-2-71:2002	<p>Applies to electric insect killers for household and similar purposes. It does not apply to appliances emitting vaporized chemicals, appliances emitting ultrasonic waves, or appliances used in corrosive or explosive atmospheres.</p> <b>HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY - PART 2-71: PARTICULAR REQUIREMENTS FOR ELECTRICAL HEATING APPLIANCES FOR BREEDING AND REARING ANIMALS (M)</b> <p>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.</p>
MS-IEC 60357:2002	<b>TUNGSTEN HALOGEN LAMPS (NON VEHICLE) (M)</b> <p>This standard specifies dimensions and characteristics of tungsten halogen lamps.</p>
MS-IEC 60364-4-41:2005	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 4-41: PROTECTION FOR SAFETY - PROTECTION FOR SAFETY – PROTECTION AGAINST ELECTRIC SHOCK (M)</b> <p>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.</p>
MS-IEC 60364-4-42:2001	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 4-42: PROTECTION FOR SAFETY – PROTECTION AGAINST THERMAL EFFECTS (M)</b> <p>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:</p> <ul style="list-style-type: none"> <li>• Combustion or degradation of materials;</li> <li>• Risk of burns;</li> <li>• Impairment of the safe function of installed equipment.</li> </ul>
MS-IEC 60364-4-43:2001	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 4-43: PROTECTION FOR SAFETY – PROTECTION AGAINST OVERCURRENT (M)</b> <p>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.</p>
MS-IEC 60364-5-51:2005	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 5-51: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT – COMMON RULES (M)</b> <p>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.</p>

<b>MS-IEC 60364-5-52:2001</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 5-52: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT – WIRING SYSTEMS (M)</b> <p>Part 5-52 of IEC 60364 deals with the selection and selection and erection of wiring systems</p>
<b>MS-IEC 60364-5-53:2002</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS – PART 5-53: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT – ISOLATION, SWITCHING AND CONTROL (M)</b> <p>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.</p>
<b>MS-IEC 60364-5-54:2002</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-54: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - EARTHING ARRANGEMENTS, PROTECTIVE CONDUCTORS AND PROTECTIVE BONDING CONDUCTORS (M)</b>
<b>MS-IEC 60364-5-55:2002</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 5-55: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT - OTHER EQUIPMENT (M)</b> <p>Covers requirements for low voltage generating sets. Particular requirements for supplies for safety services are given in clause 556 while clause 559 applies to the selection and erection of luminaires and lighting installations intended to be part of the fixed installation.</p> <p>Electrical standby supply systems, other than for safety services, are outside the scope of this standard.</p>
<b>MS-IEC 60364-6-61:2006</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 6-61: VERIFICATION – INITIAL (M)</b> <p>It provides requirements for initial and periodic verification of an electrical installation.</p> <p>Clause 61 provides requirements for initial verification by inspection and testing, of 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 existing installations.</p> <p>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.</p>
<b>MS-IEC 60364-7-705:1984</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS. PART 7: REQUIREMENTS FOR SPECIAL INSTALLATIONS OR LOCATIONS. SECTION 705: ELECTRICAL INSTALLATIONS OF AGRICULTURAL AND HORTICULTURAL PREMISES (M)</b> <p>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, piggeries, feed-processing locations, lefts and storages for hay, straw and fertilizers)</p>
<b>MS-IEC 60364-7-714:1996</b>	<b>ELECTRICAL INSTALLATIONS OF BUILDINGS - PART 7: REQUIREMENTS FOR SPECIAL INSTALLATIONS OR LOCATIONS - SECTION 714: EXTERNAL LIGHTING INSTALLATIONS (M)</b> <p>This section of IEC 364-7 deals with external lighting installations.</p> <p>The requirements apply particularly to:</p>

- 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 to:

