Republic of Namibia
Annotated Statutes

REGULATIONS

REGULATIONS MADE IN TERMS OF

Metrology Act 77 of 1973

section 42

General Regulations

RSA Government Notice R.2362 of 1977
(RSA GG 5806)
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as amended by

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ARRANGEMENT OF REGULATIONS

[The individual regulations have no headings.]

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PART I

SALE OF GOODS

Definitions

1. In these regulations "the Act" shall mean the Trade Metrology Act, 1973 (Act 77 of 1973) and unless the context otherwise indicates, any expression to which a meaning has been assigned in that Act shall have the meaning thus assigned to it. Further, unless contrary to the context -

"authorised officer" shall mean any duly appointed inspector or examiner or any employee of a statutory body furnished with proper written inspection or examination authority issued by the director in terms of section 13 of the Act;

"beer" shall mean the alcoholic liquid obtained by the fermentation of a mash of malt, with or without cereals, flavoured with hops, and shall include ale, stout and any other liquor made or sold as or under the name of beer, ale or stout if it contains more than 2 per cent by volume of alcohol, but shall not include Bantu beer;

"bread" shall mean any baked wheaten or rye product which is sold as or under the name of bread or which has the appearance of bread;

"correct" with reference to the quantity of a single unit or entity of goods, shall mean correct within the limits of error specified in this Part of the regulations;

"delivery note" shall mean any separate piece of paper of such colour and size as readily to permit of a clear and legible statement being made thereon and actually bearing such a statement of all information required by the Act and these regulations to be furnished in respect of any goods actually being delivered to a purchaser;

"dried fruit" shall mean and include all kinds of dates, candied peel, glace and crystallised fruit and the following dried tree and vine fruits:

Apples, apricots, currants, dried fruit salad (mixed dried fruits), figs, mebos, minced dried fruit, muscatels, nectarines, peaches, pears, plums, prunes, raisins and sultanas;

"fertilizer" shall mean any substance which is intended or offered to be used for improving or maintaining the growth of plants or the productivity of the soil and which is registered under the Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947), as a fertiliser;

"foodstuffs, cosmetics and disinfectants" shall have the same meanings respectively as for the purposes of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972);

"household or laundry soap" shall mean soap in the form of bars, tablets, flakes or chips for household, laundry or toilet purposes containing not less than 45 per cent of fatty acids, of which not more than one third may be replaced by resin acids, and containing not more than 0,25 per cent of free caustic alkali, calculated as sodium hydroxide (NaOH), and being free from any harmful ingredient;

"indigenous brushwood" shall mean unsplit wood obtained from the natural forests of the Republic;

"liqueur" shall have the same meaning as for the purposes of the Wine, Other Fermented Beverages and Spirits Act, 1957 (Act 25 of 1957);

[The Wine, Other Fermented Beverages and Spirits Act 25 of 1957 (SA 5866) does not appear to have been applicable to South West Africa. It defined "liqueur" as "a beverage of an alcoholic strength not less than thirty per cent of alcohol by volume, produced either (a) by maceration in rectified spirit or in brandy, of fresh or dried fruit or peels of aromatic plants, leaves, herbs, roots or seeds, to which has been added subsequently a syrup made of pure cane sugar or honey; or (b) by redistillation of a macerated extract, prepared as described in paragraph (a), to the resulting distillate of which a syrup made of pure cane sugar or honey has been added".]

"meat" shall mean meat of any description whether fresh, pickled, salted, chilled, frozen, cooked or processed, and shall include all dressed or undressed carcases, cuts, joints, soup meat, liver, venison, biltong, polony, sausages, boerewors, minced meat, brawn, meat pastes, oxtails, ox tongues, hearts, heads, plucks, feet, kidneys, hares, rabbits, live animals and live poultry;

"medicated soap" shall mean any soap containing special antiseptic or similar ingredients and conforming to the standard of quality prescribed by the regulations under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972);

"milk", without limiting its ordinary meaning, shall include fresh, pasteurised, sterilised, homogenised or skimmed milk;

"pure soap" shall mean any soap which conforms to the standard of quality for such soap prescribed by the regulations under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972).

[The Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 referred to in several of the definitions is a South African statute. The analogous law in Namibia is the Foodstuffs, Cosmetics and Disinfectants Ordinance 18 of 1979, which replaced the Food, Drugs and Disinfectants Ordinance 36 of 1952.]

GOODS DESTINED FOR EXPORT

2. The provisions of this Part shall not apply to prepacked goods destined for sale outside the Republic.

DELIVERY NOTES

To accompany goods delivered

3. (1) Except where otherwise provided in this regulation and subject to the provisions of regulation 11(4) and (9) of this Part, any goods transmitted, conveyed or delivered to any purchaser in pursuance of a sale by measure or by number shall be accompanied by a correctly dated delivery note, invoice or other writing stating the names and addresses of the seller and the purchaser, and, unless the quantity of such goods is indicated on the goods in the manner prescribed by regulation 7 of this Part, or unless such delivery note is accompanied by a cash register slip which contains a list of separate prices respectively corresponding to each retail price marked on each separate item or quantity of goods, also bearing a clear and legible statement of the quantity of such goods:

Provided that -

Exemptions

(a) a delivery note, invoice or other writing need not accompany the goods -

(i) where the goods are unprocessed or unmanufactured agricultural produce, cream or milk which have been produced in the Republic and where such goods are transmitted, conveyed or delivered in pursuance of a sale in bulk by or on behalf of the producer thereof;

(ii) where the goods, after having been taken from bulk, are measured or counted, as the case may be, in the presence of the purchaser or his agent at the time of sale and such goods are delivered to the purchaser or his agent on the same occasion and on the premises of the seller;

(iii) where a purchaser or his agent in person orders the goods at the premises of the seller, stating the quantity of the goods to be supplied, and such goods, after having been taken from bulk and made up in prepacked form at the time of sale without having been measured or counted in the presence of the purchaser or his agent, as the case may be, are delivered to the purchaser or his agent on the same occasion and on those premises; provided further that the quantity of the goods supplied is in accordance with that ordered or when of some other quantity, such other quantity is made known to the purchaser or his agent by the seller when being delivered;

(iv) where the quantity of the goods to be supplied in a transaction by retail is specified by the purchaser or his agent either explicitly or by implication at the premises of the purchaser and such goods are delivered to the purchaser or his agent on the same occasion and on those premises; provided further that the quantity of the goods so supplied is the quantity specified explicitly or by implication by the purchaser or his agent or when of some other quantity, such other quantity is made known to the purchaser or his agent by the seller when being delivered.

Goods to be measured after dispatching

(b) Where the quantity of goods which have been despatched to a purchaser in pursuance of a sale in bulk is to be measured en route to or at the place of delivery, the delivery note, invoice or other writing accompanying such goods shall be endorsed to that effect and the statement of quantity shall be inserted immediately after the quantity of the goods has been determined; provided that, where the statement of quantity is in the form of a printed ticket obtained from a person in charge of the instrument used for determining the quantity of the goods, such ticket shall be attached to the delivery note, invoice or other writing immediately after the quantity of the goods has been determined and before the delivery note, invoice or other writing is handed over to the purchaser or his agent.

Manner of indicating quantity of certain unmarked goods

(c) A delivery note, invoice or other writing accompanying goods specified in Items 6 and 23 of Schedule 4 to this Part which are permitted in terms of regulation 6(2) of this Part to be unmarked as to quantity shall contain a statement of the number of prepacked units of each prescribed quantity to be delivered as well as the mass of the respective prescribed quantities being delivered.

Goods despatched in bulk by rail

(d) Where bagged unmanufactured cereals are despatched by rail to a purchaser in pursuance of a sale in bulk without the quantity being specified on the bag, the delivery note, invoice or other writing accompanying such goods may indicate the name and address of the agent of the seller instead of the name and address of the seller and a statement of the quantity by gross mass instead of by net mass.

Liquid products in vehicle tanks

(e) A delivery note, invoice or other writing issued in connection with prepacked liquid goods sold in a vehicle tank shall clearly show the temperature of the liquid product at the time of packing, its coefficient of expansion and the quantity thereof at 20 °C.

Duties of person conveying goods

(2) Any person in possession of a delivery note, invoice or other writing relating to any goods being transmitted, conveyed or delivered by him in pursuance of a sale shall -

(a) exhibit such delivery note, invoice or other writing to any authorised officer when so requested by him;

(b) hand over such delivery note, invoice or other writing to the purchaser or his agent before any part of the goods is off-loaded;

(c) in any case where the quantity of the goods has been determined at the place of delivery, hand over such delivery note, invoice or other writing to the purchaser or his agent before leaving such place.

Dealers to retain delivery notes

(3) A delivery note, invoice or other writing issued in respect of arty goods delivered in pursuance of a sale to a dealer and handed over to the dealer or his agent as prescribed in

subregulation (2), shall be retained by him for a period of at least 48 hours after receipt, during which period it shall be kept at hand and be produced to an authorised officer on demand.

SELLER OR IMPORTER TO TAKE PRECAUTION REGARDING THE QUANTITY OF PREPACKED GOODS PURCHASED FOR RESALE

4. Any person who has purchased any prepacked goods for resale or who imports any such goods for resale bearing a statement of quantity or deemed to be of a certain quantity in terms of any provision of this Part, shall take such precaution as will ensure that the actual quantity of the goods is, subject to any applicable tolerance permitted in terms of any regulation of this Part, the quantity represented, irrespective of the origin of such goods.

PROVISION FOR TOLERANCES AND PERMISSIBLE DIFFERENCES UNDER SECTIONS 37 AND 40 OF THE ACT

Limits of error for prepacked goods

5. (1) (a) Except as provided in subregulations (2), (4), (5), (6) and (7) of this regulation and in regulations 6(1), 7(7)(iii), 11, 12 and 13 of this Part, any difference between the actual and the represented quantity of a single unit or entity of prepacked goods for sale shall be within the applicable limits of error specified in Tables I to V in Schedule 1 to this Part, subject to any further provisions of this subregulation.

(b) Subject to the provisions of paragraph (a) and unless otherwise provided in this subregulation, where 10 or more prepacked units are available -

(i) the average of the actual quantity of any 10 like units of prepacked goods of the same kind prepared for sale, taken at random from amongst those which form a batch derived from the same source, shall not be less than the represented quantity;

(ii) in the case of packaging by random mass, area or length, the total of the actual quantity of any 10 such unlike units of prepacked goods of the same kind prepared for sale, falling within a grouping of quantity specified in Tables I, IV and V of Schedule 1 to this Part, taken at random from amongst those which form a batch derived from the same source, shall not be less than the total represented quantity.

(c) In the case of prepacked liquid goods in glass bottles where the actual quantity is less than the represented quantity by not more than the permissible deficiency tolerance specified in Table II of Schedule 1 to this Part, it shall be a defence in the case of any prosecution for an offence under subregulation (a), read with subregulation (b)(i), if it is proved that the packer, after checking the volume of a representative sample of a batch of such bottles, then relied upon the volume of such bottles for determining the quantity of liquid packed therein and that he filled such bottles to the maximum possible level or to the level specified to him by the manufacturer or supplier thereof or to the level implied in any agreement or specification in accordance with Which the bottles in question were manufactured and supplied to the packer.

(d) An error or difference in excess which is more than that which is applicable to a single quantity of prepacked goods in terms of Tables I to V in Schedule 1 to this

Part or that which is applicable in terms of any regulation of this Part shall be permissible -

(i) if the nature, composition, or any particular characteristic of the goods was such that, notwithstanding the use of proper manufacturing or packaging facilities and the exercising of reasonable quantity control measures during manufacturing or packaging, the quantity of every prepacked unit in a batch could not have been maintained within the prescribed range of tolerance without the risk of exceeding the applicable limit of deficiency in the case of some such units; or

(ii) if such an error or difference in excess was due to -

(aa) an increase in the quantity of the goods which occurred after the prepackaging thereof; or

(bb) an additional allowance made for possible shrinkage or loss in quantity after packing.

Tolerances in thickness of wire and in mass per unit length of fencing posts and droppers

(2) (a) The tolerances in the thickness of wire shall be as set out below -

(i) Fencing, binding or barbed wire or wire-netting -

Diameter or cross-sectional dimensions	*Tolerance*
	mm
5 mm to 3,15 mm	±0,10
2,8 mm to 2 mm	±0,08
1,8 mm to 1,25 mm	±0,05
1 mm to 0,56 mm	±0,03

(ii) Baling wire shall be of a diameter of 1,9 mm, with a tolerance of 0,025 mm,

(b) The tolerances in the mass per unit length of fencing posts and droppers specified in regulation 12 of this Part shall be as set out in that regulation.

Quantity of prepacked goods within tolerance deemed to be quantity represented

(3) The sale, importation for sale or purchase of any prepacked goods of which the quantity is in accordance with the provisions of this regulation shall be deemed to be a sale, importation for sale or purchase of the quantity of such goods represented or stated on the container or goods or on the delivery note, invoice or other writing issued in connection with the quantity of the goods.

Tolerances for quantities determined at time of sale

(4) The quantity of goods taken from bulk and measured or counted as a single unit or entity at the time of sale in the presence of the-purchaser or his agent shall not be short of the quantity demanded of or represented by the seller unless the shortage is due to and does not exceed a deficiency error where permitted under Part II of the regulations in respect of a certifiable

measuring instrument used during the measuring of the goods and having such an error when so used.

Tolerances for prepacked goods sold in execution of a contract and for textiles

(5) (a) Where prepacked goods are sold in execution of a written contract of sale or agreement of sale which stipulates any tolerance and such goods are not purchased to be resold in the prepacked state in which received by the purchaser from the seller, any difference between the declared quantity of the goods and the actual quantity of such goods shall be permissible if such difference conforms to the tolerance stipulated in the written contract or agreement of sale.

(b) In the sale of textiles or finished articles made of textiles as listed in subsection 1.1 of section 1 of the South African Bureau of Standards Specification for Textile Tolerances, SABS 977-1969, any difference between the declared quantity or dimensions of such goods or articles and the actual quantity or dimensions thereof shall be permissible if such difference conforms to the tolerance set out in the said specification.

Tolerance for prepacked goods for which a maximum moisture content has been prescribed or registered

(6) The goods specified in Schedule 2 of this Part shall -

(a) when made up for sale in prepacked form by the manufacturer or producer, be of such net mass as will ensure that, notwithstanding any loss of moisture content of the goods, the actual net mass will at all times while such goods are still in the possession of the manufacturer or producer be not less than the mass represented:

Provided that -

where a maximum percentage of moisture content has been prescribed for any goods specified in Schedule 2 in accordance with any Act or any regulation thereunder which applies to such goods, the actual net mass of a prepacked quantity of such goods may, at any time after 24 hours after receipt thereof by a purchaser from the manufacturer or producer, be less than the mass represented by him by an amount not exceeding 10 per cent by mass of the maximum percentage moisture content prescribed, and provided further that such moisture content shall be indicated on the container holding the goods or on a label attached to such a prepacked unit as conspicuously as the net mass;

(b) when resold in prepacked form as received from the manufacturer or producer and being within the tolerance specified in the proviso to paragraph (a), be deemed to be of the net mass represented by the manufacturer or producer.

Tolerance for prepacked goods sold by number

(7) Any difference between the actual and the represented number of units in a prepacked quantity of the goods or articles specified in Table VI of Schedule 1 to this Part shall be within the applicable limits of error specified in that Table when such goods are sold: Provided that in the case of the goods specified in paragraphs (b) to (f) inclusive of the said Table -

(i) not more than three out of any five like quantities of the same kind of such goods taken at random from amongst a batch derived from the same source shall contain fewer units than the number represented; and

(ii) an error or difference in excess which is more than the number applicable to a quantity of goods in terms of the said Table shall be permissible when the number of units in at least one package in a selection of 10 like quantities of the same kind of goods taken at random from amongst those which form a batch derived from the same source is not more than the excess permitted.

Permissible difference for dispensing of mixtures or medicinal preparations

(8) (a) Where it is stated in a doctor's prescription for any mixture that the quantity of each dose is -

(i) either one fluid drachm or two fluid drachms, the equivalent of that quantity for the purpose of dispensing the prescription shall be treated as 5 ml or 10 ml, respectively; or

(ii) one half fluid ounce, the equivalent of that quantity for the purpose of dispensing the prescription shall be treated as 10 ml, subject to the provisions of subregulation (8)(a)(iii) of this regulation; or

(iii) one half fluid ounce, the equivalent of that quantity for the purpose of dispensing the prescription shall be treated as 15 ml in cases where the properties or ingredients of the mixture are such that they cannot be formulated to a 10 ml dose.

(b) Where any prescription to which subregulation (8)(a)(i), (ii) or (iii) of this regulation refers is for a total quantity expressed as a number of fluid ounces mentioned in the third column of Tables A, B, C or D of the Annexure to this subregulation, the equivalent of that total quantity for the purpose of dispensing the prescription shall be treated as the quantity set opposite thereto in the fourth column of the appropriate Table.

(c) Where a doctor's prescription for an ethical, patent or proprietary preparation or for a bulk liquid or bulk solid preparation for oral or external administration to which Table E of the Annexure to this subregulation refers, is for a total quantity expressed as a number of ounces or fluid ounces mentioned in column 1 of the Table, the equivalent of that total quantity for the purpose of dispensing the prescription shall be treated as the quantity set opposite thereto in column 2 of the Table.

(For the purposes of this subregulation, "mixture" shall mean any liquid preparation which consists of one or more drugs dissolved or suspended in an aqueous or other appropriate vehicle and intended for administration by mouth, but shall not include ethical, proprietary or patent medicines.)

ANNEXURE

TABLE A

SUBREGULATION (8)(a)(i)

PRESCRIPTIONS IN TERMS OF A 1 FLUID DRACHM DOSE

Number of 1 fl dr doses compared with number of metric doses of 5 ml		Total quantity in fl oz	Equivalent metric quantity in ml
1 fl dr	5 ml		
4	4	½	20
6	5	¾	25
8	10	1	50
12	10	1½	50
16	15	2	75
24	20	3	100
32	30	4	150
48	50	6	250
64	70	8	350
80	70	10	350
96	100	12	500

Above 96 doses, 500 ml plus the metric volume opposite the number of doses in excess of 96 shall be supplied.

TABLE B

SUBREGULATION (8)(a)(i)

PRESCRIPTION IN TERMS OF A 2 FLUID DRACHM DOSE

Number of 2 fl dr doses compared with number of metric doses of 10 ml		Total quantity in fl oz	Equivalent metric quantity in ml
2 fl dr	10 ml		
1	1	¼	10
2	2	½	20
4	5	1	50
6	5	1½	50
8	10	2	100
12	10	3	100
16	15	4	150
24	25	6	250
32	35	8	350
40	35	10	350
48	50	12	500
64	50	16	500

Above 64 doses, 500 ml plus the metric volume opposite the number of doses in excess of 64 shall be supplied.

TABLE C

SUBREGULATION (8)(a)(ii)

PRESCRIPTIONS IN TERMS OF A ½ FLUID OUNCE DOSE

Number of ½ fl oz doses compared with number of metric doses of 10 ml		Total quantity in fl oz	Equivalent metric quantity in ml
½ fl oz	10 ml		
1	1	½	10
2	2	1	20

4	5	2	50
6	5	3	50
8	10	4	100
12	10	6	100
16	15	8	150
20	15	10	150
24	25	12	250
32	35	16	350
40	35	20	350
48	50	24	500

Above 48 doses, 500 ml plus the metric volume opposite the number of doses in excess of 48 shall be supplied.

TABLE D

SUBREGULATION (8)(a)(iii)

Number of ½ fl oz doses compared with number of metric doses of 15 ml		Total quantity in fl oz	Equivalent metric quantity in ml
½ fl oz	15 ml		
1	1	$^1/_2$	15
2	2	1	30
4	4	2	60
6	6	3	90
8	8	4	120
12	12	6	180
16	16	8	240
20	20	10	300
24	20	12	300
32	32	16	480
48	48	24	720

In the case of a quantity greater than 48 doses or 24 fl oz, the quantity to be supplied shall be the corresponding multiple of the metric equivalent shown in this table for the 48 doses or 24 fl oz together with the appropriate metric equivalent shown in the table in the case of any residue of less than 48 doses or 24 fl oz.

TABLE E

SUBREGULATION (8)(c)

QUANTITIES TO BE SUPPLIED WHEN A TOTAL QUANTITY IS ORDERED. THIS TABLE INCLUDES PREPARATIONS FOR INTERNAL OR EXTERNAL USE AS WELL AS SOLIDS OR LIQUIDS

Ounces avoirdupois or fluid Column 1	Grams or millilitres Column 2
1 or more but less than 1½	25
1½ or more but less than 3	50
3 or more but less than 4	75
4 or more but less than 6	100
6 or more but less than 8	150

8 or more but less than 10	250
10 or more but less than 16	350
16 but not more than 20	500

Above 20 oz or 20 fl oz, 500 g or 500 ml plus the metric quantity opposite the quantity in excess of 20 oz or 20 fl oz shall be supplied.

Tolerance for loss in mass of prepacked maize seed

(9) The appropriate tolerances specified in Table I of Schedule 1 to this Part shall apply to prepacked maize seed at the time of packing and also for the remaining portion of the month in which such seed was prepacked, and for the period of 11 months after the month of prepacking a deficiency tolerance of 1,5 per cent shall be applicable and for any further period thereafter a deficiency tolerance of 4 per cent shall apply: Provided that any packer of maize seed shall clearly indicate in code letters marked either on the container or on a lable attached thereto the month and the year of prepacking in accordance with the following code:

"E/...../GGE", where the first "E" represents the last figure of the harvest year, the space "/...../" shows the dealer's lot number and the letters "GGE" represent the number of the month and the last two figures of the year of prepacking, based on the coding A=1, etc.

[The word "label" is misspelt in the *Government Gazette* in the first paragraph of subregulation (9), as reproduced above.]

EXEMPTIONS UNDER SECTION 40 OF THE ACT

Commodities of which the net mass may be declared "When packed"

6. (1) The goods or articles specified in Schedule 3 to this Part may, when being prepared for sale in prepacked form, be marked with the net mass at the time of packing, viz "When packed .... kg or g", as the case may be, in the manner provided in regulation 7 of this Part and for the purposes of that regulation the words "When packed" shall be regarded as an integral part of the statement of quantity, and the net mass of the goods so marked shall be within the applicable limits of error or differences prescribed in regulation 5 of this Part if such mass is measured by an authorised officer at any time within 12 hours of the time of packing.

Exemption from indication of quantity for goods specified in Schedule 4

(2) Subject to the provisions prescribed in Schedule 4 to this Part, the goods or articles included in the Schedule are not required to be marked with a statement of quantity when sold in prepacked form.

Goods or articles ordered by the purchaser in person

(3) Where a purchaser or his agent in person orders goods or articles, other than beer to be supplied from bulk for consumption at the premises of the seller, stating verbally the quantity of the goods or articles to be supplied, and such goods or articles, after having been taken from bulk and made up in prepacked form at the time of sale without having been measured or counted in the presence of the purchaser or his agent, are delivered to the purchaser or his agent on the same occasion and on those premises, the goods or articles are not required to be marked with a statement of quantity: Provided that the quantity of the goods or articles supplied is in accordance with that ordered or when of some other quantity, such other quantity is declared to the purchaser or his agent by the seller when being handed over.

Industrial packings

(4) Any goods or articles which are sold by quantity expressed in terms of a measuring unit or by number and which are required by a purchaser other than a person buying from the retail trade, for his own use and not for resale, may be made up by the manufacturer or packer in units in prepacked form which do not bear a statement of quantity: Provided that where such goods or articles are transmitted, conveyed or delivered in bulk to the purchaser, and they are enclosed in an outer container, such container shall bear a statement of the quantity in accordance with regulation 7 of this Part unless, when contained in a vehicle, it is accompanied by a delivery note, invoice or other writing in accordance with the provisions of regulation 3 of this Part.

MANNER OF DESCRIBING AND MARKING THE PRICE AND QUANTITY OF PREPACKED GOODS FOR SALE

Quantity of prepacked goods or articles to be marked in prescribed manner

7. (1) Any prepacked goods or articles imported for sale or sold shall bear a statement of the quantity of such goods or articles expressed in terms of a permissible measuring unit or by number as may be specified by the Act or any provision of this Part, and such statement shall be applied in the manner set out in this regulation, unless the provisions of any other regulation of this Part are applicable.

Price descriptions

(2) (a) When any articles or goods are offered for sale by means of a price description displayed on or near retail premises for the purpose of drawing the attention of prospective purchasers, the quantity of such articles or goods when actually sold to a purchaser shall, subject to the provisions for tolerances in regulation 5 of this Part, not be less than that quantity which the purchaser should receive for the amount paid by him or demanded from him, calculated at the price per measuring unit or by number shown on the price description which has been so displayed, unless the seller has made known to the prospective purchaser before concluding the sale that the price description which has been so displayed will not apply to the prospective transaction.

(b) Any price description displayed or advertised in connection with any article or goods sold by volume, mass, length or area and making reference to quantity shall be expressed in terms of a permissible measuring unit only and unless such price description refers to an available prepacked quantity of such article or goods, it shall be in the form of a unit price expressed, e.g. in rands or cents per millilitre, litre, kilolitre or cubic metre, or cents milligram, gram, kilogram or ton, or per millimetre or metre, or per square metre or hectare, as the case may be.

(c) Unwrapped cuts or pieces of meat and meat carcases shall, when displayed for sale on the premises of a retail butcher and having the price thereof marked or displayed thereon, have the net mass as clearly marked or displayed thereon as the price in characters and figures not less than half the height of the characters and figures used for the price.

Statement of quantity to be on immediate and outer containers

(3) Save as is otherwise provided, the required statement of quantity shall appear on the immediate container holding the goods or articles and on any outer wrapper or container where such is used, except that in the case where an immediate container which bears no brand-name or descriptive name is sold in an outer container, the statement of quantity may appear on such outer container only.

Position and clarity

(4) (a) Except as is otherwise provided, a statement of quantity shall, whether printed, in hand lettering or hand script, be clearly, legibly and indelibly marked in an unobscured position upon a plain background either -

(i) within that surface area of an attached label or of the goods, package or container which lies within the elevation in which the largest characters are used for the descriptive name if no brand-name appears; or

(ii) within that surface area of an attached label or of the goods, package or container which lies within the elevation in which the largest characters are used for the brand-name if no descriptive name appears; or

(iii) if both the brand-name and the descriptive name appear, within that surface area of an attached label or of the goods, package or container which lies within the elevation in which one or the other appears in the largest characters, compared with each other; or

(iv) except in the case of subregulation (8), alternatively, until 31 December 1980, elsewhere on the outside of the goods, package or container, except on or inside any surface intended as a base, and framed in a bold continuous line of a colour in distinct contrast with the background and within which no other wording shall appear.

(b) Where no brand-name or descriptive name appears on a container or where a container bears a brand-name or descriptive name permanently marked thereon, the statement of quantity may be embossed or permanently marked thereon in any unobscured position upon a plain background on any part of the container other than the surface intended as the base, in accordance with any applicable provision of this Part.

(c) Wooden barrels or drums may be clearly and legibly branded or stencilled on the head with the statement of the quantity of the goods contained therein.

(d) Where the statement of quantity by net mass is shown on a special stick-on label, printed by a machine which functions in conjunction with a massmeter used for determining the quantity of goods, such label shall be securely attached to the outside of the goods, package or container, except to any surface intended as the base.

(e) The statement of quantity may be positioned upon the base of a face powder compact or of a protective cover containing lipstick, or of any packaged goods authorised by the director in writing.

(f) In the case of cosmetics, perfumery or toilet preparations which are intended to be sold with both outer and immediate containers and the immediate container is not

removed from the outer container prior to sale in the retail trade, the provisions of subregulation (3) shall not apply to such immediate container.

Contrasting colour

(g) A statement of quantity shall be in a colour in distinct contrast with the background, except where such statement is embossed in high or low relief on the container itself and the container bears no other embossed wording in a colour which contrasts with the colour of the background on which it appears.

Positioning of permissible qualifications

(h) Where a permissible qualification specified in subparagraphs (i) to (vii) of subregulation (7) is used, the required statement of quantity shall appear immediately above or before such qualification.

Height of characters and figures

(5) The required statement of quantity shall be in bold characters and figures, each kind of a uniform print throughout, and, except as is otherwise prescribed in this regulation, be of a height not less than 25 per cent of the average height of the largest and smallest characters used for the brand-name or for the descriptive name, where only the one or the other appears, or where both appear, the name for which the larger characters are used shall serve as the basis for determining the minimum height of such statement:

Provided that -

(i) no statement of quantity shall be less than 1,5 mm in height or need exceed 15 mm in height;

(ii) where the statement of quantity includes lower case lettering, the height of the smallest letter used in the name or the symbol of the measuring unit shall not be less than the prescribed minimum height;

(iii) where the quantity is expressed in bilingual form and both versions appear one immediately above the other, the height of such statement may be regarded as a whole and not the individual expressions in each language, except where such bilingual statement is less than 5 mm in height;

(iv) the required statement of quantity shall, except in the case of subparagraph (viii) hereof, not be shown in smaller or lighter characters or figures, less prominently, or in a lesser number of positions than an equivalent or supplementary statement of quantity;

(v) where the package, container or label does not or the goods do not bear the brand-name or the descriptive name of the goods, the required statement of quantity expressed in measuring units of mass, or volume in ml, *l* or kl, shall be clearly, legibly and indelibly marked in a prominent and unobscured position either upon the goods, package or container or upon the label attached thereto or inserted inside a transparent container in bold characters and figures, each kind of a uniform print throughout in accordance with the following scale -

Net mass of package or contents of container	*Minimum height mm*

Over 5 kg up to over 5 *l*	10
Over 2 kg up to and including 5 kg, or over 0,5 *l* up to and including 5 *l*	5
2 kg and under, or 0,5 *l* and under	3,5;

(vi) where the package, container or label does not or the goods do not bear the brand-name or the descriptive name of the goods, the required statement of quantity expressed: in measuring units of volume, length, other linear dimensions, area, or number shall be clearly, legibly and indelibly marked in a prominent and unobscured position either upon the goods, package or container or upon the label attached thereto or inserted inside a transparent container in bold characters and figures, each kind of a uniform print throughout and of a height not less than 5 mm;

(vii) where a statement of quantity is embossed in high or low relief on a container, such statement shall be in bold characters and figures, each kind of a uniform print throughout, in accordance with the following scale -

Net mass of package or contents of container	*Minimum height mm*
Over 5 kg or over 5 *l*	15
Over 2 kg up to and including 5 kg, or over 0,5 *l* up to and including 5 *l*	7
2 kg and under, or 0,5 *l* and under	5;

(viii) where the required statement of quantity by net mass is shown on a label described in subregulation (4)(d) of this regulation such statement shall be of a height not less than 2,5 mm and if such label bears a price description, such description shall not exceed twice the height of the quantity statement.

Certain statements to be supplemented

(6) Where it is not prescribed in the regulations of this Part that the required statement of the quantity of an article or goods in prepacked form specified in a certain measuring unit, be supplemented, such statement shall, where supplementary information is significant in order to make the statement of quantity more meaningful and informative to a purchaser, be supplemented by a description of the length, grade, bore or other dimensions or size of such article or goods, whichever is appropriate.

Qualification of statement prohibited

(7) A statement of quantity shall be applied in such a manner as not to be misleading, without meaning or ambiguous and to be without qualification:

Provided that -

(i) the "drained mass" of a product may be indicated as well as the net mass;

[For the purpose of this proviso and for the purpose of determining drained content, "drained mass" in relation to the contents of any container containing a canned foodstuff means the mass of such contents after it has been drained in accordance with a provision prescribed for a specified canned foodstuff under the Agricultural Products Grading Act, 1959 (Act 9 of 1959) or the Standards Act, 1962 (Act 33 of 1962).];

[The bracketed text appears in the *Government Gazette*. The Standards Act 33 of 1962 has been replaced by the Standards Act 18 of 2005.]

(ii) the quantity of a liquid product may be qualified by a statement of content at a specified temperature of 20 °C;

(iii) where the written permission of the director has been obtained, the term "minimum quantity" or "not less than" may be used in conjunction with a statement of quantity, provided that in such cases the actual quantity of the goods shall not be less than the quantity thus declared or may not exceed such quantity by more than 20 per cent;

(iv) the mass of a beef, sheep, lamb, calf, goat or pig carcase may be indicated as "cold mass";

(v) the statement "when packed" may be used where permitted;

(vi) the words "contents", "net mass" or "net" may be used with a statement of quantity; and

(vii) the words "stretched" or "unstretched" may be used with a statement of length in the case of elastic materials; provided that both such lengths are shown simultaneously, except that in the case of cotton crepe bandage the stretched length only may be shown.

Use of descriptive names or words

(8) Without derogating from the provisions of subregulations (4) and (5) of this regulation, the required statement of quantity expressed in any measuring unit on any prepacked article or goods shall not be shown, in characters or figures -

(a) less than the height of, or of lighter print than the letters used on such an article or goods for -

(i) any descriptive name or words such as "giant", "jumbo", "king", or "giant size", "jumbo size", "king size", or the like which implies or imply size or quantity or which tends or tend to convey the impression to a purchaser of an increased size or quantity of such article or goods;

(ii) any descriptive name or words such as "economy" or "economy size" which tends or tend to convey the impression to a purchaser of a reduced selling price;

(b) smaller than half the height of, or of lighter print than the letters used on such an article or goods for any descriptive word or words -

(i) alluding to the selling price of any prepacked article or goods; or

(ii) describing the purpose for which a particular article is or a particular quantity of prepacked goods are suitable or intended to be used; or

(iii) differentiating between different sizes of prepacked finished articles or different prepacked quantities of the same kind and brand of such goods.

Positioning of a descriptive name or words

(9) Where any descriptive name or words referred to in subregulation (8) of this regulation appears or appear on a prepacked article or goods, the required statement of quantity shall not appear in a lesser number of positions or less prominently on such article or goods than any such name or words.

Manner of marking tare

(10) The tare shall be indicated as follows:

(a) "Tare - kg": Stamped, cut or cast in legible and indelible figures and letters, either on the side or neck of, or on a metal plate securely attached to, every can or container used for the sale of milk or cream by mass in accordance with the provisions specified in item 43 of the Table in Schedule 5 to this Part, other than cans or containers so used for the sale of milk the net mass of which is determined after the milk has been poured therefrom; or

(b) "Tare-g" or "T-g": In accordance with the provisions of this regulation in so far as they apply to the statement of quantity, on every container used for the sale by mass of an aerosol or of liquefied gas lighter fuel.

Exceptions for goods supplied in execution of a contract in terms of a South African Bureau of Standards specification

(11) Where prepacked goods are being supplied in execution of a written contract or agreement of sale made in accordance with the conditions of any specification which has been published by the South African Bureau of Standards, the quantity of such goods may be marked and labelled as is set out in such specification: Provided that where such marking and labelling do not comply with the provisions of this regulation such goods shall not be sold in the retail trade.

Goods sold other than in terms of a measuring unit

(12) Prepacked goods or articles which may be sold or imported into the Republic for sale other than by reference to a measuring unit shall bear no direct or indirect reference alluding to quantity in terms of any measuring unit, including numbers which might be construed as such a reference, either on the goods, package or container or on the label attached thereto or inserted in a transparent container or on any invoice, delivery note or other writing.

Director may authorise sale of goods which do not comply

(13) Prepacked goods or articles which do not comply in all respects with the provisions of this regulation shall not be imported for sale or exposed or delivered for sale or sold to a purchaser in the Republic, unless the written permission of the director has been obtained.