- 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

**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.

**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.

<b>MS-IEC 60598-1:2003</b>	<p><b>LUMINAIRES - PART 1: GENERAL REQUIREMENTS AND TESTS (M)</b></p> <p>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).</p>
<b>MS-IEC 60598-2-3:2000</b>	<p><b>LUMINAIRES - PART 2-3: PARTICULAR REQUIREMENTS - LUMINAIRES FOR ROAD AND STREET LIGHTING (M)</b></p> <p>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.</p>
<b>MS-IEC 60598-2-5:1992</b>	<p><b>LUMINAIRES - PART 2-5: PARTICULAR REQUIREMENTS - FLOOD LIGHTS (M)</b></p> <p>Specifies requirements for floodlights for use with tungsten filament, tubular fluorescent and other discharge lamps on supply voltages not exceeding 1 000 V.</p>
<b>MS-IEC 60614-2-1:1993</b>	<p><b>SPECIFICATION FOR CONDUITS FOR ELECTRICAL INSTALLATIONS. PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS. SECTION ONE: METAL CONDUITS (M)</b></p> <p>This clause of Part 1 is applicable except as follows:</p> <p><i>Addition:</i></p> <p>This standard specifies requirements for threadable and non-threadable plain rigid metal conduits.</p>
<b>MS-IEC 60614-2-2:1980</b>	<p><b>SPECIFICATION FOR CONDUITS FOR ELECTRICAL INSTALLATIONS. PART 2: PARTICULAR SPECIFICATIONS FOR RIGID PLAIN CONDUITS OF INSULATING MATERIALS (M)</b></p> <p>This clause of Part 1 is applicable except as follows:</p> <p><i>Addition:</i></p> <p>This standard specifies requirements for rigid non-flame propagating plain conduits of insulating materials</p>
<b>MS-IEC 60614-2-5:1992</b>	<p><b>SPECIFICATIONS FOR CONDUITS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS - SECTION 5: FLEXIBLE CONDUITS (M)</b></p> <p>This clause of part 1 is applicable except as follows:</p> <p><i>Addition:</i></p> <p>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.</p>
<b>MS-IEC 60614-2-6:1992</b>	<p><b>SPECIFICATIONS FOR CONDUITS FOR ELECTRICAL INSTALLATIONS - PART 2: PARTICULAR SPECIFICATIONS FOR CONDUITS - SECTION 6: PLIABLE CONDUITS OF METAL OR COMPOSITE MATERIALS (M)</b></p> <p>This clause of Part 1 is applicable except as follows:</p> <p><i>Addition:</i></p> <p>This standard specifies requirements for pliable conduits of metal or composite materials</p>



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 batteries 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 so far 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      BALLASTS FOR TUBULAR FLUORESCENT LAMPS - PERFORMANCE REQUIREMENTS (M)**

This standard specifies performance requirements for 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 - BALLASTS FOR DISCHARGE LAMPS (EXCLUDING TUBULAR FLUORESCENT LAMPS) - PERFORMANCE REQUIREMENTS (M)**

Specifies performance requirements for ballasts for discharge lamps such as high pressure mercury vapour, low-pressure sodium vapour, and 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 BALLASTS 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 pulses 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 for underwater 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.

**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.

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.

**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.

<b>MS-IEC 61140:2004</b>	<p><b>PROTECTION AGAINST ELECTRIC SHOCK-COMMON ASPECTS FOR INSTALLATION AND EQUIPMENT (M)</b></p> <p>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.</p> <p>This standard has been prepared for installations system and equipment without a voltage limit.</p> <p>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 standard.</p>
<b>MS-IEC 61156-1:2004</b>	<p><b>MULTICORE AND SYMMETRICAL PAIR/QUAD CABLE FOR DIGITAL COMMUNICATIONS PART 1 – GENERIC SPECIFICATION (M)</b></p> <p>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</p>
<b>MS-IEC 61156-1-1:2001</b>	<p><b>MULTICORE AND SYMMETRICAL PAIR/QUAD CABLE FOR DIGITAL COMMUNICATIONS – PART 1-1: CAPABILITY APPROVAL – GENERIC SPECIFICATION (M)</b></p> <p>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.</p> <p>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.</p>
<b>MS-IEC 61173:1992</b>	<p><b>OVER VOLTAGE PROTECTION FOR PHOTOVOLTAIC (PV) POWER GENERATING (M)</b></p> <p>Gives guidance on the protection of overvoltage issues for both stand-alone and grid-connected photovoltaic power generating systems.</p>
<b>MS-IEC 61194:1992</b>	<p><b>CHARACTERISTIC PARAMETERS OF STAND-ALONE PHOTOVOLTAIC (PV) SYSTEMS (M)</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>– Measurement of short-and long-term on-site photovoltaic system performance;</li> <li>– Comparison between on-site measured and projected performance, both extrapolated to standard test conditions (STC)</li> </ul>