INTERPRETATION OF STATEMENT OF QUANTITY

8. A statement of quantity shall, subject to any tolerance prescribed in any regulation of this Part, make known the net quantity of goods or articles for sale exclusive of wrappers or any other material packed with such goods:

Provided that -

(i) the statement of quantity on an aerosol package shall make known that quantity of the commodity (including the propellant) that will be expelled from the container when the instructions for use as shown are followed;

(ii) the statement of size expressed in measuring units of length or area on or in respect of any manufactured articles shall make known the finished dimensions, excluding fringes;

(iii) the statement of mass with reference to a quantity of sugar or chocolate confectionery consisting of a collection of small units individually wrapped may include the immediate wrappings of the units;

(iv) the statement of volume relating to the quantity of a liquid product sold in prepacked form shall be the volume of the said product at a temperature of 20 °C;

(v) steel cylinders used for the sale of a gas or liquid fuel by mass may be marked with the maximum filling mass (unless the actual net mass of the contents is declared on a label attached to the cylinder, the contents shall, when sold, be deemed to be equivalent to the marked maximum filling mass);

(vi) the statement of volume relating to the sale of a quantity of liquid product which has been artificially heated and which has a temperature above 20 °C when being measured, shall be the volume of the said product at a temperature of 20 °C.

DEALINGS IN GOODS TO BE IN TERMS OF PRESCRIBED PHYSICAL QUANTITY OR BY NUMBER

9. Except as is otherwise provided in Schedule 5 or 6 to this Part, the quantity of any goods, wares or merchandise largely used by the public, shall, for the purpose of any dealing made or effected in the Republic or Southwest Africa, be expressed in terms of the physical quantity or quantity by number as is specified in any Table in the said Schedules:

Provided that the quantity of goods which are solids, other than the goods exempted in paragraph 2 of Schedule 5 or those goods for which expression of quantity in terms of a specific physical quantity has been prescribed in any provision of this Part, shall be expressed in terms of an appropriate physical quantity or in quantity by number according to which is most appropriate to the kind of goods, the established trade custom or general consumer usage.

CERTAIN GOODS OR ARTICLES PREPACKED FOR SALE TO BE IN PRESCRIBED QUANTITIES

Prepacked units to be in prescribed quantities

10. (1) Except as is otherwise provided, the goods or articles listed in Schedule 6 to this Part shall, when being prepared for sale or imported into the Republic for sale in prepacked form, be made up in units in accordance with any of the quantities prescribed under any item of that Schedule for such goods or articles: Provided that the director may in his discretion and subject to any condition which he may prescribe, grant written authority for the importation or sale of goods or articles listed in the Schedule which are not prepacked in accordance with the quantities or requirements laid down in any item of the Schedule.

Combined packs of prescribed units

(2) Goods or articles of the same kind listed in Schedule 6 to this Part which have been prepacked for sale in accordance with the provisions of subregulation (1) of this regulation may be prepacked further in the form of a combined pack intended for sale in such combined form in the retail trade: Provided that the total quantity of such pack constitutes a permissible prescribed quantity or if the total quantity does not constitute a prescribed quantity, the combined pack shall contain not less than six similar units of the same quantity.

Free offers with prepacked goods

(3) Any free offer or gift of goods or articles of the same kind listed in Schedule 6 to this Part made or given with a prescribed quantity of goods or articles for sale in the retail trade shall not form an integral part of such pack or be attached thereto.

BREAD

Bread to be made up in units of prescribed mass

11. (1) Except as may be otherwise provided in this regulation, no person shall sell bread as defined in regulation 1 of this Part or in any regulation which may be in force under the Marketing Act, 1968 (Act 59 of 1968), except in whole baked units of 425 g, 850 g, 1,275 kg and 1,7 kg: Except as may be otherwise provided in this regulation, no person shall sell bread as defined in regulation 1 of this Part or in any regulation which may be in force under the Marketing Act, 1968 (Act 59 of 1968), except in whole baked units of 425 g, 850 g, 1,275 kg and 1,7 kg:

Provided that -

(a) super bread and high-protein bread shall only be in whole baked units of 450 g or 750 g;

(b) whole-wheat bread, special bread and unspecified bread shall be in whole baked units of 225 g, 450 g, 900 g, 1,35 kg or 1,8 kg;

(c) the mass of any such individual unit may deviate from the relevant prescribed mass in deficiency or excess to an extent not greater than the following respective limits:

Prescribed mass of whole baked unit	Mass limits
225 g	215 g to 250 g
425 g	405 g to 475 g
450 g	430 g to 500 g
750 g	715 g to 835 g
850 g	810 g to 950 g
900 g	860 g to 1 kg
1,275 kg	1,215 kg to 1,425 kg
1,35 kg	1,29 kg to 1,5 kg
1,7 kg	1,62 kg to 1,9 kg
1,8 kg	1,72 kg to 2 kg; and

(d) the average net mass of at least 10 available like units of bread each being of a mass within any of the mass limits specified in proviso (c) and taken at random from a batch derived from the same source, shall not be less than the relevant prescribed mass.

[subregulation (1) substituted by GN 192/1986]

Dealers to sell or purchase bread in units of prescribed mass

(2) (a) A dealer who purchases bread for resale shall not accept such bread unless it complies at the time of delivery with the conditions set out in provisos (c) and (d) to subregulation (1) of this regulation.

(b) A retail dealer who purchases bread for resale or bakes bread for sale in the retail trade shall not, unless he sells such bread in accordance with the provisions of subregulations (9) and (10) of this regulation, sell a whole loaf or a half portion thereof of which the net mass is less than the following appropriate minimum mass:

Prescribed mass of whole baked unit	Minimum mass
225 g	210 g
425 g	395 g
450 g	420 g
750 g	700 g
850 g	790 g
900 g	840 g
1,275 kg	1,185 kg
1,35 kg	1,26 kg
1,7 kg	1,58 kg
1,8 kg	1,68 kg;

[subregulation (2) substituted by GN 192/1986]

Wrapped sliced bread

(3) (a) Except as provided in paragraph (b), any unit of wrapped sliced bread sold shall constitute a whole baked unit and be only of a prescribed net mass specified in subregulation (1) of this regulation, subject to the relevant tolerances provided under that subregulation.

(b) Any wrapped sliced rye bread not constituting a whole baked unit shall be sold only in those respective prescribed masses specified in subregulation (1) of this regulation, subject to the relevant tolerances specified in the said subregulation.

Delivery notes

(4) No person shall deliver to a purchaser any whole baked units of bread for sale representing a total mass of 5 kg or over unless at the time of delivery he issues a delivery note to the purchaser or his agent in accordance with the provisions of regulation 3 of this Part, on which the number of units of bread to be delivered is stated against the relevant prescribed mass.

Compound bread to be sold by mass

(5)

[subregulation (5) deleted by GN 192/1986]

Bread supplied in bulk on order by mass

(6) Where whole baked units of bread are sold in bulk in conclusion of an order which has been placed by mass, the units supplied shall comply with the provisions of subregulation (1) or (2) of this regulation, as the case may be, and the quantity of units to be supplied shall be the same number as the number which would have the mass to be supplied if the units were of the relevant prescribed mass.

[subregulation (6) amended by GN 192/1986]

Meaning of "a loaf"

(7) The term "a loaf" means a whole baked unit or a wrapped sliced whole baked unit of any prescribed mass, subject to the relevant tolerances and circumstances prescribed under subregulations (1), (2) and (3), as the case may be.

Definition of "compound bread"

(8)

[subregulation (8) deleted by GN 192`/1986]

Sale or keeping of stale bread

(9) The provisions of subregulations (1), (2) and (3) of this regulation shall not apply to stale bread when sold to a purchaser: Provided that the seller expressly represents it as such at the time of sale or, if delivered, endorses the words "stale bread" on the invoice or delivery note which shall accompany such bread when being transmitted, conveyed or delivered in pursuance of a sale, regardless of the total mass of bread.

(10) Unless stale bread, when kept on retail premises, is stored in or at a place separated from the storage place of other bread and such place, which shall be in full view of any prospective buyer of bread, bears a clear notice to the effect that the bread stored therein and sold therefrom is stale, all units of bread kept or found on retail premises where bread is sold, shall at all times be deemed to be bread to which the provisions of subregulations (1), (2) and (3) of this regulation apply.

Bread exempted

(11) This regulation shall not apply to any whole baked unit of bread made for sale or sold in units not exceeding 100 g.

Massmeters to be kept

(12) Every person selling bread by retail at his trade premises shall provide at such premises where the bread is sold a suitable certified massmeter and, where necessary, certified masspieces for measuring the mass of such bread and shall permit any purchaser to measure the mass of the bread which has been bought by him by means of such massmeter and masspieces.

FENCING POSTS AND DROPPERS

12. (1) A statement of quantity in connection with the sale of fencing posts and droppers shall clearly state the following:

(a) The quantity by number; and

(b) the length.

(2) Any I-section or Y-section fencing posts made and sold or imported for sale shall, after punching and pointing, have the following mass per unit length within a tolerance of plus or minus 2,5 per cent:

(a) I-section: 3 kg/m; and

(b) Y-section: 2,5 kg/m.

Droppers

(3) Any ridgeback or H-section dropper made and sold or imported for sale shall have a mass per unit length respectively as set out below, within a tolerance of plus or minus 4,0 per cent:

(a) Ridgeback: 0,56 kg/m; and

(b) H-section: 0,385 kg/m.

DRESSED MEAT CARCASES

13. (1) The mass of a dressed beef, sheep, lamb, calf, goat or pig carcase which is sold for the first time by public auction after it has been slaughtered, shall be determined at the time of sale or immediately before sale and only after such meat carcase has been allowed to cool off for at least 12 hours after it has been slaughtered:

Provided that where it has been necessary as a result of any particular circumstance at an abattoir that the mass of such meat carcase be measured for sale by auction after it has been slaughtered, but before it has been allowed to cool off for at least 12 hours, the mass thus obtained on a certified massmeter shall for the purpose of determining mass for a first sale after dressing, be reduced as follows:

(i) Beef, sheep, lamb and pig carcases by 2,5 per cent; and

(ii) calf and goat carcases by 3,5 per cent.

(2) Where the mass of a dressed beef, sheep, lamb, calf, goat or pig carcase has been determined for public auction in accordance with the proviso to subregulation (1) of this regulation, such mass shall be deemed to be the declared mass for the purpose of a first sale after dressing:

Provided that -

(i) in the case of a beef, sheep, lamb or pig carcase, the actual mass of such carcase at the time of sale may exceed the declared mass by 2,5 per cent, but shall not be more than 1 per cent less than the declared mass; and

(ii) in the case of a calf or goat carcase, the actual mass of such carcase at the time of sale may exceed the declared mass by 3,5 per cent, but shall not be more than one per cent less than the declared mass.

(3) The mass of a dressed beef, sheep, lamb, calf, goat or pig carcase or of a combined number of such carcases which are sold by public auction shall either be declared by the

auctioneer at the time of sale or on an invoice issued after sale without marking the mass on such meat carcases or on a label which has been attached thereto.

MEASURING INSTRUMENTS TO BE USED AND KEPT AT PREMISES WHERE GOODS ARE MEASURED FOR SALE

14. Any person who measures the quantity of goods or articles in the presence of a purchaser or who in the retail trade prepacks goods or articles for sale, shall use a certified measuring instrument suitable for the purpose and shall make such instrument available to an authorised officer who wishes to check the quantity of prepacked goods or articles or to a purchaser who wishes to measure the quantity of the goods or articles purchased by him.

SALE OF A BULK QUANTITY OF GOODS MADE UP OF UNITS IN PREPACKED FORM

15. Where a bulk quantity of goods or articles for sale is made up of prepacked units of which the quantities comply with the prescribed tolerances, the number of such units to be supplied in respect of a specified quantity shall be that number which will, according to the statement of quantity shown thereon or the quantity each is intended to be, amount to the specified quantity.

PERMISSIBLE MEASURING UNITS AND THEIR SYMBOLS

16. (1) For the purpose of complying with the relevant provisions of section 38 of the Act in respect of goods or articles sold by quantity expressed in terms of a measuring unit or in respect of any service rendered, the quantity of which is expressed in any measuring unit, only an appropriate measuring unit specified in the First Schedule and in Tables 1 to 4 inclusive in the Second Schedule to Government Notice R.1146 of 5 July 1974, issued under the Measuring Units and National Measuring Standards Act, 1973 (Act 76 of 1973), and the carat metric (CM) shall be used, unless exemption in writing for deviating herefrom has been granted by the director or unless it is used in connection with a purpose or an article exempted in the Schedule to Government Notice R.1791 of 4 October 1974 as amended.

[The Metrology Amendment Act 17 of 2005 repealed the Measuring Units and National Measuring Standards Act 76 of 1973.

Measuring units, symbols and rules were issued under the Measuring Units and National Measuring Standards Act 76 of 1973 in RSA GN R.1146/1974 (RSA GG 4326), as amended by RSA GN R.713/1976 (RSA GG 5103) and by RSA GN R.1234/1977 (RSA GG 5648).

A prohibition of the expression of the magnitude of quantities by means of units other than prescribed units and the designation of units by symbols other than prescribed symbols was issued under the Measuring Units and National Measuring Standards Act 76 of 1973 in RSA Proc. R.1791/1974 (RSA GG 4419), as amended prior to the date of transfer by RSA Proc. R.711/1976 (RSA GG 5103), RSA Proc. R.2482/1976 (RSA GG 5361) and RSA GG R.1233/1977 (RSA GG 5648).]

(2) The use of any measuring unit or its symbol in connection with any contract, bargain, sale, purchase or transaction shall be in accordance with the rules specified in Government Notice R. 1146 referred to in subregulation (1) and shall be expressed in the manner prescribed in Schedule 7 to this Part, unless exemption in writing for deviating therefrom has been granted by the director.

RECOGNISED EQUIVALENTS

17. The equivalent of, or of any multiple or submultiple of, any measuring unit included in the Schedule to Government Notice R.1145 of 5 July 1974 issued under the Measuring Units and National Measuring Standards Act, 1973 (Act 76 of 1973), expressed in terms of any other such unit, shall be the recognised equivalent for use for trade purposes, subject to the provisions specified in the said Government Notice.

[The Metrology Amendment Act 17 of 2005 repealed the Measuring Units and National Measuring Standards Act 76 of 1973.

Equivalents of measuring units were issued under the Measuring Units and National Measuring Standards Act 76 of 1973 in RSA GN R.1145/1974 (RSA GG 4326), as amended by RSA GN R.712/1976 (RSA GG 5103).]

DATE OF COMMENCEMENT

18. Part I of the regulations promulgated by Government Notice R. 62 of 17 January 1969, as amended by Government Notices R. 4006 dated 31 December 1969, R. 998 dated 26 June 1970, R. 2276 dated 18 December 1970, R. 883 dated 28 May 1971, R. 1597 dated 17 September 1971 (as corrected by R. 2074 dated 12 November 1971), R. 2307 dated 24 December 1971 R. 1194 dated 7 July 1972, R. 2293 dated 15 December 1972, R. 496 dated 30 March 1973, R. 1575 dated 31 August 1973, R. 2444 dated 21 December 1973, R. 1129 dated 28 June 1974, R. 376 dated 28 February 1975 and R. 238 dated 18 February 1977 is repealed as from the date of publication hereof, when these regulations shall come into force.

[Regulation 5(1) and (7)]

SCHEDULE 1

TABLE I

LIMITS OF ERROR FOR GOODS SOLD BY MASS

Goods	Quantities	Limits of error	
		Deficiency	Excess
(a) All goods such as agricultural produce, grain, groceries, provisions, and other general merchandise, but excluding precious goods and other materials such as precious metals and precious stones and the goods specified below	Up to 5 g	10%	15%
	Above 5 g and up to 10 g	7%	12%
	Above 10 g and up to 20 g	4%	8%
	Above 20 g and up to 50 g	1,5 g	3 g
	Above 50 g and up to 100 g	2 g	4 g
	Above 100 g and up to 200g	4 g	8 g
	Above 200 g and up to 500 g	7g	14 g
	Above 500 g and up to 1 kg	10 g	20 g
	Above 1 kg and up to 2 kg	15 g	30 g
	Above 2 kg and up to 5 kg	25 g	50 g
	Above 5 kg and up to 10 kg	50 g	100 g
	Above 10 kg and up to 20 kg	80 g	160 g
	Above 20 kg and up to 50 kg	125 g	250 g
	Above 50 kg and up to 100 kg	250 g	500 g
	Above 100 kg	0,25%	0,5%
(b) Aerosol	As in item (a) above	As in item (a) above plus 3 per cent of the quantity expelled in the case of an accelerated test for determination of such quantity	As in item (a) above plus 3 per cent of the quantity expelled in the case of an accelerated test for determination of such quantity
(c) Canned foods and biscuits	As in item (a) above	Double the deficiencies in item (a) above	Double the excesses in item (a) above
(d) Cement, coal, coke, ore, fertiliser and similar goods	Any mass	0,5%	1%

(e) Liquids sold by mass	Above 100 kg	0,25%	0,5%
(f) Potato crisps and chips	Up to 500 g	5%	10%
(g) Permanent and dissolved gasses	Any quantity	2%	3%
(h) Dressed poultry or poultry pieces	Up to 500 g	7g	20 g
	Above 500 g	15 g	50 g
(i) Potatoes	Any quantity	3,5%	7%

TABLE II

LIMITS OF ERROR FOR GOODS SOLD BY VOLUME (in ml, *l* or kl)

Goods	Quantities	Limits of error	
		Deficiency	Excess
(a) Liquids and other goods sold by volume, excluding precious goods or precious liquids and the goods specified below	Up to 5 ml	10%	15%
	Above 5 ml and up to 10 ml	7%	12%
	Above 10 ml and up to 20 ml	4%	8%
	Above 20 ml and up to 50 ml	1,5 ml	3 ml
	Above 50 ml and up to 100 ml	2,5 ml	5 ml
	Above 100 ml and up to 200 ml	5 ml	10 ml
	Above 200 ml and up to 500 ml	10 ml	20 ml
	Above 500 ml and up to 1 *l*	15 ml	30 ml
	Above 1 *l* and up to 2 *l*	20 ml	40 ml
	Above 2 *l* and up to 5 *l*	35 ml	70 ml
	Above 5 *l* and up to 10 *l*	60 ml	120 ml
	Above 10 *l* and up to 20 *l*	100 ml	200 ml
	Above 20 *l* and up to 50 *l*	250 ml	500 ml
	Above 50 *l* and up to 100 *l*	500 ml	1 *l*
	Above 100 *l*	0,25%	0,5%
(b) Aerosol	As in item (a) above	As in item (a) above plus 3 per cent of the quantity expelled in the case of an accelerated test for determination of such quantity	As in item (a) above plus 3 per cent of the quantity expelled in the case of an accelerated test for determination of such quantity
(c) Bantu beer	Any quantity	3%	6%

TABLE III

LIMITS OF ERROR FOR GOODS SOLD BY VOLUME IN CUBIC MEASURE

Goods	Quantities	Limits of error	
		Deficiency	Excess
Any commodity sold by volume in cubic measure	Any quantity of 0,5 m^3 and above	8 dm^3/m^3	16 dm^3/m^3

TABLE IV

LIMITS OF ERROR FOR GOODS SOLD BY AREA

Goods	Area	Limits of error	
		Deficiency	Excess
Leather or other materials per unit	Up to 10 dm^2	2%	4%
	Above 10 dm^2 and up to 20 dm^2	20 cm^2	40 cm^2
	Above 20 dm^2 and up to 50 dm^2	40 cm^2	80 cm^2
	Above 50 dm^2 and up to 1 m^2	75 cm^2	150 cm^2
	Above 1 m^2 and up to 2 m^2	100 cm^2	200 cm^2
	Above 2 m^2 and up to 5 m^2	150 cm^2	300 cm^2
	Above 5 m^2 and up to 10 m^2	200 cm^2	400 cm^2
	Above 10 m^2	0,25%	0,5%

TABLE V

LIMITS OF ERROR FOR GOODS SOLD BY LENGTH

Goods	Length	Limits of error	
		Deficiency	Excess
Any commodity sold by length, including any other dimension such as thickness or width thereof, except a thickness of 25 mm or less	Up to 200 mm	2%	4%
	Above 200 mm and up to 500 mm	1%	2%
	Above 500 mm and up to 1 m	5 mm	10 mm
	Above 1 m and up to 2 m	10 mm	20 mm
	Above 2 m and up to 5 m	15 mm	30 mm
	Above 5 m and up to 10 m	25 mm	50 mm
	Above 10 m	0,25%	0,5%

TABLE VI
[Regulation 5(7)]

LIMITS OF ERROR FOR GOODS SOLD BY NUMBER

Goods	Number	Limits of error	
		Deficiency	Excess
(a) Goods or articles sold on the basis of quantity by number, but excluding the goods specified below	Any number	–	Any reasonable number having regard to the quantity, size or value of the article or to the method of determining the number in a quantity
(b) Drugs or medicines consisting of similar, identical units in tablet or capsule form	50 or more units	One unit per 50 or part thereof	Two units per 50 or part thereof
(c) Facial tissues	Over 10 units	One unit per 50 or part thereof	Two units per 50 or part thereof
(d) Paper serviettes	Over 10 units	One unit per 50 or part thereof	Two units per 50 or part thereof
(e) Paper towels, whether separate units or perforated	Over 10 units	One unit per 50 or part thereof	Two units per 50 or part thereof
(f) Sheets of toilet paper, whether separate units or perforated	Any number over 50 sheets	One sheet per 50 or part thereof	Two sheets per 50 or part thereof

SCHEDULE 2

GOODS SUBJECT TO THE TOLERANCE IN REGULATION 5(6)

Item No.	Goods
1	All kinds of meal made from cereals.
2	Animal protein-rich farm feeds.
3	Coarse salt.
4	Farm feed mixtures.
5	Fishmeal.
6	Milled roughage for farm feeds.
7	Vegetable protein-rich farm feeds.

SCHEDULE 3

[REGULATION 6(1)]

GOODS SOLD "NET MASS WHEN PACKED"

Item No.	Goods
1	All grades of ferrous sulphate, except the exsiccated variety, zinc sulphate, copper sulphate, sodium sulphite, sodium thiosulphate and lead nitrate.
2	Dried fruit when prepacked in wrappers or containers which are not moisture-retaining.
3	Dry ice.
4	Fresh mushrooms.
5	Ropes and cordage, other than metal or nylon rope.
6	Sausage skins when prepacked in wrappers or containers which are not moisture-retaining.
7	Seed potatoes.
8	Soap as defined in regulation 1 hereof in the form of bars, tablets, powders, flakes or chips containing more than 20 per cent of moisture by mass at the time of packing.
9	Tobacco or snuff when prepacked in wrappers or containers which are not moisture-retaining.
10	Twines (shop, stitching, seaming, binder or harvester, in balls, reels, cops or spools, other than nylon twines).
11	Washing soda, Glauber salts or epsom salts.
12	Yeast, except dry yeast.

INDEX TO SCHEDULE 4

Goods or articles	Item No.
Aerated waters (flavoured or unflavoured)	18
Anthracite	6 and 8
Articles or goods sold by producer	5
Bales of chaff, fodder, hay or lucerne	9
Bars of household or laundry soap	15
Beans (dried)	25
Beef carcases (dressed)	16(c)
Beer (ginger beer)	18
Beer (hop beer)	18
Bread	22
Biltong	16(e)
Bulk containers from which goods are sold by retail	10
Calf carcases (dressed)	16(c)
Candles	21
Cement	20
Cement mortar (ready-mixed)	20
Chaff in bales	9
Cheese (whole)	24
Chocolate confectionery	26
Coal	6, 7, 8 and 20
Coke	6 and 8
Concrete (ready-mixed)	20
Confectionery (flour)	13
Confectionery (sugar or chocolate)	26
Cream	17
Crushed stone	20
Dressed beef, calf, goat, lamb, pork and sheep carcases	16(c)
Dressed poultry	16(b)
Dried beans	25
Dried peas	25
Dried wore	16(e)
Drinks (fruit based)	18
Easter eggs	26
Figurines (sugar or chocolate confectionery)	26

Firewood	8, 20 and 23
Flavoured aerated and spa waters	18
Flour confectionery	13
Fodder in bales	9
Free sample	1
Fresh fruit and vegetables	11 and 12
Fruit juices	18
Ginger beer	18
Goat carcases (dressed)	16(c)
Goods or articles sold by producer	5
Goods specified in paragraph 2 of Schedule 5	27
Goods (yeast-raised)	13
Grain (whole)	25
Gravel	20
Groundnuts	25
Hay in bales	9
Hides	14
Hop beer	18
Household soap in bars or tablets	15
Juices (fruit juices)	18
Lamb carcases (dressed)	16(c)
Laundry soap in bars or tablets	15
Lime	20
Log firewood	23
Lucerne in bales	9
Meat, uncanned, processed or manufactured	16(a)
Meat parcels	16(a)
Milk	17
Mineral waters	18
Novelty shapes (sugar or chocolate confectionery)	26
Ore	20
Parcels of meat	16(d)
Peas (dried)	25
Pies	13
Pork carcases (dressed)	16(c)
Potable spirituous liquor	2
Poultry (dressed)	16(b)
Poultry (undressed)	16(c)
Prepacked goods in transparent packages	3 and 4
Processed meat (uncanned)	16(a)
Ready-mixed cement mortar	20
Ready-mixed concrete	20
Retail sale of goods from bulk containers	10
Rolls (sausage)	13
Rye bread (sliced)	22
Sand	20
Sausage rolls	13
Sheep carcases (dressed)	16(c)
Single candles	21
Single loaves of bread	22
Skins	14
Sliced rye bread	22
Soap (household or laundry)	15
Spa waters (flavoured and unflavoured)	18
Spirituous liquor (potable)	2
Split firewood	23
Stone (crushed)	20
Sugar confectionery	26

Sunflower seed	25
Tablets (household or laundry soap)	15
Transparent packages of prepacked goods	3 and 4
Uncanned processed or manufactured meat	16(a)
Undressed poultry	16(c)
Undressed venison carcasses	16(c)
Unflavoured aerated and spa waters	18
Vegetables (fresh)	11 and 12
Venison carcasses (undressed)	16(c)
Water (mineral water)	18
Whole cheese	24
Whole grain	25
Yeast-raised goods	13

SCHEDULE 4

[REGULATION 6(2)]

PREPACKED GOODS EXEMPTED FROM QUANTITY INDICATION

Item No.	Goods
1	A quantity of goods in prepacked form, being a free sample: Provided that either the words "free sample" or the words "not for sale" are prominently marked on the package.
2	A quantity of a potable spirituous liquor when served from a bulk container for consumption on the premises.
3	A transparent package containing units of prepacked goods, being of the same quantity, expressed in terms of a measuring unit or by number: Provided that - (a) the number of such units in the transparent package does not exceed 12 and all are clearly visible; and (b) where such units should bear a quantity statement, such statement is marked in accordance with the relevant requirements of this Part and is clearly visible on at least one of such units.
4	A transparent package containing units of prepacked goods, being of differing quantity, expressed in terms of a measuring unit or by number: Provided that - (a) the number of such units in the transparent package does not exceed 12 and all are clearly visible; and (b) where such units should bear a quantity statement, such statement is marked in accordance with the relevant requirements of this Part and is clearly visible on each such unit.
5	Any goods or articles subject to sale in terms of a measuring unit or by number, which have been grown in the Republic or South-West Africa and which are sold to a wholesale purchaser by the producer thereof: Provided that such goods or articles are not made up or prepacked in the form in which they will eventually be sold to a retail purchaser or when so made up or prepacked are specifically exempted from indication of quantity under any item of this Schedule.
6	Coal, anthracite or coke, when sold in bags or like containers holding 40 kg, 70 kg or 90 kg in the case of coal or anthracite, and 20 kg or 40 kg in the case of coke.
7	Coal, when sold in the retail trade in open tins of a nominal volume of 20 *l* or 25 *l* filled to the brim.
8	Coal, anthracite, coke or firewood delivered to an end-user in quantities of 10 or more bags holding quantities other than the respective masses prescribed in items 6 and 23 of this Schedule: Provided that such goods are accompanied on delivery by a delivery note in which the total number of bags and the net mass of the total consignment are clearly indicated.

9	Compressed bales of lucerne, fodder, chaff or hay, except where kept or exposed for sale on retail premises, with a price marked or displayed thereon.
10	Containers used for keeping goods in bulk for sale therefrom by retail.
11	Fresh fruit and fresh vegetables, except potatoes and onions - (a) supplied in containers to a public market for sale through the agency of the market master; or (b) sold in any containers which conform to any regulation which may be in force in terms of the Marketing Act, 1968 (Act 59 of 1968).
12	(a) Fresh fruit and vegetables permitted to be sold by number and made up for sale in the retail trade in a transparent package containing less than nine units. (b) Save as is provided in item 12 (a) of this Schedule, fresh fruit and vegetables required to be sold by mass or number and prepacked by a retail dealer: Provided that a notice bearing a clear and legible statement of the quantity of such goods, set out in letters and figures not less than 10 mm in height, is displayed in close proximity to such goods. (c) Fresh vegetables sold in bunches.
13	Flour confectionery and yeast-raised goods permitted to be sold *by* number, including sausage rolls and pies when made up for sale in the retail trade in a transparent package which contains not more than six units.
14	Hides and skins.
15	(a) Individual 1 kg bars, 500 g bars or 400 g tablets of household or laundry soap which, in their original condition, met the requirements of size and net mass as prescribed in item 100 (c) of the Table in Schedule 6: Provided that packages containing more than one such bar or tablet shall be marked with a statement of the total net mass at the time of packing and the number of 1 kg bars, 500 g bars or 400 g tablets contained therein. (b) Individual pieces of bars or halves of twin tablets of household or laundry soap so divided by a retail dealer from bars or tablets, which, in their original condition, met the requirements of size and net mass as prescribed in item 100 (c) of the Table in Schedule 6.
16	Meat - (a) A quantity or unit of uncanned processed meat or of an uncanned manufactured meat product as defined under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), when supplied to and kept by the retail trade to be portioned out and the mass to be determined at the time of sale. (b) An unenclosed or unwrapped unit of dressed poultry, except when deep-frozen, sold by a producer thereof to a reseller or when such poultry is kept or exposed for sale on retail premises without a price marked or displayed thereon: Provided that in this case a suitable massmeter shall be kept readily available for the purpose of measuring the mass of such poultry in the presence of the purchaser before sale. (c) Dressed carcasses of beef, calf, lamb, sheep, goat or pork and undressed carcasses of venison or poultry, except where kept or exposed for sale on retail premises with a price marked or displayed thereon. (d) Parcels of meat when prepared for delivery or when being delivered to a purchaser by a butcher in the retail trade: Provided that the net mass of each separate kind or cut contained in a parcel shall be shown separately on the delivery note accompanying such meat when being delivered, except that only the total net mass of the whole parcel of meat need be shown on the delivery note in cases where the purchaser was present during the measuring of the mass of the separate kinds or cuts of meat. (e) Single pieces of biltong and of dried wors of random size and mass sold to or kept by the retail trade for sale, including packs of small quantities of random mass consisting of any number of pieces of biltong, but excluding sliced biltong in prepacked form and dried wors: sticks of uniform mass and of approximately uniform size.
17	Milk or cream sold by the producer to a factory, dairy or cream or milk depot in accordance with the provisions of item 43(c) of the Table in Schedule 5.

18	Mineral waters, including hop beer and ginger beer and fruit juices, including fresh fruit juices, fruit based drinks and flavoured and unflavoured aerated and spa waters ready for drinking without dilution, sold in glass or plastic containers manufactured before 1 January 1972,
19	Packaged units of goods to be sold in terms of a measuring unit or by number, being part of a larger combined quantity or unit in prepacked form which bears a declaration of quantity, except when such units are sold separately in the retail trade or are intended to be so sold when originally prepacked by the packer and are not specifically exempted from indication of quantity under any item of this Schedule.
20	Sand, gravel, crushed stone, ready-mixed concrete, ready mixed cement mortar, lime, cement, ore, coal, firewood or similar goods when delivered in vehicle loads by road and accompanied by a delivery note.
21	Single candles which in their original prepacked condition met the requirements as prescribed in item 22 of the Table in Schedule 6.
22	Single loaves of bread as prescribed in regulation 11 of this Part, except wrapped and sliced super white loaves and wrapped sliced rye bread specified in regulation 11(3)(b).
23	Split or log firewood, when sold in bags or bundles holding 1 kg, 2 kg, 5 kg, 10 kg, 20 kg or 40 kg.
24	Whole cheeses, except where such cheeses are offered or exposed for sale in the retail trade or are packaged by the manufacturer or a wholesale dealer in such manner as to be intended to be sold as a whole unit in the retail trade: Provided that exemption from quantity indication shall also apply when an unwrapped whole cheese of the Gouda type, the mass of which is less than 600 g, is offered or exposed for sale in the retail trade.
25	Whole grains, groundnuts, sunflower seed, dried beans and dried peas in grain bags: Provided that such goods shall be sold by the net mass of the quantity involved and not per bag or number of bags.
26	Sugar or chocolate confectionery, being easter eggs, figurines or novelty shapes if the number of such articles in a package is visible to a retail purchaser.
27	The goods specified in paragraph 2 of Schedule 5.

INDEX TO SCHEDULE 5

Article or goods	Paragraph 2 Item No.	Table Item No.
Aerosol	–	1
Aluminium foil	–	2
Anthracite	–	15
Articles sold for 5c or less, or 109 or 10 ml or less	9 and 10	–
Ballast	–	3
Beans (green)	2	29(d)
Bed sheets	–	4
Beer and beer shandy	20	–
Berries	2	29(c)
Bias binding	–	23
Binder twines	–	65
Biscuits	–	5 and 6
Blankets	–	4
Bread	–	7 and 8
Bread rolls	–	9
Brush wood (indigenous)	5	–
Building sand	–	10

Cable (electric)	–	24
Cakes	–	9
Candles	–	11
Candles (fancy)	22	26
Cement mortar	–	51
Cereals (green stage)	17	–
Cheese	6	12
Chemicals (industrial)	–	33
Cheroots	–	13
Cigarettes	–	13
Cigars	–	13
Coal	23	15
Coke	–	15
Compost .	13	70
Condensed milk	–	43(c)
Concrete (ready-mixed)	–	51
Confectionery (flour)	–	9
Confectionery (sugar or chocolate)	7	14
Cordage	–	53
Cosmetics	11	16
Cream	–	43
Crewel·wools	–	17
Crocheting wools	–	18
Crushed stone	–	19
Detergent (solids)	–	57
Dressings (first aid)	–	28
Dried fruit	16	20
Drugs	11 and 12	21
Easter eggs	–	14(a)
Eggs	–	22
Elastic	–	23
Electric cable	–	24
Embroidery wools	–	25
Facial tissues (paper)	–	46
Fancy candles	22	26
Fancy soap	22	26
Farmyard manure	13	–
Figurines (confectionery)	–	14(a)
Fish (freshly caught)	14	–
Firewood	5	27
First aid dressings	–	28
Fruit -		
Dried	16	20
Fresh	4	29
Flour confectionery	–	9
Foodstuffs (prepared)	8	–
Gas	–	30(a)
Gas lighter fuel	–	30(b)
Goods sold for 5c or less, or 10 g or 10 ml or less	9 and 10	–
Green beans	2	29(d)
Green peas	2	29(d)
Hand knitting wools	–	31
Hose pipes	–	47
Ice-cream and similar frozen goods	15	32
Indigenous brushwood	5	–
Industrial chemicals	–	33
Intoxicating liquor	20	36(a)
Koeksisters	–	9

Kraal manure and kraal manure ash	13	–
Land	–	34
Leaf tobacco	18	–
Leather	–	35
Lighter fuel (gas)	–	30(b)
Liquefied petroleum gas	–	30(c) and (d)
Liqueur	21	–
Liquids (all kinds)	–	36(a) and (b)
Liquid fuels	–	37
Liquid refreshments	20	–
Liquid (viscous)	–	36(b)
Lubricating oils	–	38
Lucerne (green stage)	17	–
Manure	13	–
Materials (textile cloth)	–	62
Meat	–	39
Mending wools	–	40
Mercury	–	41
Metal sheets	–	42
Milk	20	43
Netting wire	–	68
Novelty shapes (confectionery)	–	14(a)
Oils -		
Lubricating	–	38
Viscous	–	44
Onions	1	29(d)
Paints	–	45
Paper -		
Sheets	–	46
Toilet	–	46
Wall	–	66
Waxed	–	67
Serviette	–	46
Towels	–	46
Pasties	–	9
Pastries.	–	9
Pies	–	9
Pillow cases	–	4
Pipes and hose pipes.	–	47
Plant residues.	13	70
Polishes.	–	48
Postal stationery	–	49
Potato crisps	24	–
Potatoes	1	29(d)
Prepared food	8	–
Razor blades	–	50
Ready-mixed concrete	–	51
Ribbon	–	52
Ropes and cordage	–	53
Rug cut piles	–	54
Rug-making wools	–	55
Sand (building)	–	10
Sausage rolls.	–	9
Scones.	–	9
Seeds.	25	–
Semi solids	–	58
Serviettes (paper)	–	46
Sewing thread	–	56

Sherbet (soft serve mix)	–	69
Soap:		
Fancy	22	26
Solids	–	57
Solids:		
Dry	–	58
Mixture of solid and liquid	–	58
Snuff tobacco ground	19	–
Stable manure	13	–
Stationery (postal)	–	49
Stone (crushed)	–	19
Sweet potatoes	2	29(d)
Synthetic yarns	–	59
Tapes	–	60
Tapestry wools	–	61
Textile cloth materials	–	62
Timber	–	63
Tissues (facial paper)	–	46
Tobacco:		
Leaf	18	–
Ground snuff	19	–
Toilet paper	–	46
Toilet preparations	11	–
Tomatoes	2	29(d)
Tooth-paste	–	64
Towels (paper)	–	46
Twines	–	65
Vegetables (fresh)	1, 2 and 3	29
Viscous liquids	–	36(b)
Viscous oils	–	44
Wallpaper	–	66
Waxed paper	–	67
Wine	21	–
Wire netting	–	68
Wools -		
Crewel	–	17
Crocheting	–	18
Embroidery	–	25
Hand-knitting	–	31
Mending	–	40
Rug-making	–	55
Tapestry	–	61
Yarn (synthetic)	–	59
Yeast raised goods	–	9

SCHEDULE 5

[Regulation 9]

QUANTITY OF GOODS TO BE EXPRESSED AS PRESCRIBED

1. Subject to the provisions of paragraph 2 of this Schedule or the proviso to regulation 9, the magnitude of any quantity of the goods or articles specified in the second column of the table herein, shall in any trade dealing be respectively expressed in terms of that physical quantity or by number as is prescribed in the third column of the said table: Provided that where written

permission has previously been obtained from the director, a prepacked quantity of the goods or articles specified in the second column of the table herein may be expressed otherwise than prescribed in the third column hereof.