MS-IEC 61215:2005	<b>CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES DESIGN QUALIFICATION AND TYPE APPROVAL (M)</b>
	<p>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.</p> <p>This standard does not apply to modules used with concentrated sunlight.</p>
MS-IEC 61293 :1994	<b>MARKING OF ELECTRICAL EQUIPMENT WITH RATINGS RELATED TO ELECTRICAL SUPPLY - SAFETY REQUIREMENTS (M)</b>
	<p>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.</p>
MS-IEC 61364	<b>NOMENCLATURE OF HYDROELECTRIC POWERPLANT MACHINERY</b>
	<p>This technical report provides a basic nomenclature for hydraulic machinery used in hydroelectric power stations and defines their components.</p> <p>The object of the report is to:</p> <ul style="list-style-type: none"> <li>- Standardise the names of components by giving a preferred name where more than one exist</li> <li>- Define components diagrammatically to facilitate their identification;</li> <li>- Aid in translation of component names from one language to another.</li> </ul>
MS-IEC 61386-1:1996	<b>CONDUIT SYSTEMS FOR ELECTRICAL INSTALLATIONS - PART 1; GENERAL REQUIREMENTS (M)</b>
	<p>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.</p>
MS-IEC 61394:1997	<b>OVERHEAD LINES - CHARACTERISTICS OF GREASES FOR ALUMINIUM, ALUMINIUM ALLOY AND STEEL BARE CONDUCTORS (M)</b>
	<p>This technical report applies to products designed for corrosion protection of bare electrical overhead conductors in any combination of</p> <ul style="list-style-type: none"> <li>- Wires of aluminium and aluminium alloy;</li> <li>- Wires of steel coated with zinc (galvanized) and zinc alloy with aluminium;</li> <li>- Wires of steel coated with aluminium.</li> </ul>
MS-IEC 61400-SER-1:2005	<b>WIND TURBINE GENERATOR SYSTEMS - PART 1: SAFETY REQUIREMENTS (M)</b>
	<p>Deals with safety aspects, quality assurance and engineering integrity, and specifies safety requirements for design, installation and operation of wind turbine generator systems.</p>

<b>MS-IEC 61400-SER-2:2006</b>	<p><b>WIND TURBINE GENERATOR SYSTEMS - PART 2: SAFETY OF SMALL WIND TURBINES (M)</b></p> <p>Deals with safety philosophy, quality assurance, engineering integrity and specifies requirements for the safety of wind turbines having a swept area smaller than 40m<sup>2</sup> and generating at a voltage below 1000v a.c. or 1500v d.c</p>
<b>MS-IEC 61400-SER-12-1:2005</b>	<p><b>WIND TURBINE GENERATOR SYSTEMS - PART 12-1: WIND TURBINE POWER PERFORMANCE TESTING (M)</b></p> <p>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.</p>
<b>MS-IEC 61400-SER-23:2001</b>	<p><b>WIND TURBINE GENERATOR SYSTEMS - PART 23: FULL SCALE STRUCTURAL TESTING OF ROTOR BLADES (M)</b></p> <p>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.</p> <p>The following tests are considered in this technical specification:</p> <ul style="list-style-type: none"> <li>– Static strength test;</li> <li>– Fatigue tests;</li> <li>– Other tests determining blade properties.</li> </ul>
<b>MS-IEC 61427:1995</b>	<p><b>SECONDARY CELLS AND BATTERIES FOR PHOTOVOLTAIC ENERGY SYSTEMS (PVES) - GENERAL REQUIREMENTS AND METHODS OF TEST (M)</b></p> <p>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.</p> <p>This international standard does not include specific information relating to battery assizing, method of change of PVES design.</p>
<b>MS-IEC 61429:1995</b>	<p><b>MARKING OF SECONDARY CELLS AND BATTERIES WITH THE INTERNATIONAL RECYCLING SYMBOL ISO 7000-1135 (M)</b></p> <p>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).</p> <p>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.</p> <p>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.</p>