2. The provisions of paragraph I of this Schedule shall not apply to the goods or articles specified below.

Item No.	Goods
1	Potatoes and onions sold by retail on a public market in quantities not exceeding 5 kg and not packed in a container.
2	Sweet potatoes, green beans, green peas, tomatoes, berries and Similar fruit sold by retail on a public market in quantities not exceeding 5 kg and not packed in a container, or sold by a retail dealer in unopened containers as supplied to a public market, or sold by any person in unopened containers which conform to any regulation which may be in force in terms of the Marketing Act, 1968 (Act 59 of 1968).
3	Fresh vegetables, sold by the bunch,
4	Fresh fruit sold in unopened containers as supplied to a public market or sold by retail in such containers, or sold by any person in unopened containers which conform to any regulation which may be in force in terms of the Marketing Act, 1968 (Act 59 of 1968).
5	Indigenous brushwood of a diameter not exceeding 50 mm or firewood in lengths exceeding 500 mm.
6	Single pieces of cheese or process cheese which have a mass of 30 g and under and whole cheeses of the Gouda type which have a mass of less than 600 g.
7	A quantity of sugar or chocolate confectionery in prepacked form consisting of a collection of similar small articles or a single unit, the net mass of which is less than 50 g. 8 A quantity of a foodstuff ready prepared as a refreshment or as a meal or part of a meal for human consumption when made or served on or from catering premises.
9	A quantity of goods or an article when sold by retail at a price of 5 cents or less, unless otherwise provided.
10	Any solid or liquid goods or such an article, other than a medicine, a drug, a cosmetic or a toilet preparation, the quantity of which is respectively 10 g, 10 ml or less.
11	Any solid or liquid goods or such an article, being a medicine, a drug, a cosmetic or toilet preparation, the quantity of which is respectively 5 g, 5 ml or less.
12	Medicines or drugs consisting of a quantity of less than six similar identical units in solid, tablet, capsule or powder form.
13	Kraal manure, kraal manure ash, compost and other plant residues, when not prepacked in containers for sale by retail, and farmyard or stable manure.
14	Freshly caught fish sold to quarters other than to fish factories.
15	Ice-cream and other similar frozen goods of a quantity of less than 500 ml.
16	A quantity of dried fruit which has a mass of 62,5 g or less.
17	Cereals or lucerne when in the green stage.
18	A quantity of leaf tocacco **[tobacco]** which has a mass of less than 100 g.
19	A quantity of ground snuff tobacco which has a mass of less than 30 g.

20	Any quantity of milk or other liquid, excluding beer, beer shandy or intoxicating liquor, served as a refreshment and when made up on retail catering premises where it is consumed or from where it is served.
21	Any quantity of a liqueur or a wine when served from a bulk container for consumption on the premises.
22	Fancy soap and fancy candles.
23	Coal when sold in the retail trade in open tins of a nominal volume of 20 *l* or 25 *l* filled to the brim.
24	Potato crisps when prepacked in a quantity of less than 20 g.
25	All kinds of seed when prepacked in a quantity of less than 20 g.

TABLE

Item No.	Goods or articles	Quantity to be expressed by -
1	Aerosols	mass, with the tare mass also indicated: Provided that when prepacked in a transparent container the quantity may be expressed by volume;
2	Aluminium foil	length: Provided that the width shall also be indicated;
3	Ballast, being any material commonly known as ballast	volume in cubic measure;
4	Bed sheets, pillow cases or blankets	length: Provided that the width shall also be indicated;
5	Biscuits, except as specified in item 6 below	mass: Provided that biscuits baked on the premises of a confectioner or baker and sold by him by retail from his premises may be so sold by number, or where supplied in prepacked form for resale in the retail trade in transparent packs containing six or less units, no quantity need be indicated;
6	Biscuits of a mass of more than 30 g per biscuit	number;
7	Bread, being compound bread	mass;
8	Bread loaves in the units of mass prescribed by regulation 11 of this Part	number;
9	Bread rolls and other flour confectionery, except biscuits, but including cakes, pies, sausage rolls, pastries, pasties, koeksisters, scones, biscuits of a mass of more than 30 g per biscuit or biscuits baked on the premises of a confectioner or baker and sold by him by number from such premises, and yeast raised goods other than bread and rusks	number: Provided that no supplementary description of size need be indicated. When made up for sale in the retail trade in transparent packages containing six or less units, no quantity by number need be indicated;
10	Building sand in quantities of 0,5 m^a and above	volume in cubic measure;
11	Candles – (except fancy candles) (a) in prepacked form (b) loose candles which in their original prepacked state met the requirements prescribed in item 22 of the Table in Schedule 6, when sold in the retail trade	 mass; number;

12	Cheese.....	mass, except cheese specified in item 6 of paragraph 2 of this Schedule;
13	Cigars, cigarettes and cheroots	number: Provided that no supplementary description of size need be indicated;
14	Confectionery (sugar or chocolate) Sugar or chocolate confectionery being -	mass, except if the quantity is 50 g or less, or as specified below and in item 7 of paragraph 2 of this Schedule;
	(a) easter eggs, figurines or novelty shapes	mass or number;
	(b) a wholesale quantity in prepacked form made up of a collection of small single articles of similar size and kind which is intended to be sold by number in the trade, being known in the trade as count lines	mass or number;
	(c) a combined pack made up of a number of more than five similar single articles or similar packages each of which; is of a mass of less than 50 g, being known in the trade as count lines	mass or number;
	(d) a combined pack made up of an assortment of single articles and/or packages each of which is of a net mass of less than 50 g, being known in the trade as count lines, where the net mass of such combined pack is 200 g or less	mass or number;
	(e) a combined pack described in item (d) above, where the net mass of such combined pack is more than 200 g	mass or number: Provided that when sold by number the number of articles and/or packages of each kind or of each recommended price group shall be specified thereon;
15	Coal, anthracite or coke	mass, unless otherwise provided in item 23 of paragraph 2 of this Schedule;
16	Cosmetics, being in the form of liquids or pastes, creams, semisolids or viscous liquids in tubes, jars or tubs	volume in ml or *l*;
17	Crewel wools	length or mass;
18	Crocheting wools	length or mass;
19	Crushed stone, including when coated with cement, tar or bitumen, in quantities of 0,5 m^3 and above	volume in cubic measure;
20	Dried fruit	mass, unless the quantity is 62,5 g or less as provided in item 16 of paragraph 2 of this Schedule;
21	Drugs or medicine consisting of a quantity of six or more similar identical units in solid, tablet, capsule or powder form	number: Provided that no supplementary description of size or quantity by mass need be indicated;
22	Eggs	mass or number; Provided that the grade shall also be stated;
23	Elastic and bias binding	length: Provided that the width shall also be indicated;

24	Electric cable.....	mass: Provided that when sold in the retail trade it shall be sold by length;
25	Embroidery wools.....	mass or length;
26	Fancy soap or fancy candles	number;
27	Firewood.....	mass, except indigenous brushwood or firewood specified in item 5 of paragraph 2 of this Schedule;
28	First aid dressings, being a collection of first aid dressings comprised of assorted sizes	number: Provided that no supplementary description of size need be indicated;
29	Fruit and vegetables -	
	(a) fresh fruit other than berries and similar small fruit	mass or number, unless the circumstances set out in item 4 of paragraph 2 of this Schedule apply;
	(b) fresh vegetables when not required to be sold by mass as specified in paragraph (d) below	unspecified as to quantity and also where the circumstances set out in items 1 to 3 of paragraph 2 of this Schedule apply;
	(c) berries and similar small fruit	mass, unless the circumstances set out in item 2 of paragraph 2 of this Schedule apply;
	(d) potatoes, onions, sweet potatoes, green beans, green peas and tomatoes	mass, unless the circumstances set out in items 1 and 2 of paragraph 2 of this Schedule apply;
30	Gas -	
	(a) measured through a meter	volume in cubic measure;
	(b) liquefied gas lighter fuel	mass: Provided that it may be sold by volume in ml when packed in a transparent container;
	(c) liquefied petroleum gas and dissolved or permanent gases in steel cylinders	mass: Provided that the contents of dissolved or permanent gases may, in addition, be indicated by volume in cubic measure at standard conditions of temperature and pressure;
	(d) a bulk quantity of liquefied gas	mass, or volume in *l*, kl or m^3;
31	Hand-knitting wools	mass;
32	Ice-cream and similar frozen goods in quantities of 500 ml and over	volume in ml or *l*;
33	Industrial chemicals and concentrated liquid chemical substances with highly corrosive or poisonous properties	mass, or volume in ml, *l* or kl;
34	Land situated in the Republic or South West Africa	area - hectares or square metres;
35	Leather of a size exceeding 900 cm^2	area or mass, unless sold by retail in pieces or units of irregular shape;
36	Liquids -	
	(a) liquids of all kinds which are in a fluid state when handled in trade dealings, including mixtures consisting principally of liquid in which fine solid particles are more or less in suspension	volume in ml, *l* or kl, unless otherwise provided in this table or in Schedule 6: Provided that a bulk quantity may be sold by mass or volume in cubic measure, except where prepacked for sale in the retail trade;
	(b) viscous liquids	mass, unless otherwise provided in this table or in Schedule *6*;
37	Liquid fuels in steel cylinders	mass: Provided that the contents thereof may, in addition, be indicated by volume at standard conditions of temperature and pressure;
38	Lubricating oils	volume in ml, *l* or kl;

39	Meat	mass, except that hearts, heads, plucks, feet, kidneys, hares, rabbits, live animals and live poultry may be sold by mass or number and undressed carcases of venison or poultry may be sold by number, except when sold in the retail trade;
40	Mending wools	mass or length;
41	Mercury.....	mass, or volume in ml or *l*;
42	Metal sheets	length: Provided that the width and thickness shall also be indicated;
43	Milk or cream.....	volume in ml or *l*: Provided that - (a) cream may be sold by mass after having been treated against decay and packed in hermetically sealed containers; (b) condensed milk (sweetened and unsweetened or evaporated) shall be sold by mass; (c) a factory, dairy, or cream or milk depot may purchase milk or cream from a producer by mass: Provided further that - (i) a suitable certified massmeter shall be used to determine the mass of the milk or cream purchased (ii) massmeters used for the measuring of cream shall have minimum graduations of a value not exceeding 200 g; (iii) where the net mass of milk or cream in cans or containers has to be determined by gross mass-measuring, the tare marked on such can or container shall also be reflected on a receipt issued in terms of subparagraph (iv) below; (iv) where milk or cream is purchased in bulk by mass determined by gross-mass-measuring the receipt issued shall reflect the gross mass and tare of each can or container and the net mass of the milk or cream; (v) where the equivalent of the volume of a quantity of milk is to be determined from the mass of that quantity, the density of milk shall be taken as 1,03 kg/*l*; (vi) where milk is purchased in bulk by determining the quantity thereof by net-mass-measuring the receipt issued shall reflect the net mass of the milk purchased. [For the purpose of this item "factory" means any cheese factory, chocolate factory, condensed milk factory, creamery (butter factory), ice-cream factory, milk powder factory, skim-milk powder factory or sweet factory]
44	Oils: Viscous oils sold in bulk quantities, other than lubricating oils	mass or volume in ml, *l*, kl or m^3;
45	Paints - (a) aerosol ..... (b) ready-mixed.....	 mass; volume in ml, *l* or kl
46	(a) Sheets of paper, being facial tissues, serviettes or towels, whether separate or	number: Provided that the ply and size per sheet shall also be indicated;

	joined in the form of perforated packs or rolls (b) Toilet tissue paper in rolls	number: Provided that the ply and the number of sheets per roll shall also be indicated;
47	Pipes and hose pipes	length: Provided that the bore shall also be indicated;
48	Polishes in the form of a paste	volume in ml or *l*
49	Postal stationery consisting of a collection of cards, envelopes or sheets of paper	number;
50	Razor blades.....	number;
51	Ready-mixed concrete and ready-mixed cement mortar in quantities of 0,5 m^3 and above	volume in cubic measure;
52	Ribbon.....	length: Provided that the width shall also be indicated;
53	Ropes and cordage	mass or length;
54	Rug cut piles	number;
55	Rug-making wools	mass or length;
56	Sewing thread	length, or mass in the case of a quantity of 10 g or more;
57	Soap and detergent solids	mass: Provided that - (a) bars or tablets of household or laundry soap which in their original condition met with the requirements of size and net mass prescribed in item 100 (c) of the table in Schedule 6, when sold loose in the retail trade shall be sold by number and individual pieces of such bars or halves of such tablets cut by the retail trade may be so sold in the retail trade; and (b) packages of such bars or tablets prepacked by a manufacturer shall be marked with a statement of the total net mass at the time of packing and the number of bars or tablets contained therein;
58	Solids (dry), semisolids or a mixture of solids and liquids consisting principally of solids, and particularly including such foodstuffs and other commodities sold by retail for household use or human and/or animal consumption	mass, unless otherwise provided in this Table or in Schedule 6;
59	Synthetic fibre yarns or composites of such fibres and wool in prepacked form	length or mass;
60	Tape (all kinds)	length: Provided that the width shall also be indicated;
61	Tapestry wools	length or mass;
62	Textile cloth materials (unfinished)	length or mass: Provided that sale in the retail trade shall be by length only and provided further that waste pieces of such material may be sold by mass in the retail trade;
63	Timber when sold in the retail trade	length: Provided that the width and thickness shall also be indicated ;
64	Toothpaste	volume in ml or *l*;
65	Twines (shop, stitching, seaming, binder or harvester in balls, reels, cops or spools)	mass: Provided that when taken from bulk and sold in the retail trade, sale may be by length;
66	Wallpaper	length or area: Provided that when sold by length the width shall also be indicated;

67	Waxed paper	length: Provided that the width shall also be indicated;
68	Wire netting	length: Provided that the width shall also be indicated;
69	Soft serve sherbet mix	volume in ml or *l*, except when packed in hermetically sealed containers holding a mass of 3 kg;
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SCEDULE [SCHEDULE] 6

[Regulation 10]

CERTAIN PREPACKED GOODS OR ARTICLES TO BE SOLD IN PRESCRIBED QUANTITIES

1. Subject to the provisions of paragraph 2 of this Schedule, goods or articles for sale specified in the second column of the table in this Schedule shall be prepacked only in the permissible quantities, sizes or dimensions specified in the third column of the said table or, in the case of goods measured out from bulk and sold for consumption on the premises of the seller, be supplied only in the permissible quantities specified in the said third column,

2. A retail dealer who is not a manufacturer of the goods or articles may prepack the following commodities for sale on his premises in any mass up to and including 2,5 kg -

(i) Cornflour, self-rising flour, flour, wheaten meal, semolina, rye meal, uncooked breakfast cereals;

(ii) maize meal, maize flour, bakers cones, maize grits, maize rice, samp;

(iii) tea, coffee, salt, rice;

(iv) dried beans, dried peas and ground nuts; and

(v) a manufactured product of a cereal not included in (i) and (ii) above.

TABLE

Item No.	Goods or articles	Permissible quantities
1	Absorbent cotton wool for surgical, medical, dental, first-aid and toilet purposes, or cotton or mixtures of fibres used for similar purposes	25 g, 50 g, 125 g, 250 g, 500 g, 1 kg or an integral multiple of 1 kg
2	Adhesives –	
	(a) consisting of a liquid or. a paste prepacked by mass	Any prepacked quantity by mass: Provided that in this case prepacking shall be in containers filled up to their respective nominal volumes and being only of the following nominal volumes: Any volume up to and including 125 ml; then 200 ml, 250 ml, 500 ml, 1*l*, 2*l*, 5*l*, 10*l*, 20*l*, 25*l*, 50*l*, 100*l*, 200*l* and an integral multiple of 1*l* above 200*l*
	(b) consisting of a liquid or a paste prepacked by volume	Any prepacked quantity up to and including 125 ml; then 200 ml, 250 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
	(c) solids	When prepacked in flexible containers –
		any quantity up to and including 125 g; then 250 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 50 kg and 100 kg: Provided that packaging may be of a quantity by mass other than that specified only when prepacked in rigid containers filled up to their respective nominal volumes and being only of the

		following nominal volumes: Any volume up to and including 125 ml; then 200 ml, 250 ml, 500 ml, 1*l,* 2*l,* 5*l,* 10*l*, 20*l*, 25*l*, 50*l*, 100*l*, 200*l* and an integral multiple of 1 *l* above 200 *l*
3	Agricultural and veterinary chemicals consisting of solids and semi-solids which are prepacked in the Republic, excluding dosage packs, but including insecticides and rodenticides	Any prepacked quantity up to and including 10 g; then 20 g, 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 25 kg, 50 kg and 100 kg and an integral multiple of 1 kg above 100 kg in the case of bulk packs: Provided that packaging up to and including 100 kg may be of a quantity by mass other than those specified when prepacked in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
4	Agricultural and veterinary liquid chemicals which are prepacked in the Republic, excluding dosage packs, but including insecticides and rodenticides	Any prepacked quantity up to and including 10 ml; then 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*, and an integral multiple of 1 *l* above 200 *l* in the case of bulk packs
5	Asbestos	20 kg, 25 kg, 40 kg and 50 kg.
6	Baby foods –	
	(a) cereals	25 g, 50 g, 100 g, 200 g, 250 g, 350 g, 400 g, 500 g, 750 g, 1 kg or an integral multiple of 1 kg
	(b) semi-solid and pastes (known in the trade as wet baby food)	75 ml, 100 ml, 125 ml, 200 ml and 250 ml
	(c) with a milk base or a milk substitute base	125 g, 250 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg and 20 kg
7	Baking powder, bicarbonate of soda, borax, cream of tartar, tartaric acid, citric acid, Epsom salts, Glauber salts and washing soda	Any prepacked quantity up to and including 25 g; then 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 50 kg
8	Balanced animal feed rations –	
	(a) balanced rations and protein concentrates in meal, cube, pellet and crumble forms, excluding those in paragraphs (b) and (c) of this item	1 kg, 2 kg, 10 kg, 25 kg and 50 kg: Provided that 60 kg and 70 kg are permissible when prepacked in a grain bag of the following dimensions larger than: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m
	(b) dog and cat foods in meal, cube and crumble forms	250 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 25 kg and 50 kg
	(c) milk substitutes and animal feed blocks	25 kg
9	Bananas – ripe bananas in bulk packs sold on a public market situated in an area outside the jurisdiction of the Banana Control Board	13,5 kg and 18 kg
10	Bantu beer –	
	(a) grain sorghum beer supplied from bulk at the time of sale for consumption on premises licensed for such sales or so supplied on such premises to customers in their own containers	500 ml, 750 ml, 1 *l* and an integral multiple of 1 *l*
	(b) grain sorghum beer and mageu-prepacked	1 *l,2 l, 4 l* and 16 *l*

	(c) grain sorghum beer powder	500 g, 1 kg, 25 kg, 35 kg, 50 kg and 70 kg
11	Bean meal and rice flour	100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 50 kg and, in the case of bean meal, also 65 kg when prepacked in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m, and 80 kg when prepacked in a grain bag of dimensions larger than those specified above
12	Beer- (a) beer supplied from bulk at the time of sale in glasses, mugs or tankards for consumption on premises licensed for such sale	250 ml, 500 ml, 750 ml, 1 *l* and 2 *l*
	(b) prepacked beer: Provided that such imported beer in quantities of 230 ml, 280 ml, 310 ml and 350 ml is permitted up to 31 December 1979	250 ml, 280 ml only when prepared for diabetics, 330 ml for imported beer, 340 ml, 375 ml, 450 ml, 500 ml, 750 ml, 1 *l* and then an integral multiple of 1 *l*: Provided that a quantity of 450 ml may be prepacked in a metal container only
13	Benzine, methylated spirits, white spirits, turpentine and turpentine substitutes, thinners, paint removers and linseed oil	20 ml, 50 ml, 100 ml, 200 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 5 *l*, 20 *l*, 25 *l*, 50 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
14	Biscuits, excluding biscuits specially made for diabetics	Any quantity up to and including 75 g; then 125 g, 200 g with effect from 1 November 1977, 225 g up to 1 June 1978 only, 250 g, 500 g, 1 kg, 1,5 kg, 2 kg, 5 kg and 10 kg: Provided that – (a) biscuits of a mass of more than 30 g per biscuit may be prepacked by number; (b) no quantity indication need be shown on prepacked biscuits baked by a baker or confectioner who prepacks such biscuits for sale to the retail trade in transparent packs containing six or less units
15	Bleaches – (a) consisting of solids	1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 25 kg, 50 kg, 100 kg and an integral multiple of 1 kg above 100 kg: Provided that prepackaging may be of a quantity by mass other than that specified when packed in rigid containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
	(b) consisting of liquids	500 ml, 750 ml, 1 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*, and when prepacked in sachets also any quantity up to and including 100 ml
16	Brake fluid, automotive liquid chemicals (radiator flushing liquid, engine or garage degreasing liquid, carburettor cleaner, automatic transmission fluid, radiator liquid additive, shock absorber fluid or oil,	200 ml, 500 ml, 1 *l*, 5 *l*, 20 *l*, 200 *l* and 210 *l*, and in the case of penetrating oil also 100 ml

	shackle rubber lubricant, radiator coolants, antifreeze mixtures and clutch liquid compounds), tyre paints, soldering fluid and penetrating oil	
17	(a) Bran-coarse maize	(a) 20 kg; and (b) 35 kg when prepacked in a grain bag of dimensions larger than the following: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m
	(b) bran – wheaten digestive	(a) In the case of a miller, 25 kg; and (b) 40 kg when prepacked in a grain bag of dimensions larger than the following: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m
	(c) bran – rye or wheaten feed bran	(a) 35 kg when prepacked in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m and (b) 45 kg when prepacked in a grain bag of dimensions larger than those in (a) above
18	Bread crumbs and wheat flake crumbs	75 g, 125 g, 250 g, 500 g, 1kg, 25 kg and 30 kg
19	Breakfast foods manufactured from a cereal –	
	(a) uncooked	100 g, 200 g, 500 g, 1 kg, 2 kg, 3 kg, 10 kg, 25 kg and 50 kg.
	(b) pre-cooked	25 g, 50 g, 100 g, 150 g, 200 g, 250 g, 300 g, 350 g, 500 g, 1 kg, 1,5 kg, 10 kg, 20 kg and 30 kg
	(c) Muesli-types, ready for use, uncooked or precooked	50 g, 125 g, 250 g, 350 g, 500 g, 1 kg, 2 kg and 5 kg
20	Butter	10 g, 50 g, 100 g, 250 g, 500 g and 25 kg
21	Butter substitutes and vegetable cooking fats, excluding margarine	125 g, 250 g, 500 g, 2,5 kg, 5 kg, 12,5 kg, 18 kg, 25 kg and 100 kg, and an integral multiple of 1 kg above 100 kg
22	Candles other than fancy candles	450 g, with 6 equal candles to a package
23	Cement	10 kg, 20 kg, 25 kg and 50 kg
24	Cheese – (a) cottage cheese and soft cheese, which has **[have]** not been subjected to a process of maturing	50 g, 100g, 250 g, 500 g, 1 kg and an integral multiple of 1 kg
	(b) process cheese – factory packed, wedges or pats	50 g, 100 g, 125 g, 200 g, 250 g, 500 g and 1 kg: Provided that pieces of process cheese cut from large blocks may be of any mass if the net mass, the selling price and the price per kg are indicated thereon when sold in the retail trade
25	(a) Chicken grit ..... (b) poultry and pigeon grain mixtures	1 kg, 2 kg, 10 kg and 50 kg 1 kg, 2 kg, 10 kg and 50 kg
26	(a) Coal and anthracite, except when coal is sold in the retail trade in open tins of a nominal volume of 20 *l* or 25 *l* filled to the brim	1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 40 kg, 70 kg and 90 kg: Provided that a prepacked quantity of which the net mass is more than 10 per cent in excess of either 40 kg or 70 kg shall be deemed to be a quantity short of 70 kg or 90 kg respectively

	(b) coke	1kg, 2kg, 5 kg, 10 kg, 20 kg and 40 kg: Provided that a prepacked quantity of which the net mass is more than 10 per cent in excess of 20 kg shall be deemed to be a quantity short of 40 kg
27	Cocoa and drinking chocolate	Any prepacked quantity up to and including 25 g; then 62,5 g, 125 g, 250 g, 500 g, 1 kg, 1,5 kg, 2 kg and an integral multiple of 1 kg above 2 kg
28	Coffee – (a) ground coffee, mixtures of ground coffee and chicory, roasted and unroasted coffee beans, and arid pure instant coffee	Any prepacked quantity up to and including 25 g; then 62,5 g, 125 g, 250 g, 500 g, 1 kg and multiples of 0,5 kg above 1 kg up to and including 50 kg
	(b) mixtures of instant coffee arid chicory	Any prepacked quantity up to and including 50 g; then 100 g, 250 g, 500 g, 750 g, 1 kg and multiples of 0,5 kg above 1 kg up to and including 50 kg
	(c) coffee extract – liquid	100 ml, 200 ml, 500 ml, 750 ml and 1 *l*
29	Condensed milk – (a) sweetened	30 g, 225 g, 397 g, 1 kg or an integral multiple of 1 kg
	(b) unsweetened	170 g, 410 g, 1 kg or an integral multiple of 1 kg
30	Confectionery (sugar or chocolate, excluding diabetic confectionery)	Any prepacked quantity up to and including 75 g; then 100 g, 125 g, 150 g, 200 g, 250 g, 500 g, 750 g, 1 kg, 1, 5 kg, 2 kg or an integral multiple of 1 kg above 2 kg: Provided that where the number of units and the total net mass is indicated on the pack in accordance with the provisions of regulation 7 of this Part of the regulations in addition to the indication of net mass on individual units, a combined pack intended for sale in the retail trade may be of any mass when consisting of not more than four units, each being of any mass from 50 g up to and including 75 g
31	Cosmetics, perfumery and toilet preparations – (a) consisting of semi-solids, pastes, creams or viscous liquids when packed in flexible tubes, except a pack intended for one application only	Any prepacked quantity up to and including 50 ml; then 75 ml, 100 ml, 125 ml, 150 ml, 175 ml, 200 ml and above 200 ml in multiples of 50 ml up to and including 500 ml
	Note. – Permission to prepack any quantity up to and including 50 ml referred to above is granted on a preliminary basis in order to afford packers the opportunity of taking steps to arrange for packs up to and including 50 ml to be in multiples of 5 ml	
	(b) consisting of semi-solids, pastes, creams or viscous liquids when packed in jars or tubs, except a pack intended for one application only	Any prepacked quantity up to and including 100 ml; then 125 ml, 150 ml, 175 ml, 200 ml, 225 ml, 250 ml, 300 ml, 350 ml, 400 ml, 450 ml, 500 ml, 750 ml, 1 *l* , 2 *l*, 2, 5 *l*, 5 *l* and 10 *l*
	Note. – Permission to prepack any quantity up to and including 100 ml referred to above is granted on a preliminary basis to afford packers the opportunity of taking steps to arrange for packs of up to and including 50 ml to be in multiples of 5 ml and from 50 ml to 100 ml, to be in multiples of 25 ml	
	(c) in liquid form, except a pack intended for one application only or a pack in aerosol form	Any prepacked quantity up to and including 100 ml; then 125 ml, 150 ml, 175 ml, 200 ml, 225 ml, 250 ml, 300 ml, 350 ml, 400 ml, 450 ml, 500 ml, 750 ml, 1 *l*, *2 l,2,5 l,* 5 *l* and 10 *l*

	Note. – Permission to prepack any quantity up to and including 100 ml referred to above is granted on a preliminary basis in order to afford packers the opportunity of taking steps to arrange for packs up to and including 50 ml to be in multiples of 5 ml and to be in multiples of 25 ml from 50 ml up to 100 ml	
32	Cream, except when prepacked by mass in hermetically sealed containers	125 ml, 250 ml, 500 ml, 1 *l* and an integral multiple of 1 *l*
33	Creosote, creosote substitute, paints, enamels, lacquers, varnish, wood stain, wood preservative and liquid lime wash, except when packed in the form of an aerosol	Any prepacked quantity up to and including 125 ml; then 250 ml, 500 ml, 1 *l*, 5 *l*, 10 *l*, 20 *l* only up to 31 December 1977, 25 *l*, 50 *l*, 100 *l*, 200 *l* and integral multiples of 1 *l* above 200 *l*: Provided that only paints, varnishes and lacquers formulated specifically for application to ships, boats and all forms of sea-borne transport, harbour installations, and off-shore oil rigs, platforms and installations – may also be prepacked in 20 *l* for direct sale by the manufacturer to an end user and for export after 31 December 1977, and provided further that packaging by manufacturers for direct sale to industrial end-users may also be in multiples of 5 *l* above 100 *l* when supplied in containers having a nominal volume of not less than 200 *l*
34	Custard powder	Any prepacked quantity up to and including 25 g; then 125 g, 250 g, 500 g, 1 kg, 2,5 kg, 10 kg, 20 kg and 50 kg, and 230 g or 450 g when prepacked in a wide mouth glass container of a nominal volume of 375 ml or 750 ml, respectively
35	Disinfectants and antiseptics –	
	(a) disinfectants and antiseptics consisting of solids, excluding specially prepared formula packs intended for one application only	Any prepacked quantity up to and including 50 g; then 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 25 kg, 50 kg, 100 kg, 200 kg and an integral multiple of 1 kg above 200 kg
	(b) liquid antiseptics	50 ml, 125 ml, 250 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 2,5 *l*, 5 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
	(c) liquid disinfectants	Any prepacked quantity up to and including 50 ml; then 100 ml, 200 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
36	Distemper and lime whiting	2 kg and 20 kg
37	Drawing and reproduction paper in rolls	Length of rolls: 10 m, 20 m and 50 m
38	Dried fruit as defined in regulation 1 of this Part	Any prepacked quantity up to and including 125 g; then 250 g, 500 g, 1 kg and multiples of 0,5 kg above 1 kg
39	Dripping, lard or other animal cooking fat	125 g, 250 g, 500 g and 25 kg
40	Edible nuts prepacked in flexible packaging only	30 g, 55 g, 100 g, 200 g, 500 g, 1 kg or an integral multiple of 1 kg
41	(a) Farm feeds in solid form consisting of: Animal and vegetable proteinrich farm feeds, milled roughages, additives, feed supplements, protein mineral supplements, energy supplements, vitamins, antimicrobial substances, hormones and	1 kg, 2 kg, 5 kg, 10 kg, 25 kg, 50 kg and in the case of packaging in grain bags larger than: Length: 1,055 m to 1,08 m and Width: 0,59 m to 0,622 m, also 70 kg: Provided that prepackaging may be of a quantity by mass other than that specified when

	other chemical additives, but excluding the products specified in (b) below	packed in rigid containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l,* 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
	(b) farm feeds, being –	
	(i) a by-product of the sugar industry with not more than 10 per cent fibre content and with or without urea;	40 kg
	(ii) a complete cattle/ sheep feed with not more than 20 per cent fibre content	40 kg
	(c) farm feeds of the kinds specified in (a) above and being in liquid form, excluding milled roughages	2 *l*, 5 *l*, 20 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
42	Fertilisers, being –	
	(a) fertiliser for agricultural use, excluding liquid fertiliser;	50 kg
	(b) fertiliser for garden use, excluding liquid fertiliser;	10 g, 20 g, 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg and 20 kg
	(c) liquid fertiliser for garden use	100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l* and 20 *l*
43	Fish cakes, or frozen or chilled fish prepacked by a factory in blocks or cut from fish blocks	25 g, 50 g, 100 g, 200 g, 300 g, 400 g, 500 g, 1 kg, 2 kg, 5 kg and an integral multiple of 1 kg above 5 kg
44	Fishmeal in bulk packs	50 kg
45	Fish paste	Any quantity up to and including 50 g; then 85 g, 125 g and 225 g
46	(a) Frozen vegetables and frozen fruit in small packs up to 1 kg	250 g, 500 g, 750 g and 1 kg
	(b) canned fruit, canned fruit pulp and canned vegetables prepacked in the Republic	In multiples of 5 g up to and including 1 kg and then in multiples of 10 g
47	Grain sorghum meal in grain bags	(a) 60 kg when prepacked in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m, and (b) 80 kg when prepacked in a grain bag of dimensions larger than those in (a) above
48	Gravy powder	Any prepacked quantity up to and including 25 g; then 62,5 g, 125 g, 250 g, 500 g, 1 kg, 2,5 kg and 5 kg
49	Greases and petroleum jellies, excluding petroleum jellies when prepacked for pharmaceutical purposes	10 g, 20 g, 50 g, 100 g, 200 g, 500 g, 5 kg, 15 kg, 50 kg and 180 kg
50	Hand-cleaning paste	75 g, 100 g, 125 g, 250 g, 500 g, 1 kg and 2 kg: Provided that packaging may be of any quantity by mass other than those specified when prepacked in nonflexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
51	Hand-knitting, crocheting, rug-making, mending, embroidery, tapestry or crewel wools or synthetic yarns or composites of such fibres, excluding rug cut piles	10 g, 25 g, 50 g, 100 g, 250 g, 500 g and 1 kg: Provided that any combined pack sold to the retail trade shall be either 100 g, 500 g, 1 kg or a multiple of 0,5 kg above 1 kg and, where such packs are made up of more than one unit, such units shall be only of a specified permissible quantity, and provided further that all the specified wools or

		yarns except hand-knitting wool may be prepacked by measure of length
52	Hominy chop	(a) 45 kg when prepacked in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m; and (b) 65 kg when prepacked in a grain bag of dimensions larger than those in (a) above
53	Honey, mixtures of honey and honey substitutes, excluding comb honey and bulk comb honey	20 g, 30 g, 100 g, 200 g, 500 g, 1 kg, 1,4 kg and multiples of 0,5 kg above 1 kg
54	Household essences and food colourings	30 ml, 100 ml, 200 ml, 500 ml and 1 *l*
55	(a) Ice-cream and sherbet, excluding fancy ice-cream and fancy sherbet	Any quantity up to and including 500 ml; then 600 ml, 700 ml, 800 ml, 900 ml, 1 *l*, 1,5 *l*, *2 l, 2,5 l, 5 l,* 10 *l* and 20 *l*
	(b) Soft serve sorbet mix	3 kg when packed in a hermitically **[hermetically]** sealed can
56	Industrial chemicals – (a) solids and semi-solids of the undermentioned kinds which are prepacked in the Republic: Dry ice, desiccants, dyestuffs, elastomers, inorganic chemicals, mineral and metal chemical products, organic chemicals, organo-phosphates, plastics (granules, powders, beads and fibres), resins and intermediates and waxes, excluding swimming pool chemicals when specially prepared in formula packs intended for one application only	Any prepacked quantity up to and including 10 g; then 20 g, 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 25 kg, 34 kg in the case of synthetic rubber, 50 kg and 100 kg and an integral multiple of 1 kg above 100 kg in the case of bulk packs: Provided that packaging up to and including 100 kg may be of any quantity by mass other than those specified when prepacked in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*, and in the case of a lead chemical also such a container of a nominal volume of 17 *l*
	(b) liquids of the undermentioned kinds which are prepacked in the Republic: Acids – organic and inorganic, dyestuffs, froth flotation reagents, glycols and glycol ethers, inorganic chemicals, isocyanates, lattices, organic chemicals and solvents, plasticisers, refrigerants, resins and intermediates and silicones –	
	(i) when prepacked by mass	Any prepacked quantity by mass: Provided that packaging in containers up to 200 7 shall be in containers filled up to their respective nominal volumes and being only of the following nominal volumes: 10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
	(ii) when prepacked by volume	Any prepacked quantity up to and including 10 ml; then 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*, and an integral multiple of 1 *l* above 200 *l* in the case of bulk packaging
57	Industrial flavours and fragrances –	