MS-IEC 61479:2002	<b>LIVE WORKING - FLEXIBLE CONDUCTOR COVERS (LINE HOSES) OF INSULATING MATERIAL (M)</b>
	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	<b>SAFETY OF POWER TRANSFORMERS, POWER SUPPLIES, REACTORS AND SIMILAR PRODUCTS - PART 1: GENERAL REQUIREMENTS AND TESTS (M)</b>
	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	<b>OVERHEAD ELECTRICAL CONDUCTORS - CALCULATION FOR STRANDES BARE CONDUCTORS (First edition 85p)(M)</b>
	Provides information with regards to conductors specified in IEC 61089. Such information includes 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
MS-IEC 61663-2:2001	<b>LIGHTING PROTECTION - TELECOMMUNICATION LINES - PART 2: LINES USING METALLIC CONDUCTORS (M)</b>
	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:
	<ul style="list-style-type: none"> <li>• Telecommunication lines connecting a switch with a network termination (NTI)</li> <li>• Telecommunication or signal lines connecting equipment located in different buildings, e.g. ISDN lines or signal lines between computers.</li> </ul>
	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.

<b>MS-IEC 61672-1:2001</b>	<p><b>ELECTROACOUSTICS - SOUND LEVEL METERS - PART 1: SPECIFICATIONS (M)</b></p> <p>This standard gives electro-acoustical performance specifications for three kinds of sound measuring instruments:</p> <ul style="list-style-type: none"> <li>– A conventional sound level meter that measures exponential time-weighted sound level;</li> <li>– An integrating-averaging sound level meter that measures time-average sound level; and</li> <li>– An integrating sound level meter that measures sound exposure level.</li> </ul>
<b>MS-IEC 61672-2</b>	<p><b>ELECT ACOUSTICS - SOUND LEVEL METERS - PART 2: PATTERN EVALUATION TESTS (M)</b></p> <p>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.</p>
<b>MS-IEC 61683</b>	<p><b>PHOTOVOLTAIC SYSTEMS – POWER CONDITIONERS – PROCEDURE FOR MEASURING EFFICIENCY (M)</b></p> <p>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.</p>
<b>MS-IEC 61701:1995</b>	<p><b>SALT MIST CORROSION TESTING OF PHOTOVOLTAIC (PV) PUMPING SYSTEMS (M)</b></p> <p>Determines the resistance of the module to corrosion from salt mist.</p>
<b>MS-IEC 61702:1995</b>	<p><b>RATING OF DIRECT COUPLED PHOTOVOLTAIC (PV) PUMPING SYSTEMS (M)</b></p> <p>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.</p>
<b>MS-IEC 61721</b>	<p><b>SUSCEPTIBILITY OF A PHOTOVOLTAIC (PV) MODULE TO ACCIDENTAL IMPACT DAMAGE (RESISTANCE TO IMPACT TEST) (M)</b></p> <p>Determines the susceptibility of a module to accidental impact damage.</p>
<b>MS-IEC 61724</b>	<p><b>PHOTOVOLTAIC SYSTEM PERFORMANCE MONITORING – GUIDELINES FOR MEASUREMENT, DATA EXCHANGE AND ANALYSIS (M)</b></p> <p>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.</p>

<b>MS-IEC 61725</b>	<p><b>ANALYTICAL EXPRESSION FOR DAILY SOLAR PROFILES (M)</b></p> <p>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.</p>
<b>MS-IEC 61727</b>	<p><b>PHOTOVOLTAIC (PV) SYSTEMS – CHARACTERISTICS OF THE UTILITY INTERFACE (M)</b></p> <p>This International Standard applies to utility-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.</p>
<b>MS-IEC 61773</b>	<p><b>OVERHEADLINE TESTING OF FOUNDATIONS FOR STRUCTURES (M)</b></p> <p>Is applicable to the testing procedures for foundations of overhead line structures</p>
<b>MS-IEC 61836</b>	<p><b>SOLAR PHOTOVOLTAIC ENERGY SYSTEMS – TERMS AND SYMBOLS</b></p>
<b>MS-IEC 61951-1:2006</b>	<p><b>SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES - PORTABLE SEALED RECHARGEABLE SINGLE CELLS PART 1: NICKEL-CADMIUM (M)</b></p> <p>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.</p>
<b>MS-IEC 62019:2003</b>	<p><b>ELECTRICAL ACCESSORIES – CIRCUIT-BREAKERS AND SIMILAR EQUIPMENT FOR HOUSEHOLD USE – AUXILIARY CONTACT UNITS (M)</b></p> <p>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 V d.c. and rated current not exceeding 10 A.</p> <p>The object of this standard is to state</p> <ol style="list-style-type: none"> <li>a) The characteristics of auxiliary contact units;</li> <li>b) Their electrical and mechanical requirements with respect to <ul style="list-style-type: none"> <li>• The various duties to be performed</li> <li>• The significance of the rated characteristics and of the markings;</li> <li>• The tests to verify the rated characteristics;</li> </ul> </li> <li>c) The functional requirements to be satisfied by the auxiliary contact units with respect to <ul style="list-style-type: none"> <li>• Environmental conditions, including those of enclosed equipments</li> <li>• Dielectric properties</li> <li>• Terminals</li> <li>• Safety of use</li> </ul> </li> </ol>

MS-IEC 62081:1999	<b>ARC WELDING EQUIPMENT - INSTALLATION AND USE (M)</b>
	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	<b>SPECIFICATION FOR THE USE OF RENEWABLE ENERGIES IN RURAL DECENTRALIZED ELECTRIFICATION (M)</b>
	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	<b>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)</b>
	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	<b>PROTECTION AGAINST LIGHTNING – PART 1: GENERAL PRINCIPLES (M)</b>
	This part of IEC 62305 provides the general principles to be followed in the protection against lightning of <ul style="list-style-type: none"> <li>– Structures including their installations and contents as well a persons</li> <li>– Services connected to a structure</li> </ul> <p>The following cases are outside the scope of this standards:</p> <ul style="list-style-type: none"> <li>– Railway systems;</li> <li>– Vehicles, ships, aircraft, offshore installations;</li> <li>– Underground high pressure pipelines;</li> <li>– Pipe, power and telecommunication lines not connected to a structure.</li> </ul>
MS-IEC 62305- 3:2006	<b>PROTECTION AGAINST LIGHTNING – PART 3: PHYSICAL DAMAGE TO STRUCTURES AND LIFE HAZARD (M)</b>
	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

##### **01.040.83**

- MS 36 Wood adhesives-terminology and classification

##### **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**

#### **02 SOCIOLOGY. SERVICES. COMPANY ORGANISATION AND MANAGEMENT. ADMINISTRATION. TRANSPORT**

### **03.020      Sociology. Demography**

MS-ISO 26000    Guidance on Social Responsibility

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 17021    Conformity assessment – Requirements for bodies providing audit and certification of management system

MS-ISO 17025    General requirements for the competence of testing and calibration laboratories