	(a) solids and semi-solids, excluding such a commodity specified under any of the following tariff headings in Schedule 1 to the Customs and Excise Act, 1964 (Act 91 of 1964): 20.07, 33.01, 33.02, 33.03 and 33.04	10 g, 20 g, 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 25 kg, 50 kg, 100 kg and an integral multiple of 1 kg above 100 kg: Provided that packaging up to and including 100 kg may be of any quantity by mass other than those specified when prepacked in nonflexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, *1 l, 2 l, 5 l,* 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, and 200 *l*
	(b) liquids which are prepacked by mass, excluding such a commodity specified under any of the following tariff headings in Schedule 1 to the Customs and Excise Act, 1964 (Act 91 of 1964): 20.07, 33.01, 33.02, 33,03 and 33.04	Any prepacked quantity by mass: Provided that in this case packaging in containers up to 200 *l* shall be in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
	(c) liquids which are prepacked by volume	10 ml, 20 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l*, and an integral multiple of 1 *l* above 200 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
58	Ink, being –	
	(a) drawing, marking duplicating, endorsing, linen marking, stencilling, numbering machine, price marking and meat marking ink, and ink erasing fluid, ink correcting fluid, cleaning fluid for typewriters and printing machinery and poster paints or inks	Any quantity up to and including 50 ml; then 100 ml, 125 ml, 200 ml, 250 ml, 500 ml, 1 *l* and an integral multiple of 1 *l*: Provided that packaging may be of any quantity other than that specified only when packed in specially designed containers for specific machines
	(b) printer's ink in no liquid form	500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 50 kg
	(c) printer's ink in liquid form	500 ml, 1 *l*, 5 *l*, 10 *l*, 20 *l*, 50 *l* and 200 *l*
	(d) writing ink	Any prepacked quantity up to and including 10 ml; then 25 ml, 50 ml, 100 ml, 200 ml, 500 ml, 1 *l* and an integral multiple of 1 *l* above 1 *l*
59	Jams, jellies (jam type) and marmalade	20 g, 30 g, 110g, 150 g, 225 g, 325 g, 340 g, 450 g, 680 g, 900 g, 3,75 kg, 22,68 kg, 25 kg and any quantity when prepared specially for use by diabetics: Provided that the quantity of 325 g is only permissible when prepacked in a wide-mouth glass container of a nominal volume of 250 ml
60	Laurie oils	In bulk packs – 18 kg and 180 kg
61	Lime, excluding purified lime for human consumption	10 kg, 20 kg, 25 kg, 40 kg and 50 kg
62	Liquid dairy-packed products, excluding milk and cream	125 ml, 175 ml, 250 ml, 500 ml, 1 *l* and an integral multiple of 1 *l* above 1 *l*
63	Liquid household cleaners, liquid fabric softener and wetting agents, industrial and agricultural liquid detergents, liquid toilet soaps and/or gels, liquid germicidal detergents, liquid antiseptic soaps and liquid window cleaners –	

	(a) prepacked by mass	Any prepacked quantity by mass: Provided that in this case packaging shall be only in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
	(b) prepacked by volume	100 ml, 200 ml, 300 ml, 400 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 2,5 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l*, and an integral multiple of 1 *l* above 200 *l*
64	Liquid oil additives and liquid fuel additives, including upper cylinder lubricants	100 ml, 125 ml, 200 ml, 250 ml, 375 ml, 425 ml, 500 ml. 1 *l*, 5 *l*, 20 *l*, 100 *l*, 200 *l* and multiples of 1 *l* above 200 *l*

Item No.	Goods or articles	Permissible quantities			
		Nominal volume of cylinders	Quantity		
			Type A gas	Type B gas	Type C gas
		litres	kg	kg	kg
65	Liquid petroleum gases in steel cylinders with a nominal volume of 11 *l* or more, the types of gases referred to in column 3 of this item being as follows – Type A gas – commercial butane; Type B gas – liquefied petroleum gas mixtures; Type C gas – commercial propane	11	5,5	5	4,5
		21	10,5	9	–
		22	11 or 10,5	10 or 9	9 –
		31	15	13	–
		34	16,5 or 15	14 or 13	13,5 –
		43	21	19	–
		45	22 or 21	20 or 19	18 –
		109	53	48	–
		113	55 or 53	50 or 48	45 –

Item No.	Goods or articles	Permissible quantities
66	Liquids not specified under any other item of this table and required to be sold by volume	Any prepacked quantity under 100 ml; then 100 ml, 200 ml, 500 ml, 1 *l*, 2 *l*, 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
67	Macaroni, vermicelli, spaghetti and noodles	125 g, 250 g, 500 g, 1kg, 2 kg, 5 kg, 10 kg and 20 kg
68	Malt (grain sorghum)	(a) 250 g, 500 g, 750 g, 1 kg and integral multiples of 1 kg up to and including 50 kg; and (b) when packed in a grain bag – (i) 60 kg in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m; (ii) 80 kg in a grain bag of dimensions larger than those in (i) above
69	Manufactured products which contain 60 per cent or more by mass of a cereal, excluding such a product when pre-cooked ready for use and of a quantity of	25 g, 50 g, 75 g, 100 g, 125 g, 200 g, 250 g, 375 g, 500 g, 750 g, 1 kg, 2 kg, 2,5 kg, 3 kg and an integral multiple of 1 kg above 3 kg up to and including 12

	less than 125 g or when consisting of ingredients which constitute a unit intended to be baked or cooked as a whole, unless it is a product conforming to any above description, but which is specified in any other item of this table	kg; then 12,5 kg, 13 kg and an integral multiple of 1 kg above 13 kg
70	Margarine	250 g, 500 g, 1 kg, 12,5 kg and in the case of white margarine also 25 kg
71	Sliced processed meat**,** manufactured meat products, raw sausages and raw boerewors, as defined under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), when prepacked in flexible packaging in a quantity over 100 g and up to and including 550 g, except – (i) processed meat cut in the form of pieces, steaks or fillets; (ii) manufactured meat products filled into natural casings other than vienna, frankfurter and Russian sausages; (iii) biltong or chipped beef; (iv) uncut units of manufactured meat products filled into moisture-permeable synthetic casings, known in the trade as Continental products; and (v) manufactured meat products filled into a moisture permeable or impermeable synthetic casing when in the form of one piece cut from a whole unit subsequent to cooking and processing and overwrapped individually for sale as a packaged unit	125 g, 250 g, and 500 g, and 375 g in the case of frankfurter and Russian sausages only: Provided that – (i) the net mass of a prepacked quantity of raw sausages or raw boerewors, when prepared at the premises of a retail dealer, may be of a mass other than any of the prescribed masses where the following information is indicated thereon by such dealer: (aa) Net mass; (bb) price per kg; and (cc) retail selling price; and (ii) where any of the specified kinds of meat is not prepacked at the premises of a retail dealer, but the information referred to in paragraph (i) above is indicated on the package, the net mass of any individual package may deviate from any of the prescribed masses to the extent of 5% under, up to 10% over
72	Medicinal or pharmaceutical liquids required to be sold by volume, other than such a liquid specified under any other item of this table or a pack consisting of a liquid drug intended for course treatment or a pack dispensed on a doctor's prescription	5 ml, 10 ml, 15 ml, 20 ml, 25 ml, 50 ml, 75 ml, 100 ml, 150 ml, 200 ml, 250 ml, 350 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 2,5 *l*, 5 *l*, 10 *l* and 20 *l*
73	Milk sold by volume	250 ml, 500 ml, 1 *l* and an integral multiple of 1 *l*
74	Milk powder	Any prepacked quantity up to and including 10 g; then 25 g, 50 g, 75 g, 100 g, 125 g, 250 g, 300 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg and 25 kg
75	Drinking water, soft drinks including hop beer, ginger beer, fruit or vegetable drinks, fruit or vegetable based drinks and flavoured or unflavoured artificially carbonated water or natural spring water, ready for drinking without dilution	125 ml, 175 ml, 200 ml, 250 ml, 300 ml, 350 ml, 500 ml, 750 ml, 1 *l*. 2 *l*,4,5 *l* up to 31 December 1980, 5 *l* and any quantity above 5 *l*: Provided that quantities other that those specified above may be prepacked, in reusable containers manufactured up to 31 December 1971, or in metal cans
76	Nails prepacked by manufacturers only	1 kg, 5 kg, 10 kg, 25 kg and 50 kg
77	Non-soapy detergent (NSD) laundry bars	150 g, 250 g, 300 g and 500 g
78	Nutritive tonic drinks (solids), milk shake powders and coffee additives	Any prepacked quantity up to and including 25 g; then 62,5 g, 125 g, 250 g, 500 g, 1 kg, 1,5 kg, 2 kg and an integral multiple of 1 kg above 2 kg
79	Oats (crushed or ground) in grain bags	(a) 30 kg when prepacked in a grain bag of the following dimensions; Length: From 1,055 m to 1,08 m Width: From 0,59 m to 0,622 m; and (b) 45 kg when prepacked in a grain bag of dimensions larger than those in (a) above
80	Olive oil, salad or other edible oil, except when prepacked for the pharmaceutical or toilet trade	250 ml, 500 ml, 750 ml, 1 *l*, 2,5 *l*, 5 *l*, 20 *l*, 25 *l*, 50 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
81	Onions for sale by auction on a public market	10 kg
82	Paraffin and other petroleum fuels and lubricating oils	100 ml, 200 ml, 500 ml, 1 *l*, 5 *l*, 20 *l*, 100 *l*, 200 *l*, 210 *l*, and multiples of 1 *l* above 500 *l* and, in the case of illuminating paraffin, also 750 ml, and in the case

		of lubricating oils, also any quantity up to and including 25 ml and then 50 ml
83	Polishes – liquid and paste of the following types: Floor, stoep, furniture, metal, footwear, car and other miscellaneous polishes:	
	(a) liquid polishes	25 ml, 50 ml, 75 ml, 100 ml, 125 ml, 200 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 2,5 *l*, 5 *l*, 20 *l*, 25 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
	(b) paste polishes	25 ml, 50 ml, 125 ml, 200 ml, 400 ml, 1 *l*, 2, 5 *l*, 5 *l*, 20 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
84	Polyester and metal body fillers	125 g, 250 g, 500 g, 1 kg, 1,5 kg, 2 kg, 5 kg, 8 kg and 32 kg
85	Polymer emulsion floor dressings, floor sealers and their strippers	100 ml, 200 ml, 500 ml, 1 *l*, 2,5 *l*, 5 *l*, 20 *l*, 25 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*
86	(a) Potable spirits, excluding whisky: Provided that such imported potable spirits are excluded up to 31 December 1979	Any prepacked quantity up to and including 50 ml; then 200 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 150 *l* and an integral multiple of 1 *l* above 150 *l*
	(b) Whisky	Any prepacked quantity up to and including 50 ml; then 200 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 5 *l,* 150 *l* and integral multiples of 1 *l* above 150 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
	(c) potable spirits, except a liqueur sold from bulk for consumption on premises licensed for such sales: Provided that a sale from bulk shall be deemed to be a sale from a bottle, barrel or other container of any quantity of potable spirits and the quantity being sold is less than the original quantity contained therein	25 ml or a multiple thereof: Provided that the sale of "a whisky" or "a tot of whisky", or "a double whisky" or "a double tot of whisky" and similar sales of other potable spirits shall be deemed to be a sale of a quantity of 25 ml or 50 ml, respectively
87	Potatoes in pockets for sale on a public market	2,5 kg, 5 kg and 15 kg
88	Potato chips in the form of crisps	20 g; then in multiples of 5 g from 20 g up to and including 50 g; then 60 g, 75 g, 100 g, 150 g, 200 g, 250 g, 500 g, 1 kg and an integral multiple of 1 kg
89	Pre-cooked extruded products consisting of a starch or a mixture of starches	Any prepacked quantity up to and including 125 g; then 150 g, 200 g, 250 g, 500 g, 1 kg and an integral multiple of 1 kg
90	Putty and paste fillers	500 g, 2 kg, 5 kg, 10 kg, 20 kg and 40 kg
91	Rice, dried beans, dried whole peas (green or yellow), split peas, pea flour, lentils (whole or split), pearl barley, bird seed and bird seed mixtures, and mixtures of sun-dried cereals and pulses for adding to soups	100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 50 kg, and in the case of rice, also 100 kg
92	Rug cut piles	320 cut pieces per prepacked unit
93	Rusks, excluding rusks specially prepared for diabetics	Any prepacked quantity up to and including 75 g; then 125 g, 200 g with effect from 1 November 1977, 225 g up to 1 June 1978 only, 250 g, 500 g, 1 kg, 1,5 kg, 2 kg, 5 kg and 10 kg
94	Rye meal and rye flour	(a) 12,5 kg, 25 kg and 50 kg; and (b) when packed in a grain bag – (i) 65 kg in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m Width: From 0,59 m to 0,622 m; and (ii) 90 kg in a grain bag of dimensions larger than those in (i) above
95	Salt	500 g, 1 kg and 50 kg
96	Sauces – all types of liquid pourable sauces, liquid herb sauces and liquid mixed condiment sauces	Any prepacked quantity up to and including 50 ml; then 125 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 2 *l*, 3 *l*, 5 *l* and an integral multiple of 1 *l* above 5 *l:* Provided that a quantity of 4,5 *l* may only be

		prepacked in a glass container up to 31 December 1980
97	Scouring powders	125 g, 250 g, 500 g, 800 g, 1 kg, 2 kg, 12,5 kg, 25 kg and 50 kg
98	Seed –	
	(a) all kinds of seed, excluding those specified in paragraph (b) of this item	Any prepacked quantity up to and including 20 g; then 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 25 kg and 50 kg: Provided that certified seed in sealed containers registered in terms of the Seeds Act, 1961 (Act 28 of 1961), and seed specially prepacked on order from a user for his own use may be of any mass
	(b) bean, paste, maize, beetroot, Swiss chard, broad bean and cucurbit seed	Any prepacked quantity up to and including 50 g; then 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg, 25 kg and 50 kg: Provided that certified seed in sealed containers registered in terms of the Seeds Act, 1961 (Act 28 of 1961), and seed specially prepacked on order from a user for his own use may be of any mass
99	Snuff	Any quantity under 30 g; then 500 g, 1 kg, 2 kg, 5 kg and 10 kg
100	Soap –	
	(a) abrasive soap paste	250 g, 500 g, 1 kg and 2 kg: Provided that packaging may be of a quantity other than that specified when packed in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
	(b) carbolic soap (pure) in bars or tablets	100 g, 150 g, 200 g, 300 g, 500 g and 1 kg
	(c) household and laundry soap (filled soap) shall be of the following shapes and sizes at the time of packing for sale to the retail trade:	
	(i) bars not less than 300 mm in length;	1 kg
	(ii) bars not less than 150 mm in length, but not more than 200 mm; and	500 g
	(iii) single or twin tablets not more than 200 mm in length	400 g
	(d) pure soap tablets	100 g, 125 g, 250 g, 375 g, 500 g and 1 kg
	(e) soft soap, soap paste and soap and detergent blend paste	500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg, 25 kg, 50 kg, 100 kg and an integral multiple of 1 kg above 100 kg
	(f) toilet soap in tablets, excluding such soap known in the trade as special luxury soap	Any prepacked quantity up to and including 50 g; then 75 g, 100 g, 125 g, 150 g, 200 g and 300 g
101	Maize products –	
	(a) special sifted granulated maize meal, sifted granulated maize meal, unsifted granulated' maize meal, straight-run maize meal, maize flour, baker's cones, maize grits, maize rice, unsifted crushed maize, sifted crushed maize, fine sifted crushed maize, No. 1 yellow maize feed meal, No. 2 yellow maize feed meal and maize feed meal	(a) 1 kg, 2,5 kg, 5 kg, 12,5 kg, 25 kg and 50 kg; and (b) when packed in a grain bag – (i) 60 kg in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width, From 0,59 m to 0,622 m; and (ii) 80 kg in a grain bag of dimensions larger than those in (i) above
	(b) samp	(a) 1 kg, 2,5 kg, 5 kg, 12,5 kg, 25 kg and 50 kg; and (b) when packed in a grain bag – (i) 65 kg in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m; and (ii) 90 kg in a grain bag of dimensions larger than those in (i) above
	(c) maize germ feed (germ meal) in grain bags	(a) 45 kg when packed in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m. Width: From 0,59 m to 0,622 m; and (b) 65 kg when packed in a grain bag of dimensions larger than those in (a) above

102	Spices – ground and whole, including mustard powder, but excluding such spices when prepacked for industrial use or when in a formula pack	25 g, 50 g, 75 g, 100 g, 200 g, 400 g, 1 kg, 2 kg, 2,5 kg, 3 kg, 5 kg, 10 kg, 15 kg, 25 kg and 50 kg: Provided that – (a) sachet packs may contain any quantity up to and including 25 g; (b) whole spices may be prepacked in any quantity up to and including 100 g; and (c) packaging may be of any prepacked quantity by mass when packed in a rigid transparent container of a nominal volume of 100 ml, and provided further that such container is completely filled at the time of packing
103	Split or log firewood in bags, bundles or any other container	1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 40 kg: Provided that a prepacked quantity of which the net mass is more than 10 per cent in excess of the masses specified above shall be deemed to be a quantity short of the next higher specified mass
104	Spreads consisting of meat or vegetable extracts	62,5 g, 125 g, 250 g and 500 g
105	Squashes, cordials, fruit drinks, fruit syrup and fruit bases to be diluted before consumption	50 ml, 100 ml, 200 ml, 375 ml, 500 ml, 750 ml. *1 1,2 1,5 1,* 10 *l*, 20 *l* and 25 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980, and provided further that quantities other than those specified above may be prepacked in metal cans
106	Starch, cornflour and dextrins	125 g, 250 g, 450 g up to 30 September 1977, 500 g, 45 kg and 50 kg and in the case of edible starch also any quantity up to and including 50 g; then 5 kg
107	Steelwool.....	25 g, 50 g, 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, 10 kg and 20 kg
108	Sugar – (a) castor or icing ..... (b) cube or tablet ..... (c) white or brown, all kinds except as otherwise specified in this item	 500 g and 25 kg 500 g 250 g, 500 g, 1 kg, 2,5 kg, 12, 5 kg and 25 kg
109	Syrup – golden or black	20 g, 30 g, 250 g, 500 g, 1 kg, 2 kg, 4 kg and 25 kg
110	(a) Tea, excluding packs containing tea bags	Any prepacked quantity up to and including 25 g; then 50 g, 125 g, 250 g, 500 g, 1 kg and multiples of 0,5 kg above 1 kg up to and including 50 kg
	(b) tea in packs made up of tea bags	Any prepacked quantity up to and including 25 g; then 62,5 g, 125 g, 250 g, 500 g, 1 kg and multiples of 0,5 kg above 1 kg up to and including 50 kg
	(c) rooibos tea	50 g, 100 g, 200 g and 500 g
111	Tobacco – (a) leaf tobacco packs for the retail trade made up of units of not less than 100 g each (b) pipe tobacco	 10 kg 12,5 g, 25 g, 50 g, 100 g, 200 g, 5 kg, 15 kg and 40 kg
112	Toothpaste	Any prepacked quantity up to and including 15 ml; then 25 ml, 50 ml, 75 ml, 100 ml, 125 ml, 150 ml, 175 ml and 200 ml
113	Twines (shop, stitching, seaming, binder or harvester in balls, reels, cops or spools)	25 g, 50 g, 100 g, 200 g 500 g, 1 kg, 2 kg, 5 kg, 9 kg and 10 kg
114	Groundnuts – (a) unshelled groundnuts in bags delivered ex producer to agents of the Oilseeds Control Board (b) selected, unshelled edible groundnuts in bags delivered for sale ex agents of the Oilseeds Control Board	 50 kg 25 kg
115	Vinegar	Any prepacked quantity up to and including 30 ml; then 100 ml, 200 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 1,5 *l*, 2 *l*, 5 *l*, 20 *l*, 25 *l*, 50 *l*, 200 *l* and an integral

		multiple of 1 *l* above 200 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
116	Washing powders, including soap flakes and dry solid detergents	60 g, 100 g, 150 g, 200 g, 300 g, 500 g, 1 kg, 2 kg, 5 kg, 12,5 kg, 25 kg, 50 kg, 100 kg and an integral multiple of 1 kg above 100 kg: Provided that packaging by mass may be of any quantity other than that specified when packed in non-flexible containers filled up to their respective nominal volumes and being only of the following nominal volumes: 5 *l*, 10 *l*, 20 *l*, 25 *l*, 50 *l*, 100 *l* and 200 *l*
117	Wheaten feed pollard	(a) 50 kg when prepacked in a grain bag of the following dimensions: Length: From 1,055 m to 1,08 m Width: From 0,59 m to 0,622 m; and (b) 65 kg when prepacked in a grain bag of dimensions larger than those in (a) above
118	Wheaten meal, wheaten flour, semolina and self-rising flour	(a) *l* kg, 2,5 kg, 5 kg, 12,5 kg, 25 kg and 50 kg, and 65 kg when prepacked in a grain bag of the following dimensions : Length: From 1,055 m to 1,08m. Width: From 0,59 m to 0,622 m; and (b) 90 kg when prepacked in a grain bag of dimensions larger than those in (a) above; and (c) in the case of semolina and self-rising flour also 500 g
119	Whole maize, whole grain sorghum, grain sorghum meal and brewers' grits	25 g, 50 g, 75 g, 100 g, 125 g, 200 g, 250 g, 375 g, 500 g, 750 g, 1 kg, 2 kg, 2,5 kg, 3 kg and an integral multiple of 1 kg above 3 kg up to and including 12 kg; then 12,5 kg, 13 kg and an integral multiple of 1 kg above 13 kg
120	(a) Wine and fermented fruit beverages: Provided that imported wine and fermented fruit beverages are excluded up to 31 December 1979	Any prepacked quantity up to and including 50 ml; then 100 ml, 200 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l*, 1,5 *l*, *2 l,* 2,25 *l* up to 30 June 1978 only, 5 *l*, 20 *l* and an integral multiple of 1 *l* above 20 *l*: Provided that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
	(b) sparkling wine as defined by the Wine, Other Fermented Beverages and Spirits Act, 1957 (Act 25 of 1957): Provided that imported sparkling wine is excluded up to 31 December 1979	Any prepacked quantity up to and including 50 ml; then 100 ml, 200 ml, 250 ml, 375 ml, 500 ml, 750 ml, 1 *l, l,5 l,2 l, 5 l, 10 l,* 20 *l* and an integral multiple of 1 *l* above 20 *l*: Provided that the quantity 10 *l* is permissible only when packed in special re-usable dispenser tanks, and provided further that a quantity of 4,5 *l* may only be prepacked in a glass container up to 31 December 1980
121	Wire, being – (a) baling wire	22,5 kg and 45 kg: Provided that – (a) to each prepacked quantity shall be securely attached a metal or durable plastic label showing clearly – (i) the thickness; and (ii) the net mass; (b) where such wire has been produced in the Republic or Southwest Africa it may be prepacked by the manufacturer in quantities of any mass when sold to users who require it for manufacturing purposes and not for resale; (c) any length of such wire may be taken from a prescribed quantity and sold in the retail trade by the mass or length determined at the time of sale
	(b) barbed wire.....	(a) Aluminium: 15 kg; and

	(b) steel: 25 kg, 35 kg and 50 kg; Provided that – (i) in the case of 15 kg for aluminium, the wire shall be in one piece; (ii) in the case of 25 kg, 35 kg and 50 kg the wire may be in two pieces, the smaller having a mass of not less than 10 kg; (iii) to each prepacked quantity shall be securely attached a metal or durable plastic label showing clearly – (aa) the net mass; (bb) the thickness; and (cc) the minimum length; (iv) where such wire has been produced in the Republic or Southwest Africa it may be prepacked by the manufacturer in quantities of any mass when sold to users who require it for manufacturing purposes and not for resale; (v) any length of such wire may be taken from a prescribed quantity and sold in the retail trade by the mass or length determined at the time of sale
(c) binding or fencing wire (round or oval)	500 g, 1 kg, 2 kg, 5 kg, 10 kg, 20 kg and 50 kg: Provided that – (a) in the case of 50 kg the wire may be in two pieces, the smaller having a mass of not less than 10 kg; (b) in the case of 500 g, 1 kg, 2 kg, 5 kg, 10 kg and 20 kg the wire shall be in one piece; (c) to each prepacked quantity shall be securely attached a metal or durable plastic label showing clearly – (i) the net mass; (ii) the thickness; and (iii) the minimum length; (d) where such wire has been produced in the Republic or South-West Africa it may be prepacked by the manufacturer in quantities of any mass when sold to users who require it for manufacturing purposes and not for resale; (e) any length of such wire may be taken from a prescribed quantity and sold in the retail trade by the mass or length determined at the time of sale
(d) chain link wire (diamond mesh)	(a) Length of rolls: 15 m or 30 m (b) Size of mesh: 25 mm, 40 mm, 50 mm, 60 mm or 75 mm (c) Thickness: 1,6 mm, 1,8 mm, 2 mm, 2,24 mm, 2,5 mm, 3,15 mm or 4 mm: Provided that to each roll shall be securely attached a metal or durable plastic label showing clearly – (i) the length; (ii) the width; (iii) the thickness; and (iv) the mesh size: And provided further that any length of such wire may be taken from a roll and sold in the retail trade by the length determined at the time of sale
(e) wire-netting with hexagonal meshes	(a) Length of unbroken rolls: 50 m

(b) Size of mesh	Thickness
13 mm	0,71 mm
25 mm	0,9 mm

		40 mm	1 mm
		50 mm	1 mm
		75 mm	1,8 mm
		90 mm	1,8 mm
		Provided that to each roll shall be securely attached a metal or durable plastic label showing clearly – (i) the length; (ii) the width; (iii) the thickness; and (iv) the mesh size: And provided further that any length of such wire may be taken from a roll and sold in the retail trade by the length deter-mined at the time of sale	
122	Yeast –		
	(a) bakers' yeast	500 g, 1 kg, 2 kg and 5 kg	
	(b) yeast in tablet form.....	500 g with 25 equal tablets to a package	
	(c) active dry yeast –		
	(i)in tins	125 g and 250 g	
	(ii) in bags or cartons.	500 g with 50 x 10g or 25 x 20g sachets to a carton or bag	
	(d) brewers' yeast	500 g, 1 kg, 2 kg and 5 kg	
123	Tape – pressure-sensitive tape in rolls intended for sale or sold in the retail trade	Widths of individual rolls shall be 3 mm or in increments of 3 mm	
124	Aerosols, excluding a pack for one application only	Any prepacked quantity up to and including 30 g; then from 30 g in increments of 10 g up to and including 110 g, and from 125 g in increments of 25 g up to and including 300 g; then 350 g, 400 g, 500 g, 750 g and 1 kg and in addition, no prepacked aerosol container of any volume specified in the table below shall contain an expellable mass of any substance less than the mass specified for the relevant container, provided that the minimum expellable masses specified in the said table shall not apply in the case of substances or mixtures of substances with a density of 0,7 or less at 25 °C:	

Table

Nominal volume of container (brim-full)	Minimum expellable mass
20 ml	no restriction
30 ml	no restriction
60 ml	30 g
80 ml	40g
100 ml	50 g
120 ml	60 g
140 ml	70 g
160 ml	80 g
200 ml	100 g
225 ml	110 g
300 ml	150 g
350 ml	175 g
400 ml	200g
450 ml	225 g
500 ml	250 g

		525 ml	275 g
		650 ml	350 g
		800 ml	400 g
		1 litre	500 g
125	Pneumatic tyre sealant	50 ml, 75 ml, 125 ml, 250 ml 500 ml, 1 *l*, 2 *l*, 5 *l*, 25 *l*, 200 *l* and an integral multiple of 1 *l* above 200 *l*	
126	Charcoal when sold in the retail trade	2 kg, 5 kg, 10 kg and 25 kg	
127	White open woven bandages	Lengths: 3 m or 5 m. Widths: 25 mm, 50 mm, 75 mm, 100 mm or 150 mm	
128	Absorbent gauze	Lengths: 1 m, 5 m, 10 m or 100 m. Width: 90cm	
129	Butter muslin	Lengths: 1 m, 5 m, 10 m or 100m. Width: 90 cm	
130	Toilet tissue paper in rolls	From 1 February 1978 a manufacturer, converter or wholesale dealer, and from 15 March 1978 a retail dealer, shall sell toilet paper in rolls only when wound around a core having a maximum inner diameter of 40 mm and being of the undermentioned sheet count, ply and sheet size: (i) Single ply rolls: 500 sheets and multiples of 100 sheets per roll thereafter, having a minimum length of 110 mm and a minimum width of 100 mm per sheet; (ii) two ply rolls: 350 sheets and multiples of 100 sheets per roll thereafter, having a minimum length of 110 mm and a minimum width of 100 mm per sheet	

SCHEDULE 7

[Regulation 16(2)]

USE OF MEASURING UNITS

Manner of expressing quantity in terms of measuring units

1. The manner of expressing the quantity of goods in trade dealings in terms of permissible measuring units and their multiples or submultiples shall be as prescribed in paragraphs 2 to 9 of this Schedule.

Use of fractions

2. For expressing the quantity of goods only decimal fractions, where necessary, may be used with any permissible measuring unit, e.g. 20,5 kg, 0,5 m, but not 20½ kg or ½m.

Use of units, multiples and submultiples

3. For expressing the quantity of goods, either any measuring unit only or its multiple or submultiple only may be used, e.g. 1,2 t or 1 200 kg, but not 1 t 200 kg; 1,2 kg, but not 1 kg 200 g; 1,5 m, but not 1 m 500 mm or 1 m.

Use of prefixes

4. Except for the unit "hectolitre", which may be used in the liquor trade, and the unit "centimetre", which may be used in the textile trade, the prefixes centi, deci, deca and hecto shall

not be used in describing the quantity of goods by mass, length, or volume in terms of the litre unless otherwise indicated in a regulation of this Part.

Use of units of mass

5. (1) The carat (metric) shall not be used except for dealings in precious stones or pearls and only decimal submultiples, of the carat (metric) may be used, where necessary.

(2) A mass equal to or more than 1 g or 1 kg shall not be expressed in terms of a unit smaller than the gram or the kilogram, respectively.

Use of units of volume

6. (1) A quantity equal to or more than 1 *l* shall not be expressed in terms of a unit smaller than the litre.

(2) A quantity equal to or more than 1 cm^3, 1 dm^3 or 1 m^3 shall not be expressed in terms of a unit smaller than the cubic centimetre, cubic decimetre or cubic metre, respectively.

(3) Except as otherwise provided in this Part, the litre or any multiple or submultiple thereof may only be used to express the volume of a liquid.

Use of units of length

7. A length equal to or more than 1 m shall, in the case of prepacked goods or articles, not be expressed in terms of the millimetre and, similarly, in textiles a length equal to or more than 10 m shall not be expressed in terms of the centimetre.

Use of units of area

8. (1) An area equal to or more than 1 cm^2, 1 dm^2 or 1 m^2 shall not be expressed in terms of a unit smaller than the square centimetre, square decimetre or square metre, respectively:
Provided that, in the case of the area of leather, the dm^2 may be used for areas larger than 1 ml.

(2) The hectare shall not be used except for dealings in land or for describing the area of land equal to or more than 1 ha.

Use of the decimal indicator

9. (1) Where the expression of the magnitude of a quantity in terms of a measuring unit or by number involves decimal fractions, a comma shall be used as the decimal sign in the numerical part of the expression or in the number and the digits shall be separated into groups of three digits on either side of the comma by means of spaces and the decimal sign shall have at least one digit on each side, e.g. 2,75 m, 1,5 kg, 0,5 *l*, 20,5, 25 130,4.

(2) In expressing the magnitude of a quantity in terms of a measuring unit, a space shall be left between the numerical part of the expression and the measuring unit symbol and the symbol shall not be followed by a full stop, except at the end of a sentence, when the full stop shall be one space away, e.g. “15 kg.”, but not “15kg.”.

PART II

MEASURING INSTRUMENTS AND CONTAINERS USED FOR PRESCRIBED PURPOSES

Definitions

1. In this Part of the regulations "the Act" shall mean the Trade Metrology Act, 1973 (Act 77 of 1973), and unless the context otherwise indicates, any expression to which a meaning has been assigned in that Act shall have the meaning thus assigned to it. Further, unless contrary to the context -

[The Trade Metrology Act 77 of 1973 was renamed the Metrology Act 77 of 1973.]

(i) "accelerating massmeter" means a massmeter of which the beam or steelyard has an unstable action both when the massmeter is unloaded and loaded and the balance of which is indicated as described for such an instrument in regulation 26(1)(a)(ii) of this Part;

(ii) "analogue indication", in reference to a measuring instrument, means the visual indication or the printing of the results of measurement by a scale and index, allowing the evaluation of an indicated or printed result as a fraction of the smallest graduation;

(iii) "bearings", in relation to the lever and stay pivots of a massmeter fitted with knife-edges, means and includes all surfaces and points intended to be in contact with the knife-edges;

(iv) "capacity", as marked or indicated on a measuring instrument in accordance with regulation 22 of this Part, means -

(a) in reference to a massmeter, the maximum mass which it is designed and constructed to measure in a single operation, including the mass balanced by any graduated and denominated tare adding device with which the instrument may be provided, but excluding the range of the scale on a difference chart;

(b) in reference to a length, area or volume measuring instrument, other than a liquid meter, water meter, gas meter or other continuous length, area or volume measuring instrument or a simple material measure of length or volume, the maximum length, area or volume for which it is designed and which it is constructed to measure in a single operation;

(c) in reference to any measuring instrument which is designed to measure continuously, the maximum measurement which it can indicate:

Provided that any graduated measuring instrument to which paragraphs (a), (b) and (c) of this definition relates may indicate values equivalent to a maximum of nine graduations above or one graduation below the nominal capacity of the instrument; (xxviii)

(v) "certifying stamp" means a die impression which contains the characters "RSA" and a figure or a group of figures which signify the year of certification, or alternatively contains the characters "RSA" and two separate figures or two groups of separate figures which respectively signify the identification number of an

inspector and the year of certification and which is stamped on a measuring instrument in the place described in regulation 23 of this Part of the regulations;

(vi) "conventional true value of a quantity" means a value approximating to the true value of that quantity and being such that, for the purpose for which that value is required or used, the difference between these two values may be neglected;

(vii) "denomination", in reference to a measuring instrument, means the name and value of the measuring unit used for expressing the magnitude of the quantity;

(viii) "difference-chart", in reference to a massmeter, means a chart on which, by means of an index, an excess or deficiency deviation from a required or pre-determined mass is indicated, but does not include an undenominated indicating plate and index on a balance or a beam scale;

(ix) "digital indication", in reference to a measuring instrument, means the visual indication or printing of the results of measurements by a display of discrete figures not permitting the interpolation of a value between two consecutive indications;

(x) "error", in reference to a measuring instrument, means the difference, irrespective of the cause of such difference, in excess or in deficiency between the result of a measurement by such instrument and the conventional true value of a corresponding measuring standard or standards, but does not include the rounding error of a digital indicator;

(xi) "index", in reference to a measuring instrument, means that part of the indicating device, the position of which with reference to the scale marks, enables the result of a measurement to be defined;

(xii) "load measuring device", in reference to a massmeter, means that part of the measuring instrument by means of which the mass of the load is measured;

(xiii) "load receptor", in reference to a massmeter, means that part Of the measuring instrument on or in which the load is supported or from which the load is suspended;

(xiv) "load transmitting device", in reference to a massmeter, means that part of the measuring instrument by means of which the force produced by the load acting on the load receptor is transmitted to the load measuring device;

(xv) "massmeter" means any mass measuring instrument except a masspiece;

(xvi) "material measure" means a physical object of known value and denomination used to determine the value of a quantity by direct comparison;

(xvii) "material liquid measure" means a material measure of volume intended specifically for measuring liquids;

(xviii) "new", in reference to a measuring instrument, means any such instrument which has never been used since having been made or which has never been certified notwithstanding that it may have been used;

(xix) "repaired", in reference to a measuring instrument, means any such instrument which has been repaired, either after obliteration of the certifying stamp thereon by an inspector or a repairer as required, or after obliteration of a defaced certifying stamp thereon by a repairer as required in terms of the Act or any regulation thereunder;

(xx) "reading by simple juxtaposition" means the reading of the result of a measurement where successive figures have been so juxtaposed as to give the result of the measurement without the need for calculation;

(xxi) "repeatability", in reference to a measuring instrument, means the comparison of results for repeated measurements of the same quantity;

(xxii) "result of a measurement" means the value of the measured quantity obtained by a measurement;

(xxiii) "rounding", in reference to digital indication, means the rounding, by the indicating device of a measuring instrument, of the result of a measurement, up or down, to the nearest discrete figure;

(xxiv) "rounding error", in reference to a digital indicator, means the difference between the digital indication and the result which the measuring instrument would indicate if the indicator were an analogue indicator;

(xxv) "semi-digital indication", in reference to a measuring instrument, means the visual indication or printing of the results of measurements as a digital indication in respect of all decades of the indication above the units decade, the indication in the units decade being an analogue indication;

(xxvi) "sensitivity", in reference to a vibrating massmeter, means the ratio of displacement of the indicating element to the increase in the mass of the load which produces such displacement;

(xxvii) "steelyard" means, in addition to the massmeter so designated, the load measuring device in the form of a steelyard on any massmeter so equipped;

(xxviii) "Table of Allowances", where used in this Part of the regulations, means one of the Tables of Allowances in the Annexure to this Part and includes the preceding Explanatory Notes;

(xxix) "true value of a quantity" means the value which characterises the quantity perfectly defined;

(xxx) "turn", in reference to a vibrating massmeter, means the displacement of the beam or steelyard to the full extent of its travel either way from the horizontal position of balance and the mass required to effect such turn does not include the mass required to correct any error;

(xxxi) "value", in reference to a given quantity, means the magnitude of the quantity expressed as the product of a number and the appropriate unit of measurement:

(xxxii) "vibrating massmeter" means a massmeter in which the beam or steelyard oscillates when disturbed from rest in its position of balance.

Prescribed purposes

2. The purposes relating to the use or possession for use of any measuring instrument under any applicable provision of the Act shall be -

(a) trade, as defined in section 1(xxii) of the Act, excluding the controlling of a manufacturing process or the compounding of ingredients of quantities of goods or articles in a manufacturing process and the dispensing by a doctor of his own prescription;

(b) pharmaceutical dispensing;

(c) the testing of milk and cream for butterfat content in terms of a relevant provision of the Dairy Industry Act, 1961 (Act 30 of 1961);

(d) the determination of the dimensions or the gross mass or the tare or the axle or wheel mass load or the depth of the treads of the tyres of any road vehicle for the purposes of the relevant provisions of any road traffic ordinance;

(e) the determination of the mass of persons, excluding babies, for a fee;

(f) the determination of freight charges;

(g) the determination of the gross mass or tare of any vehicle or combination of vehicles for the purposes of any law or bylaw;

(h) the fixing, collection or determination of tolls, rates, taxes or other fees by the State or any authorised person.

Measuring units, prefixes, symbols and their usage

3. (1) Subject to the provisions relating to use of a measuring unit specified in any provision of any regulation of this Part, the recognised measuring units and prefixes for the purposes of the regulations of this Part are the measuring units and their multiples and submultiples and prefixes specified in the First Schedule and in Tables 1 to 4 of the Second Schedule to Government Notice R.1146 of 5 July 1974, published under the Measuring Units and National Measuring Standards Act, 1973 (Act 76 of 1973), and shall be used in accordance with the rules set out in the Schedules.

[The Metrology Amendment Act 17 of 2005 repealed the Measuring Units and National Measuring Standards Act 76 of 1973.

Measuring units, symbols and rules were issued under the Measuring Units and National Measuring Standards Act 76 of 1973 in RSA GN R.1146/1974 (RSA GG 4326), as amended by RSA GN R.713/1976 (RSA GG 5103) and by RSA GN R.1234/1977 (RSA GG 5648).]

(2) No recognised measuring unit or multiple or submultiple thereof shall for the purposes of this Part of the regulations be designated by any symbol other than a symbol specified in the Schedules and Tables referred to in subregulation (1), subject to any provision of this Part relating to their usage,

(3) The measuring unit “metric carat”, symbol “CM”, may be used in trade for expressing the mass of precious stones and pearls.

Permissible nominal values (denominations) of masspieces and of material measures

4. The permissible nominal values (denominations) of masspieces, of material measures of length and of material measures of volume are those specified in an applicable regulation of this Part.

Instruments not to be certified or recertified and prohibition of use of certain instruments

5. (1) An inspector shall not certify or recertify the following -

(a) Any measuring instrument which -

(i) is in his opinion not sufficiently strong to withstand the wear and tear of ordinary use for the purpose for which it is used or intended to be used, unless such instrument has, in terms of section 18 of the Act, been approved specifically for such purpose;

(ii) does not meet the requirements prescribed for its class or type in the Act and in these regulations unless such instrument is of a model approved in terms of section 18 of the Act;

(iii) is not complete;

(iv) is not in a clean state;

(b) any massmeter which -

(i) has a broken scoop, pan, plate or other part which is vital to its operation;

(ii) has a scoop, pan or plate of such size or shape as may lead to incorrect measuring, either through its fouling the housing of the massmeter or because its size or shape may cause proper contact between knife-edges and bearings to be disturbed;

(iii) has a goods plate which is readily absorbent of moisture, whether because of the material of which it is made or on account of faulty glazing or of the extent to which it is cracked or chipped;

(iv) has proportional counterpoises the total value of which added to the full steelyard or dial reading does not correspond to the marked capacity of the massmeter, unless approved by the director;

(c) micro meter scales, unless of a model approved in terms of section 18 of the Act;

(d) box-end beam scales, except those used in post offices for measuring the mass of letters;

(e) counter steelyards, unless of a model approved in terms of section 18 of the Act;

(f) any measuring instrument prohibited under section 27 of the Act or under these regulations;

(g) any measuring instrument exempted under Part III of the regulations or in terms of a certificate issued by the director in terms of section 23(2) of the Act, unless certification or recertification is required by the director;

(h) any non-metric measuring instrument, unless certification or recertification is required by the director;

(i) any measuring instrument of a model which is required to be approved in terms of section 18 of the Act, unless it is of a model so approved and unless it is clearly and indelibly marked with the number of the certificate of approval;

(j) any measuring instrument of a model or modified model which has been refused approval in terms of section 18 of the Act or in respect of which a certificate of approval has been withdrawn.

(2) The use for any prescribed purpose of the following instruments is prohibited:

(a) Any accelerating type of balance, beam scale or counter scale;

(b) any accelerating type of steelyard or counter platform scale;

(c) any massmeter of the type known as a "Union" scale;

(d) any swan-necked beam scale;

(e) (i) any steelyard having a capacity of less than 50 kg;

(ii) any steelyard which is reversible or has more than one load-hook;

(iii) any steelyard not provided with a zero graduation.

Use of units for indication of results of measurements

6. (1) Unless otherwise approved by the director or as provided in the provisos to the Table in subregulation (2) of this regulation, any indication of the result of a measurement by any graduated measuring instrument, other than a material measure, which is to be approved in terms of section 18 of the Act after the first day three years after the date of promulgation of these regulations, or from such day any indication of the result of a measurement by any new graduated measuring instrument, other than a material measure, which does not require to be approved in terms of section 18 of the Act, shall be indicated in terms of only one unit of the measuring units referred to in regulation 3 of this Part and any figured subdivisions of such units shall be indicated as decimal submultiples thereof.

(2) Unless otherwise approved by the director, the applicable measuring unit referred to in subregulation (1) of this regulation shall be that shown in Column 4 of the following Table in respect of the category of instrument, other than a material measure, shown in Column 1 and having a capacity shown in Column 2 or 3 thereof, having regard to the provisos to the Table:

TABLE

Category of instrument	Capacity, if measurement is of a fixed quantity equal to capacity	Capacity, if measurement is of various quantities up to capacity	Unit

a. Massmeters	(i) 1 kg or more	more than 1 g but not	kg
	(ii) 1 g or more but less than 1 kg	more than 1 kg not	g
	(iii) less than 1 g	more than 1 g	mg
b. Length measuring	(i) 1 m or more	more than 1 m not	m
instruments	(ii) less than 1 m	more than 1 m	mm
c. Area measuring	(i) 10m^2 or more	more than 10m^2 not	m^2
instruments	(ii) less than 10 m^2	more than 10 m^2	dm^2
d. Volume measuring	(i) 11or 1 dm^3 or more	more than 1 / or 1 dm^3	*l* or dm^3
instruments.	(ii) less than 1 / or 1 dm^3	not more than 1 / or 1 dm^3.....	ml or cm^3

Provided that -

(a) in respect of a massmeter having a capacity of more than 1 000 kg, the unit may be the mega gram (Mg) or the ton (t);

(b) in respect of a volume measuring instrument for liquids having a capacity of more than 1 000 *l*, the unit may be the kilolitre (kl) or the cubic metre (m^3);

(c) where the capacity according to Column 3 -

(i) in the case of a massmeter is 1 kg or 1 g, the unit for the terminal indication may be 1 kg or 1 g, respectively;

(ii) in the case of a length measuring instrument is 1 m, the unit for the terminal indication may be 1 m;

(iii) in the case of a volume measuring instrument is 1 *l*, the unit for the terminal indication may be 1 *l*;

(d) any capacity referred to in the Table is the total value indicated directly or indirectly on the indicating dial or graduated scale including the value of any means of increasing the measuring range including, in the case of a massmeter, any loose proportional counterpoise, but excluding the value compensated by any loose masspiece in the case of a semi-self-indicating scale or by any separate adding tare compensating device.

Form of values of graduations

(3) On any new graduated measuring instrument the value of the smallest graduation shall be in the form of 1 x 10^n, 2 x 10^n, or 5 x 10^n of a measuring unit authorised by the Act where the exponent "n" is a positive or negative whole number or zero.

Reading by simple juxtaposition

(4) Except as otherwise provided in a regulation of this Part, the graduations and the figures on any new graduated measuring instrument shall be so arranged as to give the result of any measurement on the principle of reading by simple juxtaposition, including the value of any masspiece or proportional counterpoise which is indicated on the dial of any massmeter with which such masspiece or counterpoise is used.

(5) Loose masspieces used with semi-self-indicating scales and loose proportional counterpoises used in conjunction with steelyards on massmeters are excluded from the provision of subregulation (4) of this regulation.

Advance of indication by digital indicators

7. Unless otherwise approved by the director, when the value of the quantity indicated by any continuously indicating digital or semi-digital indicator is increasing, the change to the next higher figure in any decade higher than the units decade shall occur when the indication in the units decade is moving between its highest figured graduation and zero or is moving the last one tenth of its travel towards zero, whichever is the lesser, and the change in the higher decades shall be completed when the indication in the units decade has reached zero and conversely when the value of the quantity indicated is decreasing, the change to the next lower figure shall occur when the indication in the units decade is moving between zero and its highest figure graduation or for the first one tenth of its travel from zero and the change in the higher decades shall be completed when the indication in the units decade has reached the highest figured graduation or has moved one tenth of its travel.

Extent of rounding error permitted

8. On any measuring instrument with digital indication the rounding error shall not exceed 0,7 of the value of one increment of the indicating scale.

Indication by several indicators

9. Except as otherwise provided in any regulation of this Part, where a measuring instrument has more than one indicator, whether analogue or digital or whether the indication is visual or is a printed record -

(1) (a) the value of the smallest graduations of all of the analogue indicators shall be the same;

(b) the value of the smallest graduations of all of the digital indicators, including printers, shall be the same;

(c) the value of the smallest graduation of a digital indicator, including a printer, operating in conjunction with an analogue indicator, may be smaller than but shall not be more than the value of the smallest graduation of the analogue indicator;

(2) the result of a measurement indicated by the several indicators, with any digital indication corrected for rounding error, shall not differ, one from another, by more than the permissible error or by more than the permissible error on that indicator which has the greater value of the smallest graduation where these values differ:

Provided that there shall be no difference in the results indicated by the several digital indicators;

(3) permissible errors in visual indication or in printing shall be related to the respective value of the graduations of each of the visual indicators or printers:

Provided that, where the value of the graduations of a printer is smaller than the value of the graduations of an associated analogue indicator, the allowances shall relate only to the value of the graduations of the analogue indicator and the printer may record the result of a measurement equal to the analogue indication, rounded to the nearest printer increment.

Notice in connection with certification or re-certification of measuring instruments used for a prescribed purpose

10. (1) The capacity of a measuring instrument prescribed in terms of section 19(1)(d) of the Act shall in the case of a massmeter be 150 kg.

(2) (a) A notification by a person in terms of section 19(2) of the Act shall include a description of the measuring instrument stating its capacity and the type of instrument to which it belongs, such as a beam scale, self-indicating balance, cream test scale, counter scale and masspieces, self-indicating counter scale, non-self-indicating or self-indicating platform scale, overhead track scale, hopper or tank scale, road vehicle scale, rail vehicle scale, material measure of length, length measuring instrument, area measuring instrument, material measure of volume, volume measuring device, liquid meter, lubricating oil dispenser, liquid fuel dispenser.

(b) Where such notification relates to a rail or road vehicle scale which has any overhead obstruction, the height of such obstruction measured from the platform or approaches shall be stated in the notification.

Measuring instruments acquired uncertified to be certified before use for a prescribed purpose

11. Any measuring instrument which does not bear a certifying stamp for the current year when acquired for .use for any prescribed purpose shall, prior to being put into use for such purpose, be submitted for certification or recertification at a regional office of metrology unless such instrument is covered by a written authority in accordance with section 28(1) of the Act.

Mass measuring instruments which are to be recertified after having been re-installed

12. Any vehicle scale whether or not self-contained or any non-self-contained platform scale which has been re-installed after it has been certified shall be deemed to be uncertified until such time as it has been recertified in its new position.

Acceptability of a declared quantity

13. Subject to any applicable provision of any regulation of this Part, the quantity of any article or thing, determined as the result of a measurement by a measuring instrument permissible for use in terms of the Act and suitable for measuring the quantity of the article or thing in question, shall, when declared for the purpose of the provisions of any law or bylaw, be deemed to be the acceptable quantity of such article or thing.

Method of determining the tare or gross mass of containers, railway trucks or road vehicles

14. (1) Except as otherwise provided in any regulation of this Part, when the tare or gross mass of any container, railway truck or road vehicle or combination of railway trucks or road vehicles is to be determined for any prescribed purpose including the purposes of the provisions of any law or bylaw, the measuring of such mass shall be carried out upon a suitable massmeter having a goods platform or platforms of such size as to allow of the mass of such container, truck, road vehicle or combination being measured as one complete unit and during such measuring the entire container, truck or road vehicle or combination shall be stationary on the platform or platforms and if a combination of trucks or road vehicles must be uncoupled to form separate units in order that their tare or gross mass be measured as prescribed herein, each such separate unit shall be entirely disconnected before the measuring takes place.

(2) Notwithstanding the provisions of subregulation (1) of this regulation, the gross mass or tare of any railway truck or combination of railway trucks forming a train or of any road vehicle or combination of road vehicles may be determined for a prescribed purpose while any such truck or vehicle is -

(a) stationary and is coupled with other such trucks or road vehicles not on the platform or platforms of the massmeter and such mass may be determined in the case of a combination by adding together the individual truck or road vehicle loads; or

(b) in motion, whether or not coupled to other trucks or road vehicles not on the platform or platforms of the massmeter and such mass may be determined by adding together the individual axle mass loads of the truck or road vehicle or combination:

Provided that the determination of mass is made by means of a massmeter or combination of massmeters which complies with any provision of any regulation of this Part applicable to any massmeter suitable to be used for the determination of mass as set out in paragraph (a) or (b) of this subregulation and approved for such purpose of use in terms of section 18(2) of the Act.

(3) (a) Notwithstanding the provisions of subregulation (1) of this regulation, the gross mass or tare of any road vehicle or of a combination of such vehicles may be determined for the purposes of the relevant provisions of any road traffic ordinance by adding together the individual axle mass loads of such vehicle or vehicles, as obtained by the measuring thereof by means of a road vehicle scale or other type of massmeter or combination thereof complying with the requirements of any applicable regulation of this Part:

Provided that where such gross mass or tare has been determined in the manner set out in this subregulation and forms the basis of any criminal proceedings under any road traffic ordinance, the total mass so obtained less 5 per cent of such total shall be deemed to be the acceptable gross mass or tare of the vehicle or combination of vehicles.

(b) For the purposes of paragraph (a) of this subregulation, "acceptable gross mass or tare" means the mass obtained by measuring in accordance with the procedure specified in that paragraph and the expression "axle mass load" includes in the measurement thereof the mass carried by the axle and the mass of the axle and of its wheels.

Measuring instruments used for determining axle mass loads of vehicles

15. (1) Any mass measuring instrument used or intended to be used for the determination of an axle or wheel mass load of a road vehicle for the purpose of the relevant provisions of any road traffic ordinance shall be a certified road vehicle scale or combination of road vehicle scales or a certified massmeter or combination of massmeters which complies with the regulations of this Part applicable to wheel mass load scales.

(2) (a) Where an axle or wheel mass load of a road vehicle has been determined by means of a certified road vehicle scale or combination thereof or by a certified wheel mass load scale or combination thereof and such axle or wheel mass load forms the basis of any legal proceedings under any road traffic ordinance, the respective axle or wheel mass load so determined less 5 per cent thereof shall be deemed to be the acceptable mass load of the axle or wheel concerned.

(b) For the purposes of paragraph (a) of this subregulation" acceptable axle or wheel mass load" means the respective mass obtained when the mass load of the axle or wheel of a road vehicle has been determined in accordance with the procedure specified in. that paragraph and, in the measurement of such axle mass load, the mass carried by the axle concerned and the mass of that axle and of its wheels are included and, in the measurement of such wheel mass load, the mass carried by the wheel concerned and the mass of the wheel are included.

Measuring instruments not intended for use for a prescribed purpose

16. Where any person keeps a measuring instrument at a place where he carries out an act which falls within the meaning of regulation 2 of this Part, the following permanent and conspicuous notice shall be fixed on a suitable part of any measuring instrument which is kept on such premises and which is not used or possessed for a prescribed purpose:

"NOT FOR USE FOR ANY PRESCRIBED PURPOSE".

Duties of person submitting or using measuring instruments

17. An inspector may require the person submitting any measuring instrument for verification or using any measuring instrument for a prescribed purpose to -

(a) dismantle it sufficiently to enable him to examine the working parts;

(b) provide sufficient labour for the proper and expeditious handling of the standards or any material which may be used in the testing of such measuring instrument;

(c) provide facilities to the satisfaction of the director for the measuring or premeasuring of the mass, length, area or volume of any material, liquid or gas used for the testing of a measuring instrument which cannot be tested completely with standard material measures;

(d) open any locking device on such instrument or on any instrument or ancillary equipment used in conjunction therewith;

(e) furnish him with a sufficient number of coins of appropriate denomination, or with a sufficient number of suitable metal discs, for the purpose of undertaking the prescribed tests of any coin-operated measuring instrument, which coins or discs shall be returned to the submitter or be left in the instrument on completion of the testing.

Certification on premises

18. Measuring instruments may, by arrangement, be certified on the premises of a manufacturer or repairer thereof or a dealer therein when a sufficient number waiting to be certified are on hand.

Marking of number of approval certificate

19. Any new measuring instrument of a model in respect of which a certificate has been issued in terms of section 18(2) of the Act shall be clearly and indelibly marked with the number of such certificate, in the form "SA . . ."

Removable parts

20. No measuring instrument shall have any readily removable part the removal of which would affect the accuracy of the instrument, unless the part is such that the instrument cannot be used without it.

Interchangeable or reversible parts

21. No measuring instrument shall have any readily interchangeable or reversible parts, unless the interchange or reversal does not affect the accuracy of the instrument or unless such interchangeable or reversible parts are clearly and indelibly marked to indicate their positions on the instrument.

Marking of capacity or denomination

22. Every measuring instrument shall have its capacity or its denomination, as the case may be, indelibly and conspicuously marked on it in the manner prescribed by any regulation of this Part applicable to the instrument or in the manner required by the director in respect of a model of instrument approved in terms of section 18 of the Act, except in so far as exemption is provided for certain masspieces in regulation 42(5)(c) of this Part.

Plug for certifying stamp

23. Except as otherwise provided in any regulation of this Part applying to a measuring instrument of a specific class or kind or as provided on approval of a model of instrument in terms of section 18 of the Act, every measuring instrument shall be provided with a lead plug to receive the certifying stamp and such plug shall be inserted in an undercut hole in an easily accessible and essential part of the instrument, the surface of the plug being flush with the surrounding metal.

Use of defacing stamp and authority for further use

24. (1) When an inspector finds that any measuring instrument is false, defective or inaccurate or does not meet any requirement of the Act or of these regulations, he shall reject the instrument and shall obliterate any existing certifying stamp thereon by means of a defacing stamp of six-pointed star design:

Provided that where there is no plug for a certifying stamp on the instrument, he shall mark it with a defacing stamp in the most suitable position.

(2) Where an inspector has rejected any measuring instrument as set out in subregulation (1) of this regulation, for a reason other than its being false, defective, or inaccurate, he may in terms of section 27(7) of the Act, authorise the owner or user, in writing, to continue to use such measuring instrument for such reasonable period as he may in the circumstances deem necessary,

New and used measuring instruments

25. Except as otherwise provided in any regulation of this Part and except in respect of the provisions of regulation 26(2)(c), where any requirement of any regulation of this Part applies specifically to a new measuring instrument, such requirement shall apply equally to such instrument when it is no longer new.

Massmeters - Position of balance and means of balancing at zero load

26. (1) (a) The position of balance of a massmeter at zero load shall be indicated -

(i) in the case of a vibrating massmeter, by the beam or steelyard returning to the horizontal position of equilibrium when disturbed therefrom;

(ii) in the case of an accelerating massmeter of the type known as a dead-mass scale, by the beam, on being released from the horizontal position with the masspiece plate on its stop, falling gently under its own acceleration until the goods plate comes to rest on its stop, and in the case of other accelerating massmeters, by the steelyard, on being released from the horizontal position on the lower stop, rising gently under its own acceleration to the upper stop;

(iii) in the case of a self-indicating or semi-self-indicating massmeter with analogue indication and in the case of a massmeter provided with a difference chart, by the index coming to rest at the zero graduation, or vice versa;

(iv) in the case of a self-indicating massmeter with digital indication, by the number "O" appearing on the main indicator and the balance indicator, where provided, being at zero balance position.

(b) In the case of any massmeter provided with a spirit level or other level indicator, the position of balance prescribed in this subregulation shall be indicated when the spirit level bubble or other level indicator is in its true position.

(c) Paragraph (a) of this subregulation shall not apply in the case of a massmeter approved in terms of section 18 of the Act if such instrument is so constructed as not to be in balance or not to indicate zero when unloaded.

(2) (a) Except as otherwise provided in any regulation of this Part or in terms of the approval of a massmeter under section 18 of the Act -

(i) every massmeter shall be provided with a means for balancing the instrument at zero load, in accordance with any appropriate provision of subregulation (1) of this regulation;

(ii) a self-indicating massmeter with digital indication shall be provided with a means for indicating the position of balance at zero load:

Provided that, where the balance indication is itself digital or not continuous, the massmeter shall be correct within one quarter of the value of the smallest graduation of the main indicator when the position of balance is indicated.

(b) (i) Where the balance of a massmeter at zero load is manually adjustable by means of a rotatable device, one turn of such device shall not affect the position of balance by more than 0,1per cent of the capacity of the massmeter, or in the case of a self-indicating massmeter by more than 0,1 per cent of the capacity of such massmeter or by more than the value of the smallest graduation of such massmeter, whichever is the lesser.

(ii) The means for balancing at zero load of any massmeter, other than a massmeter having only digital indication, shall operate continuously when being adjusted.

(iii) The means for balancing at zero load of a massmeter having only digital indication may operate in discrete steps, the value of each step being not more than one quarter of the value of the smallest graduation of the massmeter.

(c) On a new, repaired or contract massmeter the means for balancing shall be equally adjustable either way when the massmeter is submitted for certification by a mechanic or after it has been repaired or maintained by such person.

(d) (i) A massmeter which has digital indication may be provided with a device which, when set in operation by means of a push-button, automatically resets the indication to zero.

(ii) Where a device referred to in subparagraph (i) of this paragraph does not also adjust the balance in accordance with any appropriate provision of subregulation (1) of this regulation, an additional device shall be provided for balancing as required.

(e) (i) Except as otherwise provided in any regulation of this Part, a massmeter may be provided with a device which automatically maintains the massmeter in balance at zero load or which automatically compensates, in the indication of the result of a measurement, for an out of balance condition at zero load.

(ii) A device referred to in subparagraph (i) of this paragraph may be an apparatus for setting the indication to zero when the load is within a pre-determined range about zero or an apparatus known as an "automatic calibrator", for periodically simulating a predetermined load, comparing this with the indication and, within a pre-determined range, adjusting the indication to correspond with the simulated load, thus in effect compensating for an out of balance condition at zero load.

(iii) A device referred to in subparagraph (i) of this paragraph shall be so arranged that the zero load balance is maintained or imbalance is compensated for so as to be within one quarter of the value of the smallest graduation of the main indicator and so that zero is indicated when there is no load on the massmeter.

(iv) Any means provided for switching a device referred to in subparagraph (i) of this paragraph out of operation shall not be available to an operator.

(v) The operation of any device referred to in subparagraph (i) of this paragraph shall be delayed for such a period and the pre-determined range of the device shall be so limited, taking the delay period into consideration, that the device does not operate during the placing of any load on the load receptor of the massmeter by any means normally employed for placing such load.

Placing of indicators of massmeters

27. (a) Except where a massmeter operates automatically or where the operation of loading and unloading the load receptor is controlled from a position where the operator can observe the indication of at least one indicator, including at least one printer if any printer is provided, the indicator shall be so placed that the person operating the indicator or observing the indication has a clear and unobstructed view of the load receptor, unless otherwise approved by the director.

(b) Any additional indicator not placed in accordance with paragraph (a) of this regulation shall not be deemed to be certified in any certification of the massmeter, even though it may conform to the provisions of regulation 9 of this Part, and shall not be used for trade or for any other prescribed purpose and shall be marked as follows -

"THIS INDICATOR NOT TO BE USED"

Construction and strength of massmeters

28. A massmeter shall be of such strength and shall be so designed and constructed that it will support, without yielding unduly, a load equal to the capacity of the massmeter and in addition will support, without yielding unduly, the placing of such load on the load receptor by any means normally employed for placing the load.

Positioning of massmeters

29. A movable massmeter shall be positioned and operated on a firm and rigid base, free from vibration.

Knife-edges and bearings

30. (1) Where the load transmitting device of a massmeter comprises a beam or lever system with knife-edges and bearings -

(a) the knife-edges and bearings shall be so fitted as to allow the beam, steelyard or levers to move freely;

(b) the knife-edges shall be firmly secured in position, shall be in true parallelism and, where the design so requires, shall be coplanar and shall bear throughout the length of the parts designed to be in contact with the bearings;

(c) any knife-edges with round shanks shall either have an interference or tapered fit in the holes in which they are fitted or set screws or bolts shall so secure the knife-edges in position that they cannot twist;

(d) any lateral displacement between knife-edges and bearings shall be limited by friction plates, studs or shoulders so arranged that the contact between the knife-edge and the friction element is at a point on an extension of the line of contact between the knife-edge and the bearing;

(e) the knife-edges, bearings and friction surfaces shall be made of hardened steel or agate or other material approved by the director and shall be considered to be sufficiently hard if they are not scratched when tested by means of a superfine file of suitable shape.

(2) No massmeter shall have packing at the knife-edges which, in the opinion of the inspector, either consists of an excessive number of pieces or is in any other respect unsuitable for its purpose or have caulking at the knife-edges unless the caulking is required by the design of the massmeter for securing the knife-edges and is so applied as not to interfere with the proper seating of the knife-edges.

(3) Any portable massmeter of which the load transmitting device comprises a lever or levers with knife-edges and bearings shall be so constructed that the contact between knife-edges and bearings or between the load receptor and the load transmitting device cannot be disturbed during use or transportation:

Provided that a locking or relieving device may release the contact between knife-edges and bearings.

Steelyards and travelling or sliding poises on massmeters

Steelyards

31. (1) On any massmeter of which the load measuring device, or part thereof, including a tare beam, is a steelyard -

(a) the upper surface or edge of the steelyard shall be in a perfectly straight plane over the graduated portion;

(b) adequate stops shall be provided to prevent any of the poises from travelling behind the zero graduation or off the steelyard.

Graduations on steelyards

(2) (a) The graduations on a steelyard shall consist of notches or indelible lines so defined that the position of the travelling or sliding poise or poises with respect thereto is easily discernible.

(b) Notches and graduation lines shall be evenly cut or marked in one plane at right angles to the steelyard, shall be uniformly spaced and parallel to each other and any error in the marking of the graduations shall not exceed one-fifth of the distance between graduations or the allowance of error on the massmeter, whichever is the lesser.

(c) Where notches and graduation lines are used in combination, the lines shall clearly correspond to their equivalent notches.

(d) On a new steelyard the distance between notches or graduation lines, measured from centre to centre, shall be not less than 1,5 mm.

(e) The width of graduation lines on a new steelyard shall not exceed one quarter of the distance between them, measured from centre to centre.

(f) Where any new steelyard has two or more poises, the graduations relating to all of the poises except the smallest shall consist of notches, unless otherwise approved by the director.

(g) Where any massmeter has more than one steelyard the graduations on each steelyard, except the minor steelyard, shall consist of notches.

Travelling or sliding poises

(3) (a) No loose material shall be permitted in or on any travelling or sliding poise.

(b) Where lead is used for adjusting purposes on any travelling or sliding poise, it shall not come into contact with the steelyard.

(c) A sliding poise on a new unnotched steelyard or steelyard bar shall be provided with a set-screw or with a spring loaded brake to retain it in any set position.

(d) A new travelling or sliding poise shall be so constructed that no part thereof, including the set-screw where one is provided, can easily be detached.

(e) A travelling or sliding poise shall be of such shape and design that its position with respect to each notch or graduation on the steelyard is definitely indicated and easily readable.

(f) A new travelling or sliding poise shall be of such shape and be so fitted that no foreign bodies can lodge in any cavity or hollow.

(g) A travelling or sliding poise shall be so made that its centre of gravity cannot change except in respect of the normal movement of the poise.

Certain requirements in testing of massmeters

Testing of movable and suspended massmeters

32. (1) A movable massmeter provided with a base shall be tested in a level position and a massmeter which is suspended in use shall be suspended during testing.

Testing of fixed mas meters

(2) A vehicle scale, whether or not self-contained, and a non-self-contained platform scale or other massmeter which requires to be fixed in position when used shall be tested in situ,

Testing of massmeters for error

(3) (a) Before any massmeter is tested for errors, the massmeter shall be properly balanced at zero load in accordance with the appropriate provisions of regulation 26(1) of this Part; and

(b) except as otherwise provided in a regulation of this Part and as far as is practicable a massmeter shall be tested for errors at loads from zero up to its capacity.

Composition of test loads

(4) Except as otherwise provided in any regulation of this Part or where impracticable, any test load applied to a massmeter in the course of a test for errors shall consist of certified masspieces:

Provided that where a sufficient number of such masspieces are not available, suitable stable material, applied in successive quantities not exceeding the total of the available masspieces, may be used in conjunction therewith to make up the load progressively to or near the capacity of the massmeter.

Application of test loads

(5) A massmeter shall indicate the mass of the load correctly when any load up to its capacity is distributed evenly over the load receptor irrespective of whether the load is increased or decreased.

Application of test loads - eccentric loading

(6) Except as otherwise provided in any regulation of this Part and as far as is practicable -

(a) where the load receptor of a massmeter having a capacity of more than 50 kg is in the form of a platform supported at -

(i) not more than four points, the massmeter shall indicate the mass of the load correctly when a load equal to one-quarter of the capacity of the massmeter is placed in the middle or near the sides, ends or corners of the platform, such load in each position being spread over an area approximately equal to one quarter of the area of the platform;

(ii) more than four points, the massmeter shall indicate the mass of the load correctly when a load, equal to the capacity of the massmeter divided by the number of platform supporting points, is placed in the middle of the platform or over any of the supporting points, such load in each position being spread over an area approximately equal to the area of the platform divided by the number of supporting points;

(b) where a test in terms of paragraph (a) of this subregulation is impracticable in respect of a rail vehicle scale, the rail vehicle scale shall indicate the mass of the load correctly when a load equal to one-half of the capacity of the rail vehicle scale and comprising a loaded test truck is placed anywhere on the platform;

(c) where the load receptor of a massmeter is in the form of a hopper or tank, the massmeter shall indicate the mass of the load correctly when a load equal to one-tenth of the capacity of the massmeter is placed on the load receptor or on the test load receptacle required in terms of an applicable regulation of this Part, as nearly as possible over or under any of the supporting points;

(d) where the load receptor of a massmeter is in the form of a track or rail from which the load is suspended, the massmeter shall indicate the mass of the load correctly when a load equal to one-half of the capacity of the massmeter is suspended from any part of the track or rail;

(e) where the load receptor of a massmeter having a capacity of not more than 50 kg is in the form of a scoop, pan or plate, the massmeter shall indicate the mass of the load correctly when a load equal to one-half of the capacity of the massmeter is placed on the load receptor so that the centre of gravity of the load is anywhere within a distance from the centre of the load receptor equal to one-third of the greatest length thereof or, if the load receptor has a vertical end, when such load is placed against the middle of that end.