MS-ISO 19011    Guidelines for quality and/or environmental management systems auditing

### **03.140      Patents. Intellectual property**

### **03.160      Law. Administration**

### **03.180      Education**

### **03.200      Leisure. Tourism**

### **03.220      Transport**

MS 720-2        Transport of dangerous goods – Packaging and packaging for road and rail transport.  
Part 2 – Large packaging

MS 736            Transport of dangerous goods – Intermediate bulk containers for road and rail transport

MS 845-2        Transport of dangerous goods - Emergency information systems - Part 2: Emergency information system for rail transport



MS 845-3	Transport of dangerous goods - Emergency information systems - Part 3: Emergency response guides
<b>03.240</b>	<b>Postal services</b>
<b>07</b>	<b>MATHEMATICS. NATURAL SCIENCES</b>
<b>07.020</b>	<b>Mathematics</b>
<b>07.030</b>	<b>Physics. Chemistry</b>
<b>07.040</b>	<b>Astronomy. Geology. Geography</b>
<b>07.060</b>	<b>Geology. Metrology. Hydrology</b>
<b>07.080</b>	<b>Biology. Botany. Zoology</b>
<b>07.100</b>	<b>Microbiology</b>
<b>07.100.30</b>	<b>Food microbiology</b>
MS 289-2	Animal feeds and feeding stuffs – Methods of sampling and tests Part 2: General Methods
MS 289-4	Animal Feeds and feeding stuffs – Methods of test
<b>11</b>	<b>HEALTHCARE TECHNOLOGY</b>
<b>11.020</b>	<b>Medical sciences and health care facilities in general</b>
MS 336	Open woven bandages – Specification
<b>11.040</b>	<b>Medical equipment</b>
<b>11.060</b>	<b>Dentistry</b>
<b>11.080</b>	<b>Sterilization and disinfection</b>
<b>11.080.20</b>	<b>Disinfectants and antiseptics</b>
MS 66	Antibacterial liquid toilet soap – Specification
<b>11.100</b>	<b>Laboratory medicine</b>
MS ISO 15189	Medical laboratories – Particular requirements for quality and competence
<b>11.120</b>	<b>Pharmaceutic</b>
<b>11.140</b>	<b>Hospital equipment</b>
<b>11.160</b>	<b>First aid</b>
<b>11.180</b>	<b>Aids for disabled or handicapped persons</b>

## **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**

### **13.020.01**

MS 844 Environmental and environmental protection in general

### **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 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 539 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

### **13.030.20 Liquid wastes. Sludge**

MS 534 Disposal of effluents from the dairy industry

### **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 purchaser’s 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**

#### **13.040.20 Ambient atmosphere**

MS 740	Ambient air – methods of sampling and test
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#### **13.040.30 Workplace atmospheres**

MS 742	Workplace air- determination of particulate lead and lead compounds –flame or electrothermal atomic absorption spectrometric method
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#### **13.040.40 Stationery source emissions**

MS 737	Industrial emissions –Emissions from mobile and stationary sources
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### **13.060 Water quality**

#### **13.060.10 Water of natural resources**

MS 733	Borehole and shallow well water quality - Specification
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#### **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

#### **13.060.45 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 682-5	Water quality – sampling Part 5: Guidance on sampling drinking water from treatment works and piped distribution systems.
MS 682-6	Water quality – Sampling Part 6: Guidance on sampling of rivers and streams
MS 682-8	Water quality –sampling Part 8: Guidance on sampling of wet deposition
MS 682-11	Water quality –sampling Part 11: guidance on sampling of groundwaters
MS 682-12	Water quality- sampling Part 12: Guidance on sampling of bottom sediments

MS 682-13	Water quality-sampling Part 13: guidance on sampling sludge's from sewage and water treatment work
MS 682-16	Water quality-sampling part 16: Guidance on biotesting of samples
MS 682-17	Water quality –sampling Part 17: guidance on sampling suspended sediments
MS 682-19	Water quality –sampling Part 19: Guidance on sampling of marine sediments
MS 682-21	Water quality –sampling Part 21: guidance on sampling of drinking water distributed by tankers or means other than distribution pipes.