Testing of massmeters for constancy when load is counterbalanced by various means

(7) Where the load on the load receptor of a massmeter may be counterbalanced by means of various elements of the load measuring device, e.g. a self-indicating mechanism or counterpoise masspieces or tare bar or a steelyard or any of these in combination, any difference

in the results of measurement obtained by the various methods of counterbalancing the load shall not exceed the allowance of error.

Testing of massmeters for repeatability

(8) When the same load is applied repeatedly to the load receptor of a massmeter, any difference in the results of measurement on each application of the load shall not exceed the allowance of error.

Testing of massmeters for constancy when a load is kept on the instrument

(9) When the same load is kept on the load receptor of a massmeter for any period of up to eight hours, the massmeter shall indicate the mass correctly at any time during this period.

Testing of massmeters for constancy at zero balance

(10) After the balance of any massmeter at zero load has been properly adjusted any error of zero balance indication resulting from loading and unloading the massmeter shall not exceed one-half of the allowance of error prescribed for the massmeter in respect of a load not exceeding one-half of the capacity of the massmeter:

Provided that for the purpose of this test the load may remain on the massmeter for a period of not more than 30 minutes.

Testing of vibrating massmeters for sensitivity

(11) A vibrating massmeter shall as far as is practicable be tested for sensitivity at any load up to its capacity and at any such load the mass required to effect turn of the beam or steelyard from its position of balance shall not exceed the turning allowance prescribed for its class and capacity:

Provided that an unstable or a neutral action of the steelyard of the vibrating counter-platform or platform scale or vehicle scale may be permitted at loads above one quarter of the capacity:

Provided further that in this case the test at capacity shall be applied in the manner described in subregulation (12) of this regulation but without the addition of one-half of the applicable turning allowance.

Testing accelerating massmeters for sensitivity

(12) An accelerating massmeter stall as far as is practicable be tested for sensitivity when[5] loaded to its capacity and the mass required to overcome acceleration only over the full range of travel at capacity shall not exceed one and one-half times the tabulated turning allowance prescribed for a vibrating massmeter of the same class and capacity, while the mass required to overcome acceleration only over the full range of travel with the massmeter unloaded shall not exceed the tabulated turning allowance.

Testing of massmeters for strength of levers

(13) Where doubt exists as to the strength of levers or other working parts of a massmeter the massmeter shall be rejected if it yields unduly when loaded to its capacity.

Testing of relieving gear of massmeters

(14) (a) A massmeter provided with a relieving gear shall be put slowly out of and into gear when loaded to its capacity and, when it is so operated, any variation in the indication of the mass of the load shall not exceed one half of the applicable error allowance.

(b) The load receptor of a massmeter referred in (a) above shall be disengaged entirely from the load transmitting device when the instrument is in relief.

Testing of massmeters on movement of knife-edges and bearings

(15) Except as otherwise provided in any regulation of this Part, in the case of any massmeter provided with knife-edges and bearings, when the massmeter is loaded to one half of its capacity, the load being centrally placed on or in the load receptor and, where applicable, also so placed on the pan for masspieces, any difference in the accuracy of the massmeter resulting from moving the knife-edges or bearings laterally within the limits of their movement shall not exceed the value of the appropriate allowance of error at a load equal to one half of the capacity.

Conventional mass measuring instruments

33. (1) A conventional mass measuring instrument of any of the following classes or kinds shall conform to any applicable provisions of the regulations of this Part consistent with the design of the instrument and, in particular, to regulations 34 to 42 of this Part relative to each class or kind and any such instrument which so conforms may be certified without being required to be of a model approved in terms of section 18 of the Act, unless, in the opinion of an inspector, any such instrument is of unusual or novel design or has any feature which may facilitate inaccurate measurement -

(a) (i) Equal-armed balances or beam scales;

(ii) post office letter scales;

(b) equal-armed counter scales having capacities not exceeding 50 kg;

(c) equal-armed dead-mass scales having capacities exceeding 50 kg;

(d) single-unequal armed steelyards having capacities not less than 50 kg;

(e) wall scales having two unequal-armed levers connected in series;

(f) compound lever scales of the following types, having load measuring devices comprising steelyards with travelling or sliding poises and with or without loose proportional counterpoise masspieces:

(i) Counter-platform or bench scales having capacities of not more than 150 kg;

(ii) platform scales;

(iii) hopper or tank scales;

(iv) overhead track scales;

(v) vehicle scales;

(vi) crane scales;

(g) masspieces.

(2) (a) The load transmitting device of any massmeter referred to in subregulation (1) of this regulation shall consist of a lever or a system of levers together with any necessary connecting links or rods.

(b) The pivots which connect levers together, which connect levers to their fulcrums and which connect load receptors or load measuring devices to levers shall consist of knife-edges and bearings.

(c) Pivot knife-edges shall be positioned on the levers only.

(d) Where knife-edges are secured in such a manner as to allow of ready alteration to the ratio of the lever arm, such alteration shall be possible by means of a mechanical appliance only.

(e) No tare device shall be provided on any massmeter referred to in subregulation (1) of this regulation unless specially approved by the director.

(f) Where, except in the case of a Class 1 balance as defined in regulation 34 of this Part, a means for adjusting centre of gravity, such as a gravity ball, is provided, it shall be adjustable by means of a mechanical appliance only.

Beam scales and balances

Definitions

34. (1) (a) "Beam scale" means an equal-armed massmeter, the pans of which are suspended below the beam and which is not provided with any ancillary equipment other than a means for relieving the knife-edges and bearings.

(b) "Balance" means a beam scale and is in this regulation applied with reference to a beam scale of Class 1 or Class 2 as defined in subregulation (2) of this regulation.

Classification and marking

(2) (a) Beam scales or balances shall be divided into classes as follows:

Class 1 shall comprise precision balances provided with means for relieving all of the knife-edges and bearings.

Class 2 shall include balances, other than precision balances, for measuring the mass of medicines, chemicals, precious metals, precious stones and comparable goods whether or not they are provided with means for relieving all the knife-edges and bearings.

Class 3 shall include beam scales for measuring the mass of meat, provisions and similar goods.

Class 4 shall include beam scales for measuring the mass of potatoes, onions and similar goods.

(b) Every beam scale belonging to Class 2 or to Class 3 shall be indelibly marked "Class 2" or "Class 3" according to the class to which it belongs.

Capacity marking

(3) The capacity of a beam scale shall be engraved, cast or stamped on the beam in a manner such as the following:

"Capacity . . . . g":

Provided that, where the beam is too delicate for such marking or is enclosed in a housing, the capacity shall be so marked on a metal plate permanently secured to the base or housing.

Construction

(4) (a) The beam of a beam scale or balance shall be symmetrical longitudinally about the fulcrum knife-edge and transversally about the centre line of the knife-edges, except that the ends of the beam may be shaped differently so as to prevent the interchange of removable stirrups.

Fitting of knife-edges

(b) (i) Except in the case of a Class 1 balance, or of a Class 2 balance provided with means for relieving all of the knife-edges and bearings, knife-edges shall be fitted in slots across the beam, to match continuous bearings, or fitted in holes across the beam, to match divided bearings, or shall be bolted in recesses of suitable shape.

(ii) The knife-edges of a Class 1 balance, or of a Class 2 balance provided with means for relieving all of the knife-edges and bearings, may be mounted on adjustable holders.

Pointer

(c) The beam of a beam scale or balance shall be provided with a pointer to indicate the position of equilibrium.

Balancing device

(d) (i) Except in the case of a Class 1 or a Class 2 balance the device for adjusting the balance at zero load shall be permanently secured and shall comprise a suspended balance ball or a balance box securely attached to either pan support, so attached that it cannot readily be tampered with.

(ii) A Class 1 or a Class 2 balance may be provided with a balancing device in the form of threaded screws on the beam or of a flag.

Range of travel

(e) (i) The beam of a beam scale or balance shall have equal travel each way from the position of equilibrium.

(ii) Except in the case of a beam scale or balance provided with an index pointer moving across a graduated indicating plate, travel each way from the horizontal position of balance of the beam shall be not less than -

Capacity	*Travel mm*
up to 50 g	4
over 50 g and up to 500 g	6
over 500 g and up to 5 kg	9
over 5 kg	12

(iii) The index related to a graduated indicating plate of a beam scale or balance shall have minimum travel beyond the extreme graduation on each side for a distance at least equivalent to the smallest graduation.

Method of testing

Test for errors

(5) Tests for error in accordance with applicable provisions of regulation 32 of this Part shall be applied to a beam scale or balance as follows -

Movement of knife-edges and bearings

(a) The test prescribed in regulation 32(15) of this Part shall not be applied to a Class 1 balance, or to a Class 2 balance which is provided with a means for relieving all of the knife-edges and bearings.

Test for errors at half capacity

(b) When certified masspieces equal to half the capacity of a beam scale or balance are placed in each pan, the instrument shall indicate equilibrium within the limits of one half of the turning allowance when the masspieces are placed so that the centre of gravity thereof is anywhere within a distance from the centre of each pan equal to one third of its diameter.

Test for errors at capacity

(c) When certified masspieces equal to the capacity of a beam scale or balance are placed centrally in each pan, the instrument shall indicate equilibrium within the limits of one half of the turning allowance.

Test for sensitivity

(d) (i) The turning allowances for beam scales and balances are prescribed in the Annexure to this Part.

(ii) Tests for sensitivity in accordance with the provisions of regulation 32(11) of this Part shall be applied with the pans of the beam scale or balance unloaded and with each pan loaded to the capacity of the instrument, with masspieces placed centrally in each pan, any error having been corrected.

Position of certifying stamp

(6) (a) Except as provided in paragraph (b) of this subregulation, on a Class 2 balance or on a Class 3 or Class 4 beam scale the certifying stamp shall be placed on a lead plug inserted in the beam immediately below or above the fulcrum knife-edge:

Provided that a Class 2 balance may alternatively have the lead plug placed not further than 25 mm either side of the fulcrum or, where the beam is totally enclosed in a housing, have the plug securely fitted in a cup riveted to the said housing, the housing to be sealed.

(b) A balance belonging to Class 1 or Class 2 may be stamped on a special plate permanently attached to the base of the instrument if the beam is likely to be affected by the insertion of a stamping plug.

Post Office letter beam scales

35. (1) Except as provided in this regulation, a Post Office letter beam scale shall conform to the applicable provisions of regulation 34 of this Part:

Provided that such letter scale shall not be classified in terms of subregulation (2) of that regulation.

(2) A Post Office letter scale, other than a new instrument, may have its end knife-edges inserted in box-ends on the beam.

(3) A Post Office letter scale may be arranged so -

(a) as not be in balance when unloaded, the pan for masspieces being permanently pre-loaded to counterbalance a set mass;

(b) that travel is on the goods pan side only.

(4) The turning allowances for Post Office letter scales are prescribed in the Annexure to this Part.

Counter scales

Definition

36. (1) The term "counter scale" means an equal-armed massmeter having a capacity not exceeding 50 kg, the pans of which are above the beam and which is not provided with any attached ancillary equipment.

Capacity marking

(2) The capacity of a counter scale shall be engraved, cast or stamped on the beam or on a metal plate permanently secured to some prominent part of the instrument, in a manner such as the following:

"Capacity.....kg".

Construction

Principle

(3) (a) A counter scale shall be constructed on the "Roberval" or the "Beranger" principle.

Protection

(b) Any new counter scale constructed on the "Beranger" principle shall have the working parts suitably protected by a housing.

Construction of beam

(c) Where a counter scale has a double beam, the two sides shall be connected by not fewer than two crossbars.

Fitting of knife-edges

(d) The knife-edges on a counter scale shall -

(i) have square, rectangular or pear-shaped shanks, fitted in similarly shaped holes in the beam and secured in position by means of nuts on threaded extensions of the shanks or by riveting the ends of the shanks or by welding or by casting in:

Provided that cast-in knife-edges may have round shanks with suitable flats or recesses to prevent them from twisting; or

(ii) be of triangular shape and be cast in or fitted in triangular slots machined across the appropriate surface of the beam:

Provided that in the latter case the knife-edges shall either be an interference fit in the slots or be secured by bolts through the beam, screwed into the bases of the knife-edges.

Stays

(e) (i) Any new counter scale constructed on the "Roberval" principle, other than one of the inverted type, shall have the stays forming the lower side of the parallelogram in one piece.

(ii) Centre forks of a counter scale shall be so secured that they cannot twist or get out of place.

Fitting of bearings and friction plates

(f) Where bearings or friction plates on a counter scale are loosely fitted in their supports and are retained in position by means of bearing caps or cover plates only, or where the friction plates are attached to the caps or cover plates, such caps or cover plates shall either be so fitted as to remain in position when any securing screw thereof is loosened, or at least two screws shall secure each cap or cover plate.

Pan supports

(g) The supports for the pans of a counter scale shall be of suitable and rigid structure, such as crosses strengthened by means of straps.

Form of pans

(h) (i) The pan or plate for masspieces of a counter scale shall not be readily removable unless it is of the same form and mass as the goods pan or plate or is so shaped that the pans or plates are not interchangeable.

(ii) The goods pan of a counter scale may be in the form of a pan, scoop or plate.

Balance boxes

(i) (i) A counter scale shall be provided with either one or two balance boxes containing lead, which shall be securely fixed beneath the pans, and where two boxes are provided, one shall be on each side, each box being large enough to contain lead to a mass not exceed 1 per cent of the capacity of the scale only.

(ii) The balance box or boxes referred to in subparagraph (i) hereof shall contain lead, without being completely filled, so as to allow the instrument to be readily balanced.

(iii) No balancing device other than the box or boxes referred to in subparagraph (i) hereof shall be permitted on a new or repaired counter scale.

Range of travel

(j) On a counter scale -

(i) the beam shall have equal travel each way from the horizontal position of balance;

(ii) the range of travel of the beam each way from the position of balance shall be not less than -

Capacity	*Travel mm*
up to 5 kg	6
over 5 kg and up to 20 kg	9
over 20 kg	12

Method of testing

Tests for errors at half-capacity

(4) Tests for errors in accordance with the applicable provisions of regulation 32 of this Part shall be applied to a counter scale as follows -

(a) When certified masspieces equal to half the capacity of the instrument are placed on the goods pan in accordance with the provisions of subregulation (6)(e) of that regulation and similar masspieces are placed in any position on the pan for masspieces, the scale shall indicate equilibrium within the limits of one-half of the turning allowance.

Tests for errors at capacity

(b) When certified masspieces equal to the capacity of the instrument are placed centrally on each pan, the scale shall indicate equilibrium within the limits of the prescribed turning allowance:

Provided that, if the goods pan is in the form of a scoop, half of the total mass shall be placed against the middle of the back of the scoop and the other half in any position on the scoop.

Tests for sensitivity

(5) (a) The turning allowances for counter scales are prescribed in the Annexure to this Part.

(b) Tests for sensitivity in accordance with the provisions of regulation 32(11) of this Part shall be applied to a counter scale with the pans unloaded and with each pan loaded with certified masspieces, equal to the capacity of the instrument, placed on each pan as prescribed in paragraph (4)(b) of this regulation, any error having been corrected.

Position of certifying stamp

(6) The certifying stamp shall be placed on a lead plug inserted in an undercut hole in a conspicuous and easily accessible part of the beam of a counter scale or, in the case of an enclosed "Beranger" scale, of the housing.

Dead-mass scales

Definition

37. (1) The term "dead-mass scale" means an equal armed massmeter of a capacity exceeding 50 kg the pans or platforms of which are above the beam and which is not provided with any attached ancillary equipment.

(2) The capacity of a dead-mass scale shall be engraved, cast or stamped on the beam or on one of the platforms or on a metal plate permanently secured to some prominent part of the instrument, in a manner such as the following:

"Capacity ... kg".

Principle of construction

(3) (a) A dead-mass scale shall be constructed on the "Roberval" principle.

Construction of beam

(b) The two sides of the beam of a dead-mass scale shall be connected by not fewer than two crossbars.

Fitting of knife-edges

(c) The knife-edges of a dead-mass scale shall either -

(i) have square or rectangular shanks with an interference fit in square or rectangular holes respectively across the beam; or

(ii) have square or rectangular shanks fitted in square or rectangular holes respectively and firmly secured by riveting the ends of the shanks, or by casting in or by means of set screws or bolts; or

(iii) be of "T" shape and set in suitably shaped recesses across the beam, with threaded stems passing through the beam and firmly secured by nuts:

Provided that, in each case, the knife-edges may be fitted in carriers firmly and permanently secured to the beam.

Stays and forks or hooks

(d) On a dead-mass scale -

(i) stays may be single or in two pieces;

(ii) all points of contact of stays, hooks and loops shall be made of hardened steel;

(iii) the bearing surfaces of adjustable slides shall be made of hardened steel and the stems holding the slides in position shall be secured by lock-nuts.

Platforms

(e) On a dead-mass scale -

(i) platform shall be made of metal or hardwood and shall not be readily detachable;

(ii) the goods platform shall not exceed in length the length of the beam and in width double the width of the beam;

(iii) folding wings shall not increase the dimensions of the goods platform by more than one-third in either direction.

Balance boxes

(f) On a dead-mass scale -

(i) a balance box for containing lead of a mass not exceeding 1 per cent of the capacity of the scale shall be securely fixed beneath one platform;

(ii) any other balancing material shall consist of a single piece of suitable metal, other than lead, and shall be securely attached.

Range of travel

(g) The travel of the beam of a. dead-mass scale shall be not less than 15 mm each way from the horizontal position of balance in the case of a vibrating scale and not less than 20 mm one way from the position of balance in the case of an accelerating scale.

Method of testing

Test for errors at quarter-capacity

(4) Tests for errors in accordance with the applicable provisions of regulation 32 of this Part shall be applied to a dead-mass scale as follows -

(a) When certified masspieces equal to one-quarter of the capacity of the instrument are placed successively in the middle of the front and of the back of each platform and centrally over the knife-edges on each side, the scale shall indicate equilibrium within the limits of one-half of the prescribed turning allowance.

Tests for errors at capacity

(b) When certified masspieces equal to the capacity of the instrument are placed centrally on each platform, the scale shall indicate equilibrium within the limits of the prescribed turning allowance.

Tests for sensitivity

(c) (i) The turning allowances for dead-mass scales are prescribed in the Annexure to this Part.

(ii) Tests for sensitivity in accordance with regulation 32(11) or (12) of this Part shall be applied to a dead mass scale with the platforms unloaded and with each platform loaded with certified masspieces, equal to the capacity of the instrument, centrally placed on each platform, any error having been corrected.

Position of certifying stamp

(5) The certifying stamp shall be placed on a lead plug inserted in an undercut hole in a conspicuous and easily accessible part of the beam of a dead-mass scale.

Steelyards

Definition

38. (1) Except as provided in regulation 1 of this Part, the term "steelyard" means a suspended unequal-armed single-lever massmeter, having a capacity of not less than 50 kg, the shorter arm of which carries a load-hook suspended from knife-edges and the longer arm of which is provided with a travelling or sliding poise or poises passing over a graduated scale to indicate the mass of the load:

Provided that a minor poise may be on the shorter arm.

Capacity marking

(2) The capacity and the value of the smallest graduations of a steelyard shall be engraved, cast or stamped on the blade or on the butt or on a metal plate permanently secured thereto, is a manner such as the following:

"Capacity ... kg—Divisions ... kg" or
"Capacity ... kg x ... kg".

Construction

Suspension

(3) (a) (i) The suspension arrangement of a steelyard shall comprise a horizontal bar to which the fulcrum shackle is rigidly bolted, the bar being supported by two hooks or clamps or by a wall bracket.

(ii) The suspending bar shall be provided with a loop, towards the butt end of the steelyard, with stops to prevent undue oscillation of the steelyard.

Material and form

(b) A steelyard shall -

(i) be made of wrought iron or steel and the shank shall be perfectly straight;

(ii) have its poise and hooks securely attached;

(iii) have securely fixed end-fittings to prevent the main poise carrier from riding off the shank.

Travelling or sliding poises

(c) On a steelyard -

(i) where two poises are provided, the graduations for the major poise shall consist of notches and the maximum value indicated by the minor poise shall be equal to the value of the smallest graduations for the major poise;

(ii) the poises shall move freely without risk of injury to the notches, and stops shall prevent their travelling behind the zero graduations.

Means for balancing

(d) On a steelyard a lead plug may be provided in an undercut hole in the bottom of the counter-balance for the purpose of adjusting the balance of the steelyard at zero load, unless the position of the counter-balance is adjustable for such purpose.

Range of travel

(e) Travel between stops at the loop of a steelyard shall be not less than 10 mm and not more than 20 mm each way from the horizontal position of balance.

Value of graduations

(f) The value of the smallest graduation for the major poise of a steelyard shall not exceed 1 kg.

Method of testing

Test for errors

(4) (a) As many graduations of a steelyard as the inspector considers necessary shall be tested with loads of certified masspieces suspended from the load-hook and the

steelyard shall indicate the mass of the load correctly, irrespective of whether the test load is increased or decreased.

Test for sensitivity

(b) (i) The turning allowances for steelyards are prescribed in the Annexure to this Part; and

(ii) tests for sensitivity shall be applied in accordance with the provisions of regulation 32 (11) of this Part, any error having been corrected.

Position of certifying stamp

(5) The certifying stamp shall be placed on a lead plug inserted in the steelyard and a date stamp shall be placed on the lead in the adjusting hole in any poise.

Wall scales

Definition

39. (1) The term "wall scale" means a massmeter other than a steelyard designed to be fixed to a wall, having two unequal-armed levers arranged in series, having a load-hook suspended from a knife-edge on the front end of the lower lever and provided with a poise moving over a graduated scale on each lever, to indicate the mass of the load..

Capacity marking

(2) The capacity of a wall scale shall be engraved or stamped on either lever or on a metal plate securely attached to the instrument in a manner such as the following:

"Capacity . . . kg", and the value of the smallest graduation shall be engraved or stamped on the lower lever in a manner such as the following:

"Divisions . . . kg" or "x . . . kg".

Construction

Support

(3) (a) The supporting girder of a wall scale shall be made of wrought iron, steel or hardwood and shall be provided with an adjustable strut for levelling.

Levers and travelling or sliding poises

(b) (i) The levers of a wall scale shall be made of steel or hard brass;

(ii) the upper surfaces or edges of the levers shall be in a perfectly straight plane over the graduated portions;

(iii) the graduations on the upper lever, for the major poise, shall consist of notches and the maximum value indicated by the minor poise, on the lower lever, shall be equal to the value of the smallest graduation for the major poise; and

(iv) poises shall move freely and without risk of injury to any notch.

Means for balancing

(c) (i) The means for balancing the lever system of a wall scale shall be a screw-driven balance-piece operable with a detachable tool only; and

(ii) for adjusting the centre of gravity of the mass measuring mechanism of the wall scale the balance-piece may be mounted on a vertically adjustable bracket which shall be securely bolted to the wall scale and be adjustable by means of a tool only.

Proportional counterpoises

(d) A new wall scale shall not be provided with a counterpoise to increase the capacity.

Range of travel

(e) The travel of the upper lever of a wall scale shall be not less than 9 mm each way from the horizontal position of balance.

Value of graduations

(f) The value of the smallest graduation of the minor poise of a wall scale shall not exceed 0,2 kg for a capacity of up to 250 kg or 0,5 kg for a capacity of more than 250 kg.

Method of testing

Test for errors

(4) (a) As many graduations of a wall scale as the inspector considers necessary shall be tested with loads of certified masspieces suspended from the load-hook and the instrument shall indicate the mass of the load correctly, irrespective of whether the load is increased or decreased.

Tests for sensitivity

(b) (i) The turning allowances for wall scales are prescribed in the Annexure to this Part; and

(ii) tests for sensitivity shall be applied in accordance with the provisions of regulation 32 (11) of this Part, any error having been corrected.

Position of certifying stamp

(5) The certifying stamp shall be placed on a lead plug inserted in one of the levers of a wall scale.

Conventional compound lever scales

Definition

40. (1) The term "conventional compound lever scale" means a massmeter having a load receptor in the form of a platform, hopper, tank, rail, rails or hook supported on or suspended from two or more levers arranged in parallel which are connected directly or through intermediate levers to a load measuring device in the form of a steelyard.

Capacity marking

(2) The capacity and the value of the smallest graduation of a conventional compound lever scale shall be engraved or stamped on the steelyard or on a metal plate permanently secured to the pillar or cabinet supporting the steelyard or shall be cast on the platform, in a manner such as the following:

"Capacity . . . kg - Divisions . . . kg"; or
"Capacity . . . kg x . . . kg".

Construction

(3) (a) The steelyard of a conventional compound lever scale may be enclosed in a locked receptacle, provided that all indications of mass are readily and clearly readable.

Balancing device

(b) The balancing device of a conventional compound lever scale shall be a screw-driven piece mounted on the steelyard.

Gravity ball

(c) Where the adjusting range of a gravity ball of a conventional compound lever scale is deemed to be excessive, the inspector may require such range to be reduced.

Range of travel of steelyards

(4) The travel of the steelyard of a conventional compound lever scale shall be not less than the following:

(a) Vibrating scales -
capacity exceeding 3 t ... 12 mm each way from the horizontal position of balance or capacity not exceeding 3 t ... 9 mm each way from the horizontal position of balance;

(b) Accelerating scales -
capacity exceeding 3 t ... 18 mm one way or capacity not exceeding 3 t... 15 mm one way.

Proportional counterpoises

(5) Proportional counterpoises on a new or repaired conventional compound lever scale shall -

(a) be marked in equivalents of 100 kg or some multiple or submultiple thereof in a manner such as the following: "A 100 kg", impressed or embossed on a sunken field on its upper surface;

(b) if of an actual mass of 100 g or less, be made of brass or of another metal or alloy specified in regulation 41(2)(a) of this Part, other than cast iron;

(c) in the case of instruments for measuring the mass of corrosive goods, including hides and skins, be made of brass, stainless steel or other suitable corrosion-resistant metal or alloy;

(d) be provided with an adjusting hole as specified in regulation 41(4)(a) and (c) of this Part;

(e) be of a shape generally round in plan, unless otherwise approved by the director; and

(f) be carried on a suitable support suspended from a pivot comprising a knife-edge and bearing and where the support for counterpoises is made to contain balancing material, access to such material shall be possible by means of a tool only.

Loose frames and tare counterpoises

(6) Where a conventional platform scale is not provided with a specially approved tare beam, the mass of any loose receptacle or frame used in connection with the instrument may be compensated for by means of a counterpoise distinctive in shape from any of the ordinary proportional counterpoises belonging to the scale and such compensating poise shall have the word "TARE" legibly and conspicuously cut or cast on its side.

Distinguishing marks for proportional counterpoises

(7) Where more than one platform scale provided with proportional counterpoises is kept or used for a prescribed purpose by any person on any premises or in a public market, such counterpoises shall, unless of a standard mass in the proportion of 1 to 100, be identified with the scale to which they belong by either -

(a) a number conspicuously and indelibly marked with paint to the full height of the side of each proportional counterpoise in a colour in distinct contrast to that of such counterpoise and corresponding to a similar number and colour conspicuously and indelibly marked on the pillar and on the counterpoise support of the scale:

Provided that a distinctive number shall be used for each scale and its counterpoises; or

(b) a band of paint, of a colour in distinct contrast to that of the proportional counterpoise, on the side of each such counterpoise, corresponding to a band of paint of the same colour on the pillar and counterpoise support of the scale:

Provided that a distinctive colour shall be used for each platform scale and its proportional counterpoises.

Restrictions in respect of conventional counter platform scales

(8) (a) A conventional counter platform scale shall, unless specially approved by the director for a specific purpose -

(i) not be provided with a tare beam or tare counterpoise;

(ii) not have a capacity exceeding 150 kg;

(iii) have graduations of not less than 0,05 kg; and

(iv) have the graduations visible from both sides of the steelyard.

(b) For the purpose of this subregulation the term "conventional counter platform scale" means a compound lever scale having a load receptor in the form of a platform, having a short pillar, and intended for use on a counter or bench.

Method of testing

Tests for errors

(9) (a) (i) As many graduations of the steelyard of a conventional compound lever scale as the inspector considers necessary, as well as each individual proportional counterpoise, shall be tested with certified masspieces evenly distributed on the platform, hopper, tank or rails or suspended from the rail or hook, as the case may be, and the instrument shall indicate the mass of the load correctly, irrespective of whether the test load is increased or decreased; and

(ii) tests for errors with loads eccentrically placed on the load receptor shall be applied in accordance with the applicable provisions of regulation 32(6) of this Part,

Tests for sensitivity

(b) (i) The turning allowances for conventional compound lever scales are prescribed in the Annexure to this Part; and

(ii) tests for sensitivity shall be applied in terms of regulation 32(11) or (12) of this Part, any error having been corrected.

Position of certifying stamp

(10) On a conventional compound lever scale -

(a) the certifying stamp shall be placed on a lead plug inserted in a conspicuous and easily accessible part at either end of the steelyard; and

(b) a date stamp shall be placed on the lead in the adjusting holes of proportional counterpoises and any tare counterpoise,

Masspieces

Masspieces for coarse measurement

Definition

41. (1) The term "masspiece for coarse measurement" means a masspiece for use with any massmeter in respect of which the error allowance is prescribed in any of Tables III, IV, V, VI or VII of the Tables of Allowances in the Annexure to this Part.

Construction

(2) Except as otherwise provided in this regulation, any masspiece for coarse measurement shall -

(a) be made in one piece of a single metal or metal alloy with a density of not less than 7 g/cm^3 and not more than 9,5 g/cm^3, with a hardness not less than that of cast brass and with corrodibility and friability not more than that of grey cast iron:
Provided that the adjusting hole shall contain lead;

(b) be free of flaws;

(c) be smooth on all its surfaces, to a degree of smoothness at least equal to that of grey cast iron carefully cast in a mould of fine sand, except for the denomination and any name or trade mark where this appears;

(d) not bear any inscription other than the denomination and, if desired, a name or trade mark:
Provided that the latter shall be in letters smaller than the height of the figures and letters of the denomination.

(3) (a) Any masspiece for coarse measurement of a nominal value of 100 g or less shall be made of brass or of another metal or alloy specified in subregulation (2) hereof, other than cast iron.

(b) Iron or steel masspieces for coarse measurement shall be blacked, black-leaded or protected by galvanising or other suitable process.

Adjusting hole

(4) (a) Every masspiece for coarse measurement of a nominal value of 20 g or more shall be provided with only one hole located in the underside of the masspiece which shall be of such design as to permit of ready adjustment of the masspiece without risk of fracture and such hole shall be undercut and plugged with lead sufficiently thick to ensure that it will remain securely in position,

(b) In the case of a masspiece for coarse measurement other than a block masspiece, such adjusting hole shall be centrally positioned.

(c) Lead shall not project above the rim of the adjusting hole of any masspiece.

Denominations

(5) (a) The permissible denominations of masspieces for coarse measurement shall be 1 g or more in accordance with Table C of this regulation.

(b) A masspiece for coarse measurement shall not be marked with a denomination in more than one measuring unit.

Construction

(6) Except as otherwise approved by the director, new masspieces for coarse measurement having nominal values of 1 g up to 20 kg inclusive shall conform to the following specifications:

(a) Masspieces of 1 g to 2 kg shall be of generally cylindrical shape with a flat button handle;

(b) masspieces of 5 kg to 20 kg shall be of block shape and generally rectangular parallelepipedic having a centre section lower than the end sections and provided with a rigid bar handle between the end sections, cast integrally with the body of the masspiece and entirely within the parallelepiped;

(c) the collar and the edge of the handle of a cylindrical masspiece and the arises of all masspieces shall be rounded;

(d) the adjusting hole in a cylindrical masspiece shall consist of an open cavity of circular cross-section in the centre of the bottom surface and extending into the body of the masspiece to a depth approximately equal to one third of the height of the masspiece;

(e) the adjusting hole in a block masspiece shall consist of an open cavity of rectangular cross-section in the bottom surface and extending into one end section of the body of the masspiece to a depth approximately equal to one third of the height of that end section;

(f) the cross-section area of the adjusting cavity of a cylindrical or block masspiece shall be greater at the base of the cavity than at its opening;

(g) the denomination of a cylindrical masspiece and the name or trade mark, if any, shall be embossed on a sunken field or impressed on the upper surface of its top:

Provided that the denomination may be repeated on the body of a masspiece having a value of 500 g or more;

(h) the denomination of a block masspiece and the name or trade mark, if any, shall be embossed or impressed on the upper surface of its central section;

(i) the inscription of the denomination shall be in the following form:

1 g; 2 g; 5 g; 10 g; 20 g; 50 g; 100 g; 200 g; 500 g; 1 kg; 2 kg; 5 kg; 10 kg; or 20 kg;

(j) the designed dimensions of cylindrical masspieces shall be as set out in Table A of this regulation and the masspieces shall conform to these dimensions within ordinary manufacturing tolerances except where limits are specified;

(k) the designed dimensions of block masspieces shall be as set out in Table B of this regulation and the masspieces shall conform to these dimensions within ordinary manufacturing tolerances except where limits are specified;

(*l*) newly manufactured masspieces must have sufficient lead in their adjusting cavities to ensure that the lead is securely fixed and that at least two thirds of the depth of the adjusting are void of lead.

Masspieces which do not conform to specifications

(7) The director may approve masspieces for coarse measurement which do not conform to the specifications in subregulation (6) of this regulation.

Verification

(8) Each masspiece for coarse measurement shall be tested for accuracy by comparison with an appropriate standard masspiece by means of a beam scale or a precision balance or another specially prepared massmeter which has been verified in accordance with regulation 1(1) and (2) of Part V of these regulations.

Error permitted

(9) The allowances of error on masspieces for coarse measurement are prescribed in the Annexure to this Part.

Position of certifying stamp

(10) (a) A masspiece for coarse measurement provided with an adjusting hole shall have the certifying stamp placed on the lead in such hole.

(b) A masspiece for coarse measurement not provided with an adjusting hole shall have the certifying stamp placed on the bottom surface of the masspiece:

Provided that, where the small size of a masspiece makes it impracticable to place any or an additional certifying stamp in this position, a certificate shall be issued in lieu thereof.

TABLE A

	Denomination										
	1 g	2 g	5 g	10 g	20 g	50 g	100 g	200 g	500 g	1 kg	2 kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Mean diameter: of body	6	6	8	10	13	18	22	28	38	48	60
Diameter of handle	5,5	5,5	7	9	11,5	16	20	25	34	43	54
Diameter of collar at centre	3	3	4,5	6	7,5	10	13	16	22	27	36
Radius of groove forming collar	0,9	0.9	1,25	1,5	1,8	2,5	3,5	4	5,5	7	9
Radius of arises	0,5	0,5	0,5	0,5	0,5	1	1	1,5	1,5	2	2
Radius of edge of handle	0,5	0,5	0,7	0,8	1	1,5	2	2,25	3	4	5
Minimum diameter of adjusting cavity (open end)	–	–	–	–	5	6	6	9	12	15	22
Maximum diameter of adjusting cavity (open end)	–	–	–	–	6	7	7	10	13	17	24
Minimum height of denomination figures	1	1	1	1	1,5	2	2	3,2	3,2	5	5
Slope of shoulder beyond collar radius	–	–	–	–	10^0	10^0	10^0	10^0	10^0	10^0	10^0
Height	according to metal										

Provided that the body may have a designed 1° inclusive taper.

TABLE B

	Denomination		
	5 kg	10 kg	20 kg

	mm	mm	mm
Overall length at top	152	193	234
Length at bottom	150	190	230
Width at top	77	97	117
Width at bottom	75	95	115
Height of end sections	84	109	139
Length of end sections at top	36	46	61
Length of centre section	80	101	112
Height of centre section at sides	30	38	52
Height of centre section at middle	36	46	64
Diameter of handle	19	25	29
Distance of centre of handle from top of masspiece	18	25	30
Minimum length of adjusting cavity (open end)	28	28	28
Maximum length of adjusting cavity (open end)	30	30	30
Minimum width of adjusting cavity (open end)	16	20	20
Maximum width of adjusting cavity (open end)	18	22	22
Radius of arises	5	6	8
Minimum height of denomination figures	12	16	20

Provided that the height of all sections may be increased or reduced according to the metal used and that the dimensions "overall length at top" and "length at bottom" and the dimensions "width at top" and "width at bottom" may respectively be reversed.

TABLE C

Masspieces for coarse measurement.

Denominations.

Any multiple of 1 000 kg or of 1 Mg or of 1 t.

1 000 kg or 1 Mg or 1 t

500 kg	500 g
200 kg	200 g
100 kg	100 g
50 kg	50 g
20 kg	20 g
10 kg	10 g
5 kg	5 g
2 kg	2g
1 kg	1 g

Masspieces for fine measurement

Definition

42. (1) The term "masspiece for fine measurement" means a masspiece for use with any massmeter in respect of which the error allowance is prescribed in either of Tables I or II in the Tables of Allowances in the Annexure to this Part, and includes any metric carat masspiece.

Construction

(2) Except as otherwise provided in this regulation any masspiece for fine measurement shall -

(a) be made of brass or of another corrosion resistant and non-magnetic metal or alloy specified in regulation 41(2)(a) of this Part, other than iron, or if of a value of 500 mg or less may be made of aluminium or aluminium alloy;

(b) conform to the requirements of regulation 41(2) of this Part in all other applicable respects.

Adjusting hole

(3) A masspiece for fine measurement need not be provided with an adjusting hole, but any masspiece provided with an adjusting hole shall conform to the requirements of regulation 41(4) of this Part.

Denominations

(4) The denominations of masspieces for fine measurement shall be in accordance with Table A or B of this regulation.

Construction

(5) Except as otherwise approved by the director, new masspieces for fine measurement -

(a) having nominal values of 1 g up to 20 kg shall either conform to the specifications prescribed in regulation 41(6) of this Part or shall be of generally cylindrical shape having a height not more than one and one half of the mean diameter or be flat and circular in shape, with button handles or other suitably shaped handles;

(b) having nominal values of 500 mg or less shall be constructed -

(i) of wire shaped into one, two or five sections to indicate the numerical values of 1×10^n, 2×10^n or 5×10^n respectively; or

(ii) of flat plate, and having one edge or corner turned up;

(c) shall, except where the small size of a masspiece makes it impossible, have the inscription of their denominations lightly engraved, embossed or stamped on their upper surfaces in the following form:

1 mg; 2 mg; 5 mg; 10 mg; 20 mg; 50 mg; 100 mg; 200 mg; 500 mg; 1 g; 2 g; 5 g; 10 g; 20 g; 50 g; 100 g; 200 g; 500 g; 1 kg; 2 kg; 5 kg; 10 kg or 20 kg .

(6) New masspieces for fine measurement of denominations of 18 g or 9 g for use with cream test scales shall be of cylindrical shape and shall have the same dimensions except for height as the 20 g and 10 g masspieces specified in regulation 41(6) of this Part.

(7) The director may approve masspieces for fine measurement which do not conform to the specifications in subregulation (5) of this regulation.

Verification

(8) Each masspiece for fine measurement shall be tested for accuracy by comparison with an appropriate standard masspiece by means of a precision balance which has been verified in accordance with regulation 1(1) and (2) of Part V of these regulations.

Error permitted

(9) The allowances of error on masspieces for fine measurement are prescribed in the Annexure to this Part.

Positions of certifying stamp

(10) (a) A masspiece for fine measurement provided with an adjusting hole shall have the certifying stamp placed on the lead in such hole.

(b) A masspiece for fine measurement not provided with an adjusting hole shall have the certifying stamp placed on the top or bottom surface of the masspiece except where the small size of the masspiece makes this impracticable, in which case a certificate shall be issued in lieu thereof.

TABLE A

Masspieces for fine measurement other than metric carat masspieces.

Denominations

20 kg	200 g	2g	20 mg
10 kg	100 g	1 g	10 mg
5 kg	50 g	500 mg	5 mg
2 kg	20 g	200 mg	2 mg
1 kg	10 g	100 mg	1 mg
500 g	5 g	50 mg	

and for use with cream test scales only – 18 g and 9 g.

TABLE B

Metric carat masspieces.

Denominations

10 000 CM	200 CM	5 CM	0,1 CM
5 000 CM	100 CM	2 CM	0,05 CM
2 000 CM	50 CM	1 CM	0,02 CM
1 000 CM	20 CM	0,5 CM	0,01 CM
500 CM	10 CM	0,2 CM	0,005 CM

Mass measuring instruments which require approval in terms of section 18 of the Act

43. (1) New mass measuring instruments of the following classes or kinds require to be of models approved in terms of section 18(2) of the Act, unless exempted in terms of section 23(2) of the Act from certification or recertification:

(a) Any massmeter of a class or kind to which the provisions of regulations 33 to 40 of this Part apply and which is of unusual or novel design or which has any feature which is not in accordance with such provisions;

(b) any self-indicating scale;

(c) any semi-self-indicating scale;

(d) any scale provided with a difference chart;

(e) any automatic scale;

(f) any cream test scale;

(g) any person scale of coin operated or self-indicating type;

(h) any counting scale; (i) any wheel mass load scale;

(j) any massmeter provided with an enclosed steelyard, with controls outside the enclosure;

(k) any counter steelyard;

(1) any micro meter scale;

(m) any spring scale;

(n) any electronic load cell scale;

(o) any mass measuring instrument which measures mass on any principle or by any means in respect of which no provisions have been prescribed in the regulations of this Part.

Conformity to appropriate regulations

(2) Except as otherwise provided in any regulation of this Part relating to an instrument of a specific class or kind, or in a certificate issued in terms of section 18(2) of the Act, any mass measuring instrument which is required to be of a model approved in terms of section 18 of the Act shall conform to any applicable provision of the regulations of this Part consistent with the design of the instrument and in particular to any applicable provision of regulations 44 to 56 of this Part relative to instruments of each class or kind.

Submission for approval of installations

(3) Any new installation or any new system of measurement of a design not previously approved, which incorporates any massmeter of a model approved in terms of section 18(2) of the Act together with ancillary equipment which is necessary to the operation of the massmeter or which extends the scope of its operation and which may affect its measuring accuracy shall, before the massmeter and such ancillary equipment are put into use for a prescribed purpose, be referred to the director for examination, testing and approval by him in terms of section 18(9) of the Act, unless approval of the ancillary equipment comprising such installation or system was included in the approval of the massmeter.

Self-indicating scales

Definition

44. (1) The term "self-indicating scale" means a massmeter on which the mass of the load, including any part of such mass that may be counterbalanced by any incorporated counterpoise, is directly indicated by means of a chart and index or optically projected images of such chart and index, or by means of a digital display, or by means of a printed record, and without

requiring manipulation by an operator, except that the following operations may require such manipulation:

(a) The depositing of an incorporated counterpoise;

(b) the adjusting of a tare compensating device;

(c) the setting of a unit price; or

(d) the initiating of the printing of the result of a measurement.

Capacity marking

(2) (a) The capacity and the value of the smallest graduation of a self-indicating scale shall be indelibly marked on the dial or on a metal plate permanently secured to some prominent part of the instrument, in a manner such as the following:

"Capacity .. . kg" or "Maximum load .. . kg" or "Max. load . . , kg" or "Max. . . . kg" and "Divisions . . . kg" or "Div . . . kg" or "x . . . kg" or "d . . . kg" or "dd . . . kg".

(b) Where a self-indicating scale is provided with an undenominated tare compensating device, the maximum permissible tare being the greatest tare that can be compensated for shall similarly be marked on the scale in the following manner, in addition to the capacity marking:

"Maximum tare . . . kg" or "Max. tare . . . kg" or "T . . . kg".

General requirements

Protection of mechanism

(3) (a) The dial and indicating mechanism or digital indicating apparatus of a self-indicating scale shall be protected against dust, damp or the entry of any foreign bodies.

Control of oscillations

(b) Where the design of a self-indicating scale is such that the indication of mass oscillates about the point of equilibrium, a device shall be provided for limiting such oscillation and such device shall be so adjusted that the number of single oscillations is limited to between three and five inclusive.

Locking device

(c) Any locking device which is provided on a self-indicating scale, except a device intended for use only when the scale is transported, shall be so arranged that it cannot be left in any position other than fully locked or fully unlocked.

Control of printing

(d) Except as otherwise provided in any regulation of this Part -

(i) any self-indicating scale, of a model approved after 1 September 1957, which is provided with a recording or printing device shall not record or print unless the scale is in equilibrium and unless any oscillation of the indication is within one half of the value of the smallest graduation above or below the point of equilibrium;

(ii) any self-indicating scale which has one or more counterpoises and which is provided with a recording or printing device, shall not print unless the counterpoises are properly positioned;

(iii) any self-indicating scale having a recording or printing device and a locking device referred to in paragraph (c) of this subregulation shall not print unless the locking device is in the fully unlocked position.

Level indicators on scales for counter use

(e) Any self-indicating scale intended for use on a counter or bench shall be provided with a circular spirit level or cross spirit levels and adjustable feet so that the instrument may be adjusted to a level position unless the scale correctly indicates the mass of a load when tilted 3° off level in any direction.

Back and front indication on scales for counter use

(f) Any self-indicating scale intended for use on a counter in the presence of a purchaser, where seller and purchaser are on opposite sides of the counter, shall have the indication of mass on both the seller's and the purchaser's sides of the instrument.

Tare devices

(g) (i) Where any self-indicating scale intended for use on a counter in the presence of a purchaser is provided with a tare compensating device for resetting the indication to zero when a load is placed on the load receptor, or for setting a predetermined tare when there is no load on the load receptor, such device shall be either -

(aa) non-automatic, requiring manual operation; or

(bb) semi-automatic, operating automatically following a single manual command.

(ii) Any non-automatic tare compensating device referred to in subparagraph (i)(aa) of this paragraph shall be so constructed that -

(aa) the operation of the device is clearly visible to the purchaser and there is a clear and conspicuous indication, visible to both the operator and the purchaser, that the device is in use [this condition is satisfied where an indication of tare compensation referred to in subparagraph (ff) of this paragraph is provided];

[bracketed text in *Government Gazette*]

(bb) the progressive effect of the device does not exceed the following:

1 d or 1 dd when a point on the circumference of a continuous rotating control moves 5 mm;

1 d or 1 dd when a continuous linear control moves 5 mm;

1 dd for one step of a discontinuous control in the case of a scale with digital indication;

1 d for one step of a discontinuous control in the case of a scale with analogue indication where the value of 1 d does not exceed 2 g;

0,5 d for one step of a discontinuous control in the case of a scale with analogue indication where the value of 1 d is equal to or greater than 5 g;

d or dd being the value of the smallest graduation of an analogue or digital indicator, respectively;

(cc) in the case of a price computing scale where the amount is computed electrically or electronically, the indication of the computed amount is blanked out while the tare compensation is being adjusted;

(dd) zero tare compensation can be correctly determined;

(ee) it cannot be used for a tare compensation below zero;

(ff) where the value of the tare compensation is indicated after the indication is reset to zero such tare indication appears on both seller's and purchaser's sides of the scale and remains so until the device is again adjusted.

(iii) Any semi-automatic tare compensating device referred to in subparagraph (i) (bb) of this paragraph shall be so constructed that -

(aa) when the single command is given, the indication is reset to zero to within 0,25 of the value of the smallest graduation of the indicator of the scale:

Provided that where the scale has a capacity greater than that shown in Column 1, Table A of subregulation (4)(a) of this regulation under the heading "Capacities/ not greater than", relative to the appropriate tabulated value of the smallest graduation, and where the value of the tare compensation is indicated after operation of the command, the indication may be reset to zero to within 0,5 of the value of the smallest graduation of the indicator of the scale;

(bb) the tare compensation cannot be altered unless the load is changed;

(cc) it can only be operated when the scale is in stable equilibrium;

(dd) where the value of the tare compensation is indicated after operation of the command, such indication appears on both seller's and purchaser's sides of the scale and remains so until there is no load on the load receptor of the scale;

(ee) the removal of all load from the load receptor causes either the effect of the tare compensating device to be cancelled and the indications to return to zero or the value of the tare with a "minus" sign or the word

"TARE" to be indicated or all indications to be blanked out until the effect of the tare device is cancelled.

(h) A semi-automatic tare compensating device referred to in paragraph (g)(i)(bb) of this subregulation, the operation of which does not result in the indication of the value of the tare compensated, may be combined with a zero balancing device referred to in regulation 26(2)(d) of this Part.

Safeguard against breakdown

(i) Any self-indicating scale which operates electrically or electronically shall be so constructed that the breakdown of or the malfunction or failure to function of any part, which can result in the incorrect indication of the result of a measurement, is either obvious or is indicated by a special device.

Value of graduations and capacities

(4) (a) Except as otherwise provided in any regulation of this Part, the value of the smallest graduation of any self-indicating scale shall be related to the indicating capacity of the scale in accordance with the following Tables:

Provided that any scale having a capacity greater than that shown in Column 1, Table A, under the heading "Capacities/not greater than", relative to the appropriate tabulated value of the smallest graduation, shall be used only where no influencing environmental factor can cause incorrect measurement by the scale.

TABLE A

SELF-INDICATING SCALES FOR MEASURING THE MASS OF GENERAL MERCHANDISE

Value of smallest graduation	Capacities		
	equal to or exceeding	not greater than	
		Column 1	Column 2
0,1 g.....	5 g	100 g	0,5 kg
0,2 g.....	10 g	200 g	1 kg
0,5 g.....	25 g	500 g	2,5 kg
1 g.....	50 g	1 kg	5 kg
2 g.....	100 g	2 kg	10 kg
5 g.....	500 g	10 kg	25 kg
0,01 kg.....	1 kg	20 kg	50 kg
0,02 kg.....	2 kg	40 kg	100 kg
0,05 kg.....	10 kg	100 kg	250 kg
0,1 kg.....	25 kg	200 kg	500 kg
0,2 kg.....	50 kg	400 kg	1 t
0,5 kg.....	125 kg	1000 kg	2,5 t
1 kg.....	500 kg	2,5 t	5 t
2 kg.....	1 t	5 t	10 t
5 kg.....	2,5 t	12,5 t	25 t
10 kg.....	5 t	25 t	50 t
20 kg.....	20 t	60 t	100 t
over 20 kg	1 000 times the value of the smallest graduation	3 000 times the value of the smallest graduation	5 000 times the value of the smallest graduation.

TABLE B

SELF-INDICATING SCALES FOR MEASURING THE MASS OF MEDICINE AND CHEMICALS IN PHARMACEUTICAL DISPENSING, OF PRECIOUS METALS, PRECIOUS STONES AND COMPARABLE GOODS

Value of smallest graduation	Capacities	
	equal to or exceeding	not greater than
1 mg	200 mg	100 g
2 mg	400 mg	200 g
5 mg	1 g	500 g
10 mg	10 g	1 kg
20 mg	20 g	2 kg
50 mg	50 g	5 kg
100 mg	100 g	10 kg
200 mg	200 g	20 kg
500 mg	500 g	50 kg
1 g	5 kg	100 kg
over 1 g	5 000 times the value of the smallest graduation	100 000 times the value of the smallest graduation.

(b) The capacities referred to in Tables A and B of this subregulation include the total capacities indicated directly or indirectly on the chart or digital display, whether or not incorporated counterpoises or other means are used to increase the measuring range, but exclude the value of any separate tare compensating device.

Analogue indication

Construction of indicator

(5) (a) Visual analogue indication by a self-indicating scale shall be effected by means of a graduated chart and index.

Legibility of results

(b) On a self-indicating scale having visual analogue indication the mass indicated shall be clearly legible and, in the case of a partially enclosed chart, the aperture through which the indication is read shall be sufficiently large to permit the next lower figured graduation to be read.

(c) On a self-indicating scale shaving visual analogue indication -

(i) graduation lines shall be clear and distinct and their distance apart shall be equal except in the case of certain fan charts;

(ii) the length of the smallest graduation lines shall be not less than the distance between the lines measured from centre to centre;

(iii) the width of all graduation lines on any one chart shall be equal and shall be not less than one-tenth or more than one-quarter of the distance between the lines, measured from centre to centre:

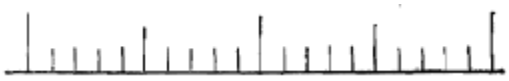
Provided that no graduation line shall be less than 0,2 mm wide;

(iv) figured graduations shall be distinguished by their lines being longer than the nearest four intermediate lines on either side;

(v) graduation lines shall be situated on only one side of a common base line, whether or not this is marked on the chart;

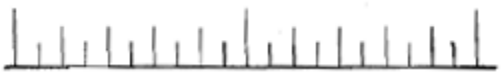
(vi) unless every graduation is figured, in which case the graduation lines may be of equal length, or unless every second graduation is figured, in which case alt of the figured graduation lines may be of the same length and all of the intermediate lines shall be of the same length but shorter than the figured lines, graduation lines shall be arranged in accordance with one of the following diagrams -

(aa) Where the numerical value of the smallest graduation is 1 x 10^n of 2 x 10^n



or

(bb) where the numerical value of the smallest graduation as 5 x 10^n



Provided that, where the numerical value of the smallest graduation is 5 x 10n and the "n" is a positive whole number or zero, the arrangement of the graduation lines may be as set out in (aa) above -

(vii) the distance between graduation lines or projected images or the apparent distance between magnified graduation lines, depending on whether the lines are directly visible, whether they are projected on a ground glass or similar screen or whether they are visible through a magnifier, when measured from centre to centre at the base line, shall be not less than -

(aa) 1,25 mm for a scale having a capacity of not more than 50 kg and intended for use on a counter or bench or intended to be suspended in use;

(bb) 2 mm for a counter-platform or bench scale or a suspended scale having a capacity of more than 50 kg up to 250 kg;

(cc) 2 mm for any other scale having a capacity of not more than 250 kg, including any platform scale intended to stand on a floor;

(dd) 3 mm for any scale having a capacity of more than 250 kg;

(viii) the movement of the index relative to the chart or vice versa shall extend to the equivalent of not more than three graduations or less than one graduation beyond the ends of the scale of graduations; and

(ix) where the pointer related to a circular chart makes only one revolution or where there is an equivalent movement of the chart, there shall be a blank zone on the chart, of a width equivalent to not less than five times the distance between the smallest graduations, between the two ends of the scale of graduations.

Index lines and pointers

(d) On a self-indicating scale having visual analogue indication -

(i) the width of any index line, wire, thread or band or that portion of any pointer which moves across the graduations, shall not exceed the width of any graduation line;

(ii) the width of the end of any pointer, or of a line of contrasting colour on a disc or arrow at the end of a pointer, which moves in the plane of the graduations shall not exceed the width of any graduation line for a distance from the extremity of the pointer of at least the length of the minor graduation lines;

(iii) the index on a scale having a cylindrically shaped chart, or on any such scale on which the indication is visible through a magnifier and on which the index is not in the same plane as the graduations, shall consist either of a flat band or of double wires or threads;

(iv) all index wires shall be taut and index threads shall be spring loaded;

(v) the extremity of any pointer or any index band, wire or thread nearest to the graduation scale, shall not at any point be distant from the graduation lines by more than 1,5 mm in the case of a scale in respect of which the minimum distance apart of graduation lines of 1,25 mm is prescribed or by more than 2 mm in the case of any other scale.

Figuring of graduations

(e) On a self-indicating scale having visual analogue indications -

(i) graduations shall be figured to denote the values indicated at the zero graduation and at intervals of not more than ten graduations;

(ii) figures shall be clearly legible and shall be of a size compatible with the size of the chart;

(iii) the height of the image of the figures on an optically projected chart or the apparent height of the figures on a chart viewed through a magnifier shall be not less than 4,5 mm;

(iv) the height of the figures on a chart, the scale of which is arranged vertically, shall not be more than three quarters of the distance between the figured graduation lines;

(v) where the numerical value of the smallest graduations is 5 x 10^n and the graduation lines are arranged as in example (bb) in paragraph (c)(vi) of this subregulation, either every tenth or every second graduation shall be figured.

Symbol of measuring unit

(f) The symbol denoting the measuring unit shall be marked conspicuously in an appropriate position or positions on the chart and shall be of a size compatible with the size of the largest figures denoting numerical values to which the symbol relates, but the size of the symbol Shall in no case be less than one-half of the size of such figures,

Analogue price computing and indicating

(g) On any self-indicating scale provided with an analogue price computing chart which for any given mass permits simultaneous reading of the mass and the computed amount for a unit price or amounts for a range of unit prices -

(i) the unit prices shall be prices per kilogram;

(ii) the scales of computed amounts shall be graduated in whole numbers of cents;

(iii) price charts shall conform to the provisions of this subregulation in respect of price as well as mass indications, in so far as such provisions are applicable;

(iv) (aa) the indications of mass and their corresponding computed amounts shall be in proper alignment;

(bb) the indications of unit prices shall be in proper alignment with their respective scales of computed amounts; and

(cc) any error of alignment shall not exceed the width of the graduation line in question;

(v) in the case of a scale intended for use on a counter in the presence of a purchaser where seller and purchaser are on opposite sides of the counter and where the mass and amount charts are optically projected, the indications of the unit price and computed amount as well as the indication of mass shall appear on both seller's and purchaser's sides of the instrument.

Analogue printing devices

(h) On any self-indicating scale provided with an analogue printing device -

(i) the visually indicated and the printed result of a measurement shall not differ by more than the allowance of error of the instrument;

(ii) the printed result of a measurement shall appear in the form of a clearly legible index comprising a line or arrow indicating the graduation line which depicts the result, together with adjacent graduation lines and as many figured graduations as will allow correct determination of the printed result;

(iii) the printed figures shall be arranged so that the result of a measurement may be read by simple juxtaposition of the figures.

Method of testing

Tests for errors of indication

(i) When a self-indicating scale having analogue indication is tested for errors -

(i) the allowances of error to be applied are those prescribed in the Annexure to this Part in accordance with the appropriate provisions of regulation 32 of this Part;

(ii) tests shall be made at loads equivalent to as many graduations as the inspector considers necessary;

(iii) the computed amounts indicated on any analogue price computing chart shall be checked at a sufficient number of computations to establish their general accuracy.

Tests for discrimination

(j) When a self-indicating scale having analogue indication is tested for discrimination, at any load, the addition or subtraction of a mass equal, in the case of a new repaired or contract scale, to 1,2 times, or in the case of a scale in actual trade use when tested by an inspector, to 1,4 times the value of the smallest graduation, shall indicate a difference of not less than the value of the smallest graduation.

Position of certifying stamp and seals

(k) The certifying stamp shall be placed on a lead plug inserted in a conspicuous and easily accessible part of the dial housing or pillar or cabinet of a self-indicating scale having analogue indication:

Provided that, where the construction of the scale does not permit the insertion of a plug, such plug may be in a cup securely fixed to such part and seals shall be affixed to the dial and, where deemed necessary by the inspector, to the cabinet, to prevent unauthorised access to the working parts.

Digital indication

Construction of indicator

(6) On a self-indicating scale having digital indication -

(a) visual digital indication shall be effected by means of a display of figures constituting the number indicative of the numerical result of a measurement, together with the symbol denoting the measuring unit;

Legibility of results

(b) the mass indicated shall be clearly legible and the figures shall be in line and so arranged that the result of a measurement may be read by simple juxtaposition of the figures;

Size of figures and symbols

(c) (i) the height of the figures denoting the numerical result of a measurement shall be not less than 5 mm in the case of a scale having a capacity of not more than 50 kg and not less than 15 mm in the case of a scale having a capacity of more than 50 kg; and

(ii) the height of the symbol denoting the measuring unit shall be compatible with, but in no case less than one half of the height of the figures denoting the numerical values to which the symbol relates;

Symbol of measuring unit

(d) the symbol denoting the measuring unit shall be marked conspicuously on the dial, either immediately following the figures denoting the numerical value or immediately above or below such figures;

Seven segment indicating lamps

(e) where the figures comprise seven separate segments, the apparatus shall be so arranged that whenever the power to the apparatus is switched on, having previously been switched off, or on manual operation of a switch all digits shall show the figure 8 for a short period sufficient for the figures to be read, unless the apparatus is provided with a device which automatically tests the functioning of all of the segments immediately before each measurement and inhibits a display in the event of any malfunction;

Zero balance indication

(f) except as otherwise provided in any regulation of this Part -

(i) an indicator shall be provided to show that zero balance is correct within one-quarter of the value of the smallest graduation of the mass indicator:

Provided that such zero balance indicator need not be provided on a wheel mass load scale nor on a scale on which an automatic zero balancing or compensating device is provided nor on a scale which provides analogue as well as digital indications of mass;

(ii) the balance indicator referred to in subparagraph (i) hereof shall provide either -

(aa) a continuous indication about zero, in which case the range of indication above and below zero shall be not less than one-half of the value of the smallest graduation of the mass indicator; or

(bb) a discontinuous indication about zero, in which case it shall be arranged to indicate a balance condition within one-quarter of the value of the smallest graduation of the mass indicator above and below zero and an out of balance condition beyond these limits;

(iii) in the case of a scale provided with an automatic balancing or compensating device referred to in the proviso to subparagraph (i) hereof, a mass indication

of zero shall indicate that balance at zero load is correct within one-quarter of the value of the smallest graduation of the mass indicator.

Digital price computing and indicating

(7) On any self-indicating scale provided with a price computing device which, for any given mass, provides a digital display or printed record of computed amounts for any predetermined unit price -

(a) the unit prices shall be prices per kilogram;

(b) the display of computed amounts shall be in whole numbers of cents;

(c) in the case of a scale intended for use on a counter in the presence of a purchaser where seller and purchaser are on opposite sides of the counter, whether the indication of mass is analogue or digital, the digital displays of the unit price and the computed amounts as well as the indication or digital display of mass shall appear on both seller's and purchaser's sides of the scale;

(d) a digital price indicator shall, for any single indication of mass, indicate the amount for only one selected unit price at a time;

(e) a scale which functions automatically shall provide a printed record of the unit price and computed amount together with the result of the measurement of mass.

Digital printing devices

(8) (a) A device on a self-indicating scale, which provides a digital printed record of the result of a measurement of mass or such record of a unit price or of a computed amount shall be regarded as a digital indicator, whether the visual indication is analogue or digital.

(b) Where the printing device referred to in paragraph (a) hereof furnishes a document on which the mass of the goods measured, the unit price and the computed money value of the goods appear -

(i) the amount of the money value printed shall be equal to the product of the mass printed multiplied by the unit price, except for any rounding error in the amount;

(ii) unless the document is a pre-printed label bearing the symbols for the units of mass and currency such symbols shall be printed by the printing device together with the figures representing the respective numerical values;

(iii) in the case where the figures and symbols are printed in one line, the symbol for the unit of mass (kg or g) shall follow the relevant figures, the symbol for the unit of currency (R) shall precede or the symbol for the unit of currency (c) shall follow the relevant figures and the symbol for the reference value of mass in the unit price shall follow the relevant unit price figures, e.g. Rl,03/kg or 94c/kg;

(iv) in the case where the symbols are printed above or below the figures, they shall be correctly aligned above or below the columns of figures to which they refer;

(v) in the case where the document is intended for the marking of pre-packed goods, the height of the printed figures and the symbols representing mass values shall be not less than 2,5 mm and the height of the printed figures and symbols representing money values shall be not more than twice the height of the relevant figures and symbols representing mass.

Method of testing

Tests for errors in balance at zero load

(9) (a) When a self-indicating scale having digital indication is tested for errors in balance at zero load -

(i) except in the case of a scale provided with an automatic balancing or compensating device, after the scale has been balanced by the means provided, an out of balance condition shall be indicated if a mass equal to one-quarter of the value of the smallest graduation of the mass indicator is placed on or is removed from the load receptor:

Provided that such mass may be increased by one tenth of the value of the smallest graduation to overcome any uncertainty in the indication of an out of balance condition by a digital balance indicator -

(ii) in the case of a scale provided with an automatic balancing or compensating device, after the scale has been balanced and the indicator reset to zero by any means provided in addition to the automatic device, the operation of such device shall be tested in a manner appropriate to the design thereof.

Tests for errors of indication

(b) When a self-indicating scale having digital indication is tested for errors of indication -

(i) the allowances of error to be applied are those prescribed in the Annexure to this Part;

(ii) testing shall be in accordance with the appropriate provisions of regulation 32 of this Part;

(iii) tests shall be made at loads equivalent to as many graduations as the inspector considers necessary;

(iv) after the scale has been correctly balanced, and a load of certified masspieces equal to the value of any number of the smallest graduations plus one-half of such a graduation has been placed on the load receptor and consequently a mass of either less than or more than the value of the load is indicated, the addition to or subtraction from the load of a mass equal to the allowance of error, plus, if necessary, one-fifth of the value of one graduation, shall cause the indication of mass to be equal to at least the next higher or the next lower graduation, respectively than the value of the original load;

(v) computed amounts indicated shall be checked at a sufficient number of computations to establish their general accuracy and any computed amount shall not differ from the product of the unit price multiplied by the indicated number of units of mass except in respect of any permissible rounding error,

Tests for discrimination

(c) When a self-indicating scale having digital indication is tested for discrimination, at any load, the addition of a mass equal, in the case of a new, repaired or contract scale, to 1,2 times, or in the case of a scale in actual trade use when tested by an inspector to 1,4 times the value of the smallest graduation shall, after the load has been increased by small quantities until the indication has just changed to the next higher digit, cause indication of the following higher digit and the reverse procedure shall produce a similar effect.

Position of certifying stamp and seals

(10) The certifying stamp shall be placed on a lead plug inserted in a conspicuous and easily accessible part of the dial housing or indicator cabinet of a self-indicating scale having digital indication:

Provided that, where the construction of the scale does not permit the insertion of a plug, such plug may be in a cup securely fixed to such part and seals shall be affixed to the dial and cabinet to prevent unauthorised access to the working parts or to any electrical or electronic apparatus.

Marking of serial numbers

(11) Where a self-indicating scale having digital indication comprises several separate and detachable parts, all of the parts shall either be marked with the same serial number or the several serial numbers shall be marked on the parts and all of the serial numbers shall be marked on the dial or dial housing.

Semi-self-indicating scales

Definition

45. (1) The term "semi-self-indicating scale" means a massmeter on which the mass of a load up to chart capacity, or part of the mass of a load which is more than chart capacity is indicated by means of a load measuring device of a self-indicating type, as defined in regulation 44(1) of this Part, and which is provided with a receptacle for loose masspieces or loose proportional counterpoises for that part of the load above chart capacity and the term includes a scale provided with a graduated and denominated difference chart.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, a semi-self-indicating scale shall in particular conform, in respect of its self-indicating part, to any applicable provision of regulation 44 of this Part.

Value of graduations

(3) The value of the smallest graduation of a semi-self-indicating scale, other than a scale provided with a difference chart, shall be related to the capacity of the scale in accordance

with regulation 44(4) of this Part and, in this case, the capacities referred to shall include that part of the load which may be counterbalanced by masspieces or proportional counterpoises,

(4) Any semi-self-indicating scale with a difference chart being used in retail trade on a counter in the presence of a purchaser shall not have graduations on the "- "or "light" side of the zero graduation.

Tarring devices not permitted

(5) A semi-self-indicating scale intended for use on a counter in the presence of a purchaser shall not be provided with any tare compensating device.

Method of testing

Tests for errors of indication and discrimination

(6) (a) The allowances of error for semi-self-indicating scales are prescribed in the Annexure to this Part.

(b) A semi-self-indicating scale shall be tested for errors in accordance with the appropriate provisions of regulation 32 of this Part.

(c) The self-indicating part of a semi-self-indicating scale shall be tested for errors and discrimination in accordance with the provisions of regulation 44(5)(i) and (j) of this Part, in the case of a scale having analogue indication, or in accordance with the provisions of regulation 44(9)(b) and (c) of this Part, in the case of a scale having digital indication:

Provided that such tests shall be made with the load receptor respectively unloaded and loaded with any mass of certified masspieces up to the capacity of the scale that the inspector may consider necessary, the receptacle for masspieces or proportional counterpoises being loaded correspondingly.

Position of certifying stamp and seals

(7) The certifying stamp and seals shall be applied to a semi-self-indicating scale in, accordance with the provisions of regulation 44(5)(k) or 44(10), as the case may be.

Massmeters provided with ungraduated, or graduated but undenominated difference charts

46. (1) On a new massmeter provided with an ungraduated, or a graduated but undenominated difference chart -

(a) the range of travel of the tip of the pointer or other index in relation to the "0" or "correct mass" indicating line on the chart shall be not less than 10 mm, whether the instrument is unloaded or is loaded to its capacity;

(b) the index related to a graduated but undenominated difference chart having more than one graduation on either side of the zero shall have minimum travel beyond the extreme graduation for a distance at least equivalent to the smallest graduation; and

(c) where a difference chart is graduated on the " + " or "heavy" side only, travel of the index on the ungraduated side shall be not less than that on the graduated side.

Taring devices not permitted

(2) A massmeter provided with an ungraduated or a graduated but undenominated difference chart and intended for use on a counter in the presence of a purchaser shall not be provided with any tare compensating device.

Method of testing

(3) A massmeter provided with an ungraduated, or graduated but undenominated difference chart shall be tested for errors and sensitivity in accordance with the appropriate provisions of regulation 32 of this Part and, subject to the appropriate provisions of Explanatory Note 3 preceding the Tables of Allowances, the allowance prescribed in the Tables shall displace the index for a distance of not less than 10 mm on either side of the "0" or "correct mass" indicating line at any load up to the capacity of the instrument.

Position of certifying stamp and seals

(4) The certifying stamp and, where required, seals shall be applied to a massmeter provided with an ungraduated, or graduated but undenominated difference chart in accordance with the appropriate provision of the regulation of this Part relating to the type of instrument to which such massmeter belongs.

Automatic scales

Definition

47. (1) The term "automatic scale" means a massmeter provided with self-acting mechanism for -

(a) the measurement of the mass of predetermined quantities of materials, the feed to and delivery from the load receptor being automatically controlled;

(b) the measurement of the mass of quantities of materials approximately predetermined and the recording and summation of the actual mass of the quantities measured, the feed to and delivery from the load receptor being automatically controlled;

(c) the measurement of the mass of any material passed intermittently or in a continuous stream over the load receptor and the automatic summation of the mass of such material; or

(d) the performing of any function similar to those referred to in paragraphs (a), (b); and (c) of this subregulation.

General provisions

(2) (a) Any adjusting or compensating device of an automatic scale shall be effectively secured to the scale and shall be protected against tampering.

(b) The self-acting mechanism on an automatic scale with intermittent feed and discharge shall be so constructed that, when the scale is operating, feeding is prevented while the scale is discharging and vice versa.

Testing devices

(c) Where an automatic scale is provided with an incorporated test mass arrangement or certified masspieces, such arrangement of mass or masspieces, including any supporting rig that may be included in such mass arrangement, shall be verified.

Method of testing

(3) (a) Except as otherwise provided in this regulation, in addition to testing by any method prescribed in this regulation for any specific type of automatic scale, the accuracy of the throughput of material shall be tested by operating the scale under actual working conditions and using, where possible, the material the mass of which is normally measured by the scale.

(b) In the case of an automatic scale provided with an intermittent feed, the total mass of material determined in at least three measuring cycles of operation shall be verified by means of a suitable certified massmeter, either before or after the material has passed through the automatic scale, and the error in respect of each cycle shall not exceed double the allowance of error prescribed in paragraph (e) hereof, but the total error in respect of three or more cycles shall not exceed such prescribed allowance of error.

(c) In the case of an automatic scale provided with an intermittent feed which is incorporated in a conveyor system and the material is normally fed to the scale -

(i) from an outside source and then discharged to storage, the material used during testing shall, where practicable, be conveyed to the automatic scale from such source after having been measured on the independent massmeter; or

(ii) from storage and then discharged to an outlet, the material used during testing shall be measured on the independent massmeter after having been taken from such outlet.

(d) In the case of an automatic scale of the continuous type, the quantity of material to be used and the method of testing for accuracy of throughput is prescribed in subregulation (8)(k) of this regulation.

Allowance of error on throughput

(e) Except as otherwise provided in any regulation of this Part, the difference between the mass of material determined by means of the independent massmeter and the mass indicated by the automatic scale shall not exceed the limits of error specified in the Table hereunder, for any mass of material measured:

TABLE

	Material	*Range of error*
(i)	Grain, grain products, sugar or similar free-flowing materials	0,25 per cent in excess or in deficiency.
(ii)	Cement, coal, coke, ore or similar materials.....	0,5 per cent in excess or in deficiency.
(iii)	Granulated or powdered fertiliser.....	0,5 per cent in excess or in deficiency.

(iv)	Raw fish	0,5 per cent in excess or in deficiency.
(v)	Liquids	0,25 per cent in excess or in deficiency.
(vi)	Tacky materials or viscous liquids	0,5 per cent in excess or in deficiency.
(vii)	Bagasse	0,5 per cent in excess or in deficiency.

Checking of self-acting mechanism

(f) The operation of the self-acting mechanism and of any controls on an automatic scale shall be checked by the observation thereof during a number of cycles of operation of the scale when in actual normal use.

Testing of checking devices

(4) Any self-indicating or other type of load measuring device provided on an automatic scale and which may be coupled at will to the load receptor and load transmitting device for checking the accuracy of the setting for the predetermined quantity of material, shall be tested together with the automatic scale itself.

Scales with a receptacle for masspieces or counterpoises, for predetermined quantities

(5) (a) Where an automatic scale, used for the measurement of the mass of predetermined quantities of materials, comprises an equal-armed beam or an unequal-armed lever from which a load receptor, and a receptacle for certified masspieces or for proportional counterpoises, are respectively suspended -

(i) the equal-armed beam need not be marked for its class, but where more than one such scale of the same type is used on any one premises, each such beam or unequal-armed lever shall be identified with its respective scale by the impression or stamping on the beam of the serial number of the instrument or of another appropriate identification mark and any proportional counterpoises shall be similarly identified;

(ii) a device in the form of a steelyard or of a self-indicating load measuring device may be provided for determining in the measurement of a batch of material, the mass of any residue which is less than the predetermined quantity;

(iii) any counting or totalising device with which the scale may be provided shall accurately indicate the number of completed cycles of operation of the scale or the total mass measured in a number of completed cycles of operation of the scale, as the case may be, in respect of a batch of material;

(iv) any printing device with which the scale may be provided shall record the total mass measured in a number of completed cycles of operation of the scale together with the mass of any residue of material the mass of which is measured.

Method of testing

Balancing

(b) The scale shall be balanced with any compensating device out or action or set for zero compensation and with the receptacle for masspieces and the load receptor empty.

Tests for errors

(c) Each masspiece used with the scale shall be certified and each proportional counterpoise shall be verified.

(d) (i) Where it is practicable to load the load receptor with certified masspieces, the scale, so loaded and with equivalent certified masspieces or appropriate counterpoises in or on the receptacle for masspieces, shall indicate equilibrium correctly at any load up to its capacity, any compensating device being out of action.

(ii) Where it is impracticable to load the scale as prescribed in paragraph (i) above, the test described therein need not be applied.

(e) With discharge prevented, when any quantity of certified masspieces or appropriate counterpoises, up to capacity, is placed in or on the receptacle for masspieces and any compensating device is correctly adjusted, the scale shall indicate equilibrium correctly after a quantity of material has been fed into the load receptor until the self-acting mechanism stops the feed.

Tests for sensitivity

(f) When an automatic scale is loaded as described in paragraph (d) or (e) of this subregulation, the mass required to effect turn of the beam or lever, any error having been eliminated, shall not exceed the appropriate turning allowance prescribed in Table VI, or in Tables VII or VIII of the Annexure to this Part, respectively -

(i) in respect of an automatic scale having a capacity of not more than 50 kg; or

(ii) in respect of an automatic scale having a capacity of more than 50 kg.

(g) The tests of the scale specified in paragraphs (b) to (f) of this subregulation shall be carried out in addition to the tests specified in subregulation (3) of this regulation.

Scales with self-indicating load measuring devices, for predetermined quantities

(6) (a) An automatic scale which incorporates a self-indicating load measuring device by means of which the predetermined mass may be set and is used for the measurement; of the mass of predetermined quantities of materials, shall be provided with a counting or totalising device and such device shall indicate the number of completed cycles of operation of the scale or the total mass measured in a number of completed cycles of operation of the scale, as the case may be.

(b) Where an automatic scale referred to in paragraph (a) of this subregulation is provided with a printing device such device shall record the total of the results of measurements in terms of a unit of mass:

Provided that where such an instrument is also provided with a totalising counter the scale may be used without the printer.

(c) Where an automatic scale referred to in paragraphs (a) and (b) of this subregulation is provided with a means for measuring the mass of any residue in a batch of material

which is less than the predetermined quantity, the mass of such residue shall be included in the total mass printed.

Method of testing

(d) An automatic scale referred to in paragraph (a) or (b) of this subregulation shall be tested in accordance with the applicable provisions of regulation 44(5)(i) and (j) or 44 (9) of this Part in addition to the provisions of subregulation (3) of this regulation.

Scales with self-indicating load measuring devices for approximately predetermined quantities

(7) (a) An automatic scale, which incorporates a self-indicating load measuring device and is used for the measurement of the mass of approximately predetermined quantities of material, shall be provided with a totalising device which indicates and adds the actual values of the approximately predetermined quantities, for which the instrument is set.

(b) Where an automatic scale referred to in paragraph (a) of this subregulation is provided with a means for measuring the mass of any material or debris left in the load receptor after the discharge of a load, the total indicated in a number of completed cycles of operation of the scale shall not include the mass of such material or debris.

(c) Where an automatic scale referred to in paragraph (a) of this subregulation is provided with a printing device, such device shall record the total of the results of measurements in terms of a unit of mass.

(d) Where an automatic scale referred to in paragraph (a) of this subregulation is provided with a means for measuring the mass of any residue in a batch of material which is less than the predetermined quantity, the mass of such residue shall be included in the total mass printed.

Method of testing

(e) An automatic scale referred to in paragraph (a) of this subregulation shall be tested in accordance with the applicable provisions of regulation 44(5)(i) and (j) or 44(9) of this Part and the inspector may, in his discretion, also apply the tests prescribed in subregulation (3) of this regulation.

Automatic scales for continuous measurement and summation of mass

Conveyor belt scales

Definitions

(8) (a) (i) The term "conveyor belt scale" means a massmeter intended for the determination of the mass of material in bulk while the material is being conveyed in a continuous stream on a conveyor belt passing over the load receiving structure.

(ii) The term "measuring length", in reference to a conveyor belt scale, means the distance between the centres of the outer rollers on the belt supporting structure of the load receptor increased by one-half of the distances between

the centres of those rollers and the centres of the respective nearest rollers not on such structure.

Construction

(b) A conveyor belt scale shall consist of -

(i) a conveyor belt which travels on a roller track;

(ii) a load receptor comprising that portion of the belt which is passing over the measuring length of the scale at any instant, and a belt supporting structure;

(iii) a load transmitting device;

(iv) a load measuring device which shall include an indicating and totalling device;

(v) a belt-travel pick-up device; and

(vi) a zero-load setting device.

Marking of capacity

(c) The capacity of a conveyor belt scale, being the maximum instantaneous load on the measuring length tor which the scale is constructed, shall be conspicuously and indelibly marked on an essential part of the instrument or on a metal plate permanently secured thereto and the maximum rate of measurement, expressed as kg/h or as t/h shall be similarly marked.

Conveyor belt and rollers

(d) The conveyor belt passing over the load receiving structure of a conveyor belt scale shall be -

(i) endless and any joints shall be smooth;

(ii) made of a material suited to the material of which the mass is to be measured;

(iii) of such finish and so arranged, together with the rollers, that the material on the load receptor does not move relative to the belt or cannot come into contact with any part not on such load receptor;

(iv) of virtually constant mass per unit length and be kept at a virtually constant tension;

(v) provided with any necessary device for cleaning it.

(e) The length and speed of travel of the belt passing over the load receiving structure of a conveyor belt scale shall be so limited as not adversely to affect the accuracy of the scale.

(f) The outer conveyor rollers on the load receptor and the nearest rollers not on the load receptor of a conveyor belt scale shall be in the same plane and the axes of all of the said rollers shall be at right angles to the direction of travel of the belt.

(g) In the case of a conveyor belt scale for measuring the mass of wet raw fish the conveyor belt passing over; the load receptor of the scale shall be horizontal in length and unperforated and a length of not less than 30 m of perforated belt shall precede the belt passing over the load receptor.

Feeding of material

(h) The device for feeding material on to the belt of a conveyor belt scale shall be arranged so that -

(i) the arrival of material on the belt does not adversely affect the operation of the scale;

(ii) the feed of material is in the direction of travel of the belt unless the feeding takes place at a distance from the scale of more than the distance between three rollers; and

(iii) the rate of feed may be controlled.

Load measuring device

Value of graduations

(i) (i) The indication by the load measuring device of a conveyor belt scale may be in units of mass of the instantaneous load or in percentage of capacity or in units of mass per unit time at a stated belt speed.

(ii) Where the indication of a conveyor belt scale is in units of mass of the load, the value of the graduations shall be in accordance with regulation 44(4) of this Part.

(iii) The value of the smallest graduations of the totalising device of a conveyor belt scale shall be that specified on approval of the model under section 18 of the Act, but shall be not more than 0,01 per cent of the mass measured in one hour at the maximum rate of measurement.

Zero load setting device

(j) (i) The zero load setting device of a conveyor belt scale shall be so arranged that an average zero can be achieved within 0,1 per cent of the capacity of the scale over any number of complete revolutions of the unloaded belt.

(ii) Where the totalising device of a conveyor belt scale does not provide for the indication of mass below zero, a separate zero indicator which indicates below zero shall be provided.

Allowance of error on throughput

(k) The table of errors set out in subregulation (3)(e) of this regulation is augmented in respect of a conveyor belt scale by the following additions -

(i) For raw fish the range of error is 0,75 per cent in excess or in deficiency;

(ii) for bagasse, the mass of which is determined only for the purpose of calculating the sucrose content of sugar cane at sugar mills, the range of error is 2,5 per cent in excess or in deficiency.

Method of testing

Tests for discrimination

(*l*) (i) When the rate of measurement is increased from 20 per cent of the maximum to the maximum and is decreased from the maximum to 20 per cent of the maximum the conveyor belt scale shall indicate the increments and decrements of load correctly; or

(ii) where a simulated test is applied to the scale, small additions to or subtractions from the mass of the load shall result in correct corresponding increases or decreases in the mass being added to the total indication.

Test for zero load error

(m) Before the commencement of a load test the conveyor belt shall be run empty for not less than 10 minutes and for a number of complete revolutions of the belt and, if the error is more than 0,1 per cent of the capacity, the scale shall be adjusted and the zero load test repeated.

Test for accuracy of output

(n) Subject to the provisions paragraph (o) of this subregulation -

(i) the quantity of material used for testing for accuracy of output shall be not less than that quantity which would pass over the scale under actual working conditions during 10 minutes of continuous operation at not less than one-half of its maximum rate of measurement or such longer period as the inspector considers necessary; or

(ii) if testing facilities do not permit of such a test being carried out, not more than three separate quantities, which collectively represent at least that quantity which would pass over the scale during 10 minutes of continuous operation at not less than one-half of its maximum rate of measurement, shall be passed over the scale consecutively and the total mass of the three quantities shall in this case be compared with the comfed mass recorded; and any of the aforesaid tests shall, so far as is practicable, be carried out at various steady rates of measurement in the range from 20 to 100 per cent of the maximum.

(o) In the case of a conveyor belt scale used at a power station for the measurement of a quantity of coal or at such other place for the measurement of the quantity of other materials as the director may approve for the purpose of this subregulation -

(i) the inspector shall, after applying any method of testing prescribed in paragraph (n)(i) or (ii) hereof, apply a simulated test on the same occasion by placing certified masspieces more or less equivalent to the loading of the scale under actual working conditions on the belt supporting structure or by suspending such masspieces therefrom and shall by this means determine the

difference, if any, between correct registration when a prescribed test is carried out and the results obtained when the simulated test is carried out and, where any difference is found, the inspector shall determine the compensation which should be applied in the case of a simulated test in order to obtain correlation with any test prescribed in paragraph (n)(i) or (ii) hereof;

(ii) a registered mechanic may, for the purpose of maintenance under a service contract and his consequent certification for use in trade, carry out a simulated test specified in subparagraph (i) above, after he has ascertained from the responsible inspector what compensation, if any, should be applied in respect of the specific scale concerned.

Totalising scales without conveyor belts

Conformity to appropriate regulations

(9) An automatic continuously totalising scale constructed on the principle of a conveyor belt scale, but without the belt, for measuring the mass of material in bulk which is previously divided into discrete quantities, shall conform to the applicable provisions of regulation 44 of this Part in addition to the applicable provisions of subregulation (8) of this regulation.

Position of certifying stamp and seals

(10) The certifying stamp shall be placed upon a lead plug inserted in a conspicuous and easily accessible part of the beam or some other essential part of an automatic scale and upon the lead in the adjusting hole of any masspieces used with the scale, or in the case of other counterpoises the date stamp shall be placed upon the lead in the adjusting hole, and in appropriate cases seals shall be affixed to prevent unauthorised access to the working parts.

Cream test scales

Definitions

48. (1) (a) The term "cream test beam scale" means any massmeter having an equal armed beam with knife-edge pivots and with cream test bottle holders suspended below the beam.

(b) The term "cream test torsion balance" means any massmeter having an equal armed beam with torsion band pivots and with cream test bottle holders above the beam.

(c) The term "self-indicating cream test scale" means any massmeter having a self-indicating load measuring device and provided with a cream test bottle holder.

Cream test beam scales and torsion balances

Graduation and index

(2) Where a cream test beam scale or torsion balance is provided with an index pointer moving over a graduated scale -

(a) the clear interval between the graduations shall be not less than 1 mm; and

(b) the width of the pointer at its extremity shall not exceed the width of any graduation line.

Range of travel

(3) The pointer of a cream test beam scale or torsion balance provided with a graduated indicating or sector plate or a graduated difference chart shall have travel beyond the extreme graduations for a distance of not less than the distance between the smallest graduations, whether the scale is unloaded or is loaded to capacity.

Gravity ball

(4) Where a gravity ball is provided on a cream test beam scale or torsion balance -

(a) it shall be so set as to ensure, as far as is practicable, that the scale turns equally readily whether it is unloaded or loaded to capacity; and

(b) its retaining screw in the case of an unenclosed gravity ball shall be covered by a stud or plug suitable for receiving the certifying stamp.

Method of testing

Tests for errors at half capacity

(5) (a) When certified masspieces equal to half the capacity of a cream test beam scale or torsion balance are placed on each pan or bottle holder in any position normally occupied by a cream test bottle, the scale shall indicate equilibrium within the limits of one-half of the turning allowance.

Tests for errors at capacity

(b) When certified masspieces equal to the capacity of a cream test beam scale or torsion balance are evenly distributed on each pan or bottle holder, the scale shall indicate equilibrium within the limits of the turning allowance.

Tests for sensitivity

(c) A cream test beam scale or torsion balance, whether unloaded or loaded with certified masspieces equal to the capacity of the scale, shall turn in accordance with the following Table, any error having been corrected -

TABLE

Capacity not exceeding	Turning allowance	
	New and repaired instruments	Instruments in actual use
240 g	75 mg	150 mg
500 g	200 mg	400 mg

Self-indicating cream test scales

Method of testing

(6) (a) A self-indicating cream test scale shall be tested for accuracy of indication and discrimination according to regulation 44(5)(i) and (j) of this Part:

Provided that the scale shall indicate the mass of the load correctly when a load of certified masspieces equal to one-half of the capacity of the scale is placed on the pan or bottle holder in any position normally occupied by a cream test bottle.

Allowance of error

(b) The allowances of error for self-indicating cream test scales are those prescribed for self-indicating scales in the Annexure to this Part.

Position of certifying stamp and sealing

(7) (a) The certifying stamp shall be placed -

(i) in the case of a cream test beam scale, in accordance with the provisions of regulation 34(6) of this Part;

(ii) in the case of a cream test torsion balance, upon the sealing plug provided on the gravity ball or, where no gravity ball is fitted or where the gravity ball is within the housing, upon a lead plug inserted in the housing which shall be sealed; or

(iii) in the case of a self-indicating cream test scale, in accordance with the provisions of regulation 44(5)(k) of this Part.

(b) Seals shall be affixed to prevent unauthorised access to the working parts of any cream test scale provided with a housing.

Person scales

Definition

49. (1) The term "person scale" means a massmeter which, for fee or reward to the owner or lessee thereof, is made available for use for determining the mass of persons only.

General provisions

(2) A person scale shall -

(a) have the name and address of the owner or lessee clearly and conspicuously marked thereon;

(b) be kept in a level position and be used for the sole purpose of determining the mass of persons;

(c) in the event of its being liable to give incorrect results unless special precautions are taken, have appropriate and clear instructions in respect of such precautions permanently and conspicuously marked thereon;

(d) in the case of a coin-operated scale, have the value of the coin required to activate the mechanism clearly marked thereon.

Self-indicating person scales

Graduations

(3) (a) The value of the smallest graduation on the chart of a self-indicating person scale shall be not more than 500 g.

(b) The distance between graduation lines on the chart of a self-indicating person scale, measured from centre to centre, shall be not less than 1,5 mm and the width of the graduation lines shall be not more than one-half of the distance between them.

Index pointer

(4) The width of the tip of the pointer of a self-indicating person scale where it passes over the graduations or where it is in the same plane as the graduations shall, for a distance from the extremity of not less than the length of the smallest graduation lines, be not more than the width of the graduation lines.

Indication at zero load

(5) (a) The pointer of a self-indicating person scale shall automatically return to the position of balance at zero load on removal of the load.

(b) A new or repaired self-indicating person scale provided with coin-operated mechanism shall be so adjusted that the indicating mechanism will not advance more than three graduations from the zero mark when a load is in position on the load receptor and a coin has not yet been inserted in the scale.

Ticket-printing person scales

(6) (a) Where a person scale indicates mass by means of a ticket, such ticket shall bear a clear and definite statement of the mass.

(b) A person scale indicating mass by means of a ticket shall be so designed and constructed that when the supply of tickets is exhausted, the coin slot shall be closed automatically or any coin placed in the slot shall be returned automatically to the customer.

Method of testing

(7) (a) A person scale shall satisfy the requirements prescribed for a scale of similar type, in so far as such requirements are applicable.

(b) After a certified masspiece has been positioned on the load receptor and the mass indicated, the load shall be removed and the pointer allowed to return to zero before an additional masspiece is added and the scale is tested at the next graduation.

Allowances of error

(8) The turning and error allowances shall be those prescribed in the Annexure to this Part for a scale of similar class or type:

Provided that the allowance of error for a new or repaired self-indicating person scale shall be 250 g and for a scale in actual trade use shall be 500 g, irrespective of the graduation being tested.

Position of certifying stamp and sealing

(9) The certifying stamp shall be placed upon a lead plug inserted in a conspicuous and easily accessible part of the scale and in the case of a self-indicating instrument seals shall be affixed to prevent unauthorised access to the working parts.

Counting scales

Definition

50. (1) The term "counting scale" means any measuring instrument which, by a gravimetric process, indicates when the number of articles of uniform mass, placed on the load receptor, is equal to a predetermined multiple of an identical article or articles placed in a ratio pan.

Classification

(2) Except as otherwise provided in this regulation, a counting scale shall, in respect of the method of testing, in so far as it applies and in respect of the application of error or turning allowances, conform to the applicable regulations of this Part appropriate to -

(a) a platform or counter-platform scale, when it comprises a load receptor resting on a compound lever system with a steelyard or ratio-lever counting device, and having a capacity of more than 50 kg, including such a scale having a difference chart;

(b) a self-indicating platform or counter-platform scale, when it comprises a load receptor resting on a compound lever system with self-indicating count indication and having a capacity of more than 50 kg;

(c) a counter scale, when it comprises a load plate or pan resting on a compound lever system with a steel-yard or ratio-lever counting device, and having a capacity of not more than 50 kg, including such a scale having a difference chart;

(d) a self-indicating counter scale, when it comprises a load plate or pan resting on or suspended from a compound lever system with self-indicating count indication and having a capacity of not more than 50 kg;

(e) a Class 4 beam scale, when it comprises a load pan suspended from a single lever or multiple lever system, including such an instrument having a difference chart; or

(f) whatever type of massmeter may be specified in terms of an approval of any model of counting scale under section 18 of the Act.

Capacity marking

(3) The capacity or the maximum load for which the scale is constructed, as the case may be, shall be clearly, indelibly and conspicuously cut, cast or stamped on a metal plate securely affixed to the pillar or housing in the following manner -

"Capacity .. . kg" or "Max. load . .. kg".

General provisions

(4) A counting scale shall -

(a) have the counting ratios clearly and indelibly marked in a prominent position on the scale adjacent to or on the appropriate ratio pans;

(b) bear any such operating instructions or notice as may be prescribed in terms of an approval under section 18 of the Act;

(c) be provided with a suitable spirit-level according to its classification.

Suitability of articles for counting

(5) A new or repaired counting scale shall bear a clear, legible and indelible notice which stipulates the smallest unit suitable for counting, which shall be such that, when one unit is placed on the load receptor, the indicator will move a minimum distance -

(a) equal to its travel, in the case of a scale without a difference chart and not being a self-indicating scale;

(b) of 3 mm, in the case of a scale provided with an ungraduated difference chart;

(c) of two divisions, in the case of a scale provided with a graduated difference chart;

(d) of one division, in the case of a self-indicating scale.

Travel of indicator and graduation of difference chart

(6) (a) The travel of the indicating lever of a new counting scale not provided with a difference chart and not being of a self-indicating type or a scale for combined counting and mass measurement, shall be not less than 10 mm each way from the horizontal position of equilibrium.

(b) The travel of the indicator of a new counting scale provided with an ungraduated difference chart shall not be less than 10 mm each way from the zero mark.

(c) A graduated difference chart on a new counting scale shall have not less than six graduations on either side of the zero mark and the graduations shall not be less than 1,5 mm apart, measured from centre to centre of the lines.

Method of testing

(7) (a) A counting scale shall be tested by the method prescribed for a massmeter of like class according to its classification in terms of subregulation (2), as far as may be applicable.

(b) When a known mass is placed in a ratio pan and a load of correct proportion is placed on the load receptor, the counting scale shall indicate equilibrium within the limits of one-half of the applicable allowance for sensitivity.

Test for sensitivity

(c) With a counting scale unloaded or loaded with any mass up to its capacity and with a mass proportional to the load placed in each ratio pan in turn, the addition or subtraction of the applicable allowance shall -

(i) displace the steelyard either way from its position of equilibrium to the full extent of its travel in the case of a scale not provided with a difference chart and not being of a self-indicating type;

(ii) displace the indicator not less than 10 mm on either side of the zero mark, whether the travel of the indicator equals or exceeds 10 mm, in the case of an instrument provided with an ungraduated difference chart;

(iii) displace the indicator not less than six graduations on either side of the zero mark in the case of an instrument provided with a graduated difference chart.

Position of certifying stamp

(8) The certifying stamp shall be placed upon a lead plug inserted -

(a) at either end of the steelyard, in the case of counting scales other than those with difference charts or of the self-indicating type;

(b) in a conspicuous, easily accessible and essential part of the instrument in the case of a counting scale of a difference chart or self-indicating type.

Sealing

(9) Seals shall be affixed to a counting scale of a difference chart or self-indicating type to prevent unauthorised access to the working parts.

Wheel mass load scales

Definition

51. (1) The term "wheel mass load scale" means a massmeter for the determination, for the purposes of the relevant provisions of any road traffic ordinance, of wheel mass loads of road vehicles or, when used in combination, for determining for the said purposes, the axle mass loads of road vehicles in accordance with regulations 14(3) and 15 of this Part.

Condition of use

(2) A wheel mass load scale shall be used only for the purpose specified in subregulation (1) of this regulation and shall not be used for any purpose of trade.

General requirements

(3) A wheel mass load scale -

(a) shall have the base of the load-receiving unit so constructed that the unit stands firm and level when placed on a level plane;

(b) shall be so constructed that the load receptor is a platform which is able to support one wheel of an axle of a vehicle;

(c) shall be provided with a zero balancing device, with provision for back balancing to the extent of at least 200 kg;

(d) shall have the value of the smallest graduation of the indicating scale not more than 50 kg or one two-hundredth of the capacity of the instrument, whichever is the lesser;

(e) if not of a self-indicating type, shall be provided with a balance indicator by means of which a variation of the load by a mass equivalent to not more than four-fifths of the value of the smallest graduation is discernible;

(f) may be self-contained, having the indicating mechanism directly and permanently attached to the load-receiving unit, or may be provided with a remote indicator;

(g) may have two or more load-receiving units coupled to a remote indicator in such a manner that the mass of the load on more than one of the units is indicated collectively, in which case the capacity of the indicating scale shall be equivalent to the total capacity of all of the load-receiving units;

(h) which is so constructed that it comprises two or more load-receiving units coupled severally to the indicator by means of removable couplings, shall have the several units marked to identify them with the indicator and to identify the appropriate coupling position on the indicator and the indicator shall be marked to identify it with such units and the appropriate coupling positions on the indicator shall be marked to identify them with such units;

(i) shall have its capacity or the capacity of a load receiving unit, as the case may be, marked thereon and -the capacity of each of the several units, as well as the total capacity of a remote indicator, shall be marked on the indicator;

(j) which is provided with more than one load-receiving unit, which may be coupled to the indicator, shall not function to indicate a result of measurement unless all of the units which are intended to operate together are correctly coupled.

Allowances

(4) The error allowances on a wheel mass load scale shall be -

(a) two per cent in excess or in deficiency of the mass of the load for loads equivalent to one-quarter of the capacity of the scale up to capacity; and

(b) one-half per cent in excess or in deficiency of the capacity of the scale for loads Jess than one-quarter of the capacity.

Method of testing

(5) (a) As many graduations of the indicator of a wheel mass load scale as the inspector considers necessary shall be tested and the scale shall indicate the mass of the load correctly at such graduations irrespective of whether the test is forward or backward.

(b) A wheel mass load scale shall be tested to its capacity or as near thereto as circumstances permit.

(c) The certified masspieces and any other material comprising the load at any stage of the test shall be evenly distributed on the platform or platforms of a wheel mass load scale.

(d) For the purpose of testing wheel mass load scales, two load-receiving units of a scale which provides for these to be coupled to one indicator or two wheel mass load scales which are intended to be used as a pair may be tested together and when so tested they shall be regarded as correct if the indication of the mass of the load on the combination of units or scales, as the case may be, is within the applicable error allowance.

Position of certifying stamp

(6) The certifying stamp shall be placed upon a lead plug provided in an undercut hole in a conspicuous and easily accessible part of each load-receiving unit of a wheel mass load scale and, in the case of an instrument having a remote indicator, also upon a lead plug securely affixed to the indicator housing.

Sealing

(7) Seals shall be affixed on a wheel mass load scale to prevent unauthorised access to the working parts or any electrical apparatus of the indicator:

Provided that any electrical battery contained within the indicator housing shall be accessible without the need to break a seal.

Periodic certification

(8) Subject to the provisions of sections 20 and 21 of the Act, any person who uses a wheel mass load scale for determining mass in accordance with the provisions of regulation 14(3) of this Part or who has a wheel mass load scale in his possession for such use shall produce it at least once in every year at the regional offices of metrology at Cape Town, Bloemfontein, Pietermaritzburg or Pretoria for the purpose of examination and certifying or recertifying of the instrument by an inspector, but need not comply with a notice under section 19(1) of the Act.

Massmeters with enclosed steelyards

Definition

52. (1) The term "massmeter with enclosed steelyard" means a massmeter of which the load measuring device is a steelyard enclosed in a housing and having the controls for operating the steelyard outside of the housing.

Legibility of results of measuring

(2) The position of the equilibrium indicator and the result of a measurement shall be clearly legible from outside the housing of a massmeter with enclosed steelyard.

Control of printing

(3) Where a massmeter with enclosed steelyard is provided with a printing device, printing shall not be possible unless the poises are in a position corresponding to a whole number of graduations and the massmeter is in equilibrium.

(4) Where necessary a massmeter with enclosed steelyard may be provided with a device to bring the steelyard into a position of equilibrium with loads falling between the smallest steelyard graduations, and such device, whether its functioning is automatic or is under the control of the operator, shall be arranged so that it may be made inoperative when required for the purpose of testing the massmeter.

Sealing

(5) The steelyard housing of a massmeter with enclosed steelyard shall be sealed to prevent unauthorised access to the steelyard and operating mechanism.

Counter steelyards

Definition

53. (1) The term "counter steelyard" means a massmeter intended for use on a counter and comprising a single unequal armed lever, which is mounted on a pedestal and the shorter arm of which carries a load pan or plate suspended from or supported on a pivot and the longer arm of which is provided with a poise or poises passing over a graduated scale to indicate the mass of the load,

Indications of mass

(2) The indications of mass by a counter steelyard shall appear on both sides of the steelyard and graduations shall correspond on both sides.

Micrometre scales

Definition

54. (1) The term "micrometre scale" means a form of counter steelyard of which the poise comprises a disc provided with a threaded axle which, when turned in its supporting nut and bearings on the steelyard, travels along the steelyard.

Construction

(2) On any micrometre scale -

(a) the shaft of the disc assembly shall move freely and without backlash in the nut;

(b) graduation lines and figures, stamped, cut or engraved on the periphery of the disc for minor graduations and on a plate on the steelyard frame for major graduations, shall be clearly legible from both sides of the scale.

Value of graduations

(3) The value of the smallest graduations of a micrometre scale shall be not more than 10 g or 0,01 kg.

Spring scales

Definition

55. (1) The term "spring scale" means a massmeter of which the load balancing device comprises a spring or springs.

Construction

(2) A spring scale not provided with a suitable temperature compensating device shall have the load balancing spring or springs made of a material the elasticity of which remains virtually constant with temperature changes.

Electronic load-cell scales

Definition

56. (1) The term "electronic load-cell scale" means a massmeter of which the load transmitting device comprises or includes one or more load cells which measure the mass of a load and transmit the value thereof in the form of an electrical signal to a manually operated or self-indicating electronic measuring device which provides analogue or digital indication of the mass of the load.

Construction and installation

(2) An electronic load-cell scale shall be so constructed and installed that -

(a) the force resulting from the application of a load is in all circumstances transferred vertically to the load cell or cells;

(b) the accuracy of indication is not affected by -

(i) fluctuations in supply voltage and frequency;

(ii) externally or internally generated electromagnetic or electrostatic interference;

(iii) atmospheric conditions such as humidity or pollution;

(iv) vibration from any source; or

(v) other ambient conditions.

Platform scales

Definition

57. (1) The term "platform scale" means a massmeter consisting of a load receptor in the form of a platform, a load transmitting device and a load measuring and indicating device.

Conformity to appropriate regulations

(2) A platform scale shall conform to any applicable provision of the regulations of this Part consistent with the design of the platform scale.

Construction and strength

(3) A platform scale shall be of such strength and shall be so designed and constructed that -

(a) a load equal to one-half of the capacity of the scale, placed as near as possible to any edge of the load receptor, will not cause the load receptor or any elements of the load transmitting device to yield unduly or cause the load receptor to disengage from any element of the load transmitting device;

(b) where any load, the mass of which the scale is required to measure, having a mass of more than one-half of the capacity of the scale, can be concentrated on an area of less than one-half of that, of the load receptor under normal conditions of use, it will support such mass, so concentrated, without undue yielding of the load receptor, or of any element of the load transmitting device.

Overhead track scales

Definition

58. (1) The term "overhead track scale" means a massmeter having a load receptor in the form of a hook or pan suspended overhead by means of a trolley which can be positioned on a rail through which the load is transmitted to a load measuring device.

Conformity to appropriate regulations

(2) An overhead track scale shall conform to any applicable provision of the regulations of this Part consistent with the design of the scale.

Special requirements

(3) All pulleys, trolleys, cradles, chains and similar equipment used in conjunction with the measurement of the mass of carcases on an overhead track scale shall be adjusted respectively to be of equal mass within plus or minus 100 g of the average mass of each type of such equipment and such average masses shall be shown on a legible and conspicuous notice fixed in a suitable place near the indicating device of each overhead track scale over which such pulleys, trolleys, cradles, chains or similar equipment are used.

(4) Any connecting rod between the overhead mechanism and the load measuring device of an overhead track scale shall be enclosed sufficiently to prevent any outside interference therewith.

Method of testing

(5) In addition to the tests to be applied in terms of any applicable regulation of this Part, an overhead track scale shall indicate the mass of the load correctly when a load equal to one-half of the capacity of the instrument is placed in any position on the supporting rail or is run off and on to such rail.

Hopper or tank scales

Definition

59. (1) The term "hopper or tank scale" means a massif consisting of a load receptor in the form of a hopper or tank, a load transmitting device and a load measuring and indicating device.

Conformity to appropriate regulations

(2) A hopper or tank scale shall conform to any applicable provision of the regulations of this Part consistent with the design of the scale,

Provisions for testing

(3) Where the construction or erection of a hopper or tank scale is such that it is impracticable or dangerous to place certified masspieces in or on the load receptor, the scale shall be provided with a solid support securely affixed to the load receptor on which a load of certified masspieces equal to the capacity of the scale, or at least 5 t if the capacity is more than 5 t, cart easily and safely be loaded and unloaded:

Provided that where it is impractical to fit a permanent support, a removable support to the satisfaction of an inspector, may be fitted.

Rail and road vehicle scales

Definitions

60. (1) (a) The term "vehicle scale", means a massmeter for the determination of the mass of rail or road vehicles and having a load receptor in the form of a rail track or of a platform or platforms or both rail track and platform or platforms on to which rail or road vehicles may be moved for the measurement of their mass.

(b) The term "rail vehicle scale" means a vehicle scale intended for the measurement of the mass of rail vehicles.

(c) The term "road vehicle scale" means a vehicle scale intended for the measurement of the mass of road vehicles.

(d) The term "road/rail vehicle scale" means a vehicle scale intended for the measurement of the mass of either road or rail vehicles.

Conformity to appropriate regulations

(2) A vehicle scale shall conform to any applicable provision of the regulations of this Part consistent with the design of the scale.

Capacity marking

(3) (a) Where the maximum safe load on the road load receptor of a road/rail vehicle scale is less than the capacity of the instrument, such maximum safe load shall be marked on the scale in the same manner as the capacity and adjacent to the capacity marking.

(b) Where the maximum safe load on any load receptor of a vehicle scale having more than one such receptor is less than the capacity of the instrument, such safe load in

respect of each of the load receptors shall be marked on the scale in the same manner as the capacity and adjacent to the capacity marking.

Construction and strength

(4) A vehicle scale shall be of such strength and shall be so designed and constructed that -

(a) a load equal to one-half of the capacity of the scale or of the maximum safe load, as the case may be, applied through one axle of a vehicle placed as near as possible