## **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 <sub>2</sub> 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**

MS 845-2      Transport of dangerous goods-Emergency information systems Part 2: Emergency information system for rail transport

MS 845-3      Transport of dangerous goods-emergency information systems part 3: emergency response guides

### **13.300      Protection against dangerous goods**

MS 720-2      Packaging of dangerous goods - packaging and large packaging for road and rail

MS 736      Transportation of dangerous goods-intermediate bulk containers for road and rail transport

MS 847      Transportation of dangerous goods operational requirements for road vehicles

MS 849      Transportation of dangerous goods designed, construction, testing

### **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

<b>17.080</b>	<b>Measurement of time, velocity, acceleration, angular velocity</b>
<b>17.100</b>	<b>Measurement of force, weight and pressure</b>
<b>17.120</b>	<b>Measurement of fluid flow</b>
<b>17.140</b>	<b>Acoustics and acoustic measurements</b>
MS 173	Acoustics Noise pollution – Tolerance limits
<b>17.140.01</b>	<b>Acoustic measurements and noise abatement in general</b>
MS 697	Industrial noise affecting mixed residential and industrial area – Method for rating
<b>17.140.99</b>	<b>Other standards related to acoustics</b>
MS 173	Acoustics – Noise pollution-Tolerance limits
<b>17.160</b>	<b>Vibrations, shock and vibration measurements</b>
<b>17.180</b>	<b>Optics and optical measurements</b>
<b>17.200</b>	<b>Thermodynamics and temperature measurements</b>
<b>17.200.20</b>	
MS 833	Thermostats for electric storage water heaters-specification
<b>17.220</b>	<b>Electricity. Magnetism. Electrical and magnetic</b>
<b>17.240</b>	<b>Radiation measurements</b>
<b>19</b>	<b>TESTING</b>
<b>19.020</b>	<b>Test conditions and procedures in general</b>
<b>19.040</b>	<b>Environmental testing</b>
<b>19.060</b>	<b>Mechanical testing</b>
MS 761-1	Domestic Solar Water Heaters Part 1 Thermal performance using an outdoor test method
<b>19.080</b>	<b>Electrical and electronic testing</b>
<b>19.100</b>	<b>Non-destructive testing</b>
<b>19.120</b>	<b>Particle size analysis. Sieving</b>
<b>21</b>	<b>MECHANICAL SYSTEMS AND COMPONENTS FOR GENERAL USE</b>

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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)

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MS 353	Fertilizers – Ammonium nitrate – Specification
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MS 477	Food for infants and children – Code of hygienic practice
MS 654	Additional of essential nutrients to foods –general principles
MS 815	Organic products-General standard
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
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MS-ISO 22002-3	Prerequisite programmes on food safety
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MS-ISO 22003	Food safety management systems- requirements for bodies providing audit and certification of food safety management systems
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
MS 798	Instant noodles – specification

### **67.050      General methods of tests and analysis for food products**

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MS 144	Agricultural food products: Determination of crude fibre content: General method

MS 801 Honey-methods of test

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MS 30 Fortifies Wheat flour – Specification  
MS 31 Common bread – Specification  
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MS 34 Fortified, Maize flour – Specification  
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MS 146 Cereals – Methods of sampling as grain  
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MS 518-1 Cereals and pulses-determination of hidden insect infestation  
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MS 544 Whole and decorticated pearl millet grains- specification  
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MS 843 Code of practice for the prevention and reduction of aflatoxin contamination in groundnuts  
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## **67.080 Fruits. Vegetables**

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MS 24 Canned pineapples – Specification  
MS 25 Tomato puree – Specification  
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MS 28 Canned tomatoes – Specification  
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MS 924-2	Chillies and chill oleoresins-determination of total capsaicinoid content Part 2: method using high performance liquid chromatography
MS 925	Ginger and ginger oleoresins-determination of the main pungent componets (gingerols and shogaols) methods using high performance liquid chromatography (HPLC)
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### **71.100.01 Products of the chemical industry in general**

- MS 468 Mosquito coils – Specification
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### **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
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- MS 373 Scouring powder – Specification
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- 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
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- MS 596 Mixtures of copper – chromium. Arsenic compounds for timber preservatives.
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### **71.100.70 Cosmetics. Toiletries**

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- MS 108 Petroleum jelly for cosmetic industry – Specification
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- MS 266 Cosmetics – Guidelines for hygienic manufacture
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### **71.100.99 Other products of the chemical industry**

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**73.040 Coals**

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MS 856 Hard Coal - Determination of caking power - Roga Test

MS 857 Coal burning appliances (Reduced smoke emission type)

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MS 859 Moisture content of coal samples intended for general analysis (vacuum-coal methods

MS 860 Moisture content of Coal samples intended for general analysis

MS 862 Coking properties of coal

MS 871 Hard Coal–Determination of moisture – Holding capacity

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MS 862	Coking properties of coal
MS 870	Coal –determination of forms of sulphur
MS 871	Hard Coal–Determination of moisture – Holding capacity

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MS 236-3	The handling, storage, distribution and maintenance of liquefied petroleum gas (LPG) in domestic, commercial, and industrial installations; Part 3: Installations involving storage vessels of individual water capacity exceeding 500 l
MS 236-4	The handling, storage, distribution and maintenance of liquefied petroleum gas (LPG) in domestic, commercial, and industrial installations; Part 4: Transportation in bulk by road
MS 236-6	Code of practice for handling, storage, distribution and maintenance of liquefied petroleum gas (LPG) in domestic, commercial and industrial installations. Part 6; the application of liquefied petroleum and compressed natural gas as engine fuels for internal combustion engines
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## **75.180            Equipment for petroleum and natural gas industries**

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<b>77.100</b>	<b>Ferroalloys</b>
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MS 775-1	Hot rolled steel bars – Dimensions of round bars
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- 77.150      Products of non-ferrous metals**
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## **79            WOOD TECHNOLOGY**

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### **79.040      Wood, sawn logs and sawn timber**

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 MS 494          Softwood flooring boards – Specification  
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 MS 499          Timber, stress graded softwood general structural – Specification  
 MS 502          Softwood furniture timber – Specification  
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### **79.060      Wood-based panels**

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**81.040      Glass**

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MS 782-2:2011 Glass In Building - Basic soda lime silicate glass products  
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MS 782-3:2011 Glass in Building - Basic soda lime silicate glass products  
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MS 782-4:2011 Glass in building - Basic soda lime silicate glass products  
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<b>97.020</b>	<b>Home economics on general</b>
<b>97.030</b>	<b>Domestic electrical appliances in general</b>
<b>97.040</b>	<b>Kitchen equipment</b>
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<b>97.040.50</b>	<b>Small kitchen appliances</b>
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                      Part 2: Limited payout gaming equipment  
                      Part 3: Monitoring and control systems for gaming equipment  
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                      Part 5: General equipment

**97.220            Sports equipment and facilities**

**99                (No Title)**

## SUMMARY ANALYSIS OF PRINTED MALAWI STANDARDS

<div>ACTIVITY</div> <div>TYPE OF STANDARD</div>	NUMBER OF STANDARDS PER FIELD OF ACTIVITY					TOTALS
	CHEMICALS AND TEXTILES	ENGINEERING AND MATERIALS	FOOD AND AGRICULTURE	MS/IEC ADOPTED STANDARDS	MS/ISO ADOPTED STANDARDS	
Specifications	96	316	130	116	13	671
Vocabulary	5	18	6	3	3	35
Code of practice	36	66	14	12	20	147
Sampling and test methods	55	62	44	39	4	204
TOTALS	192	462	194	170	40	1058

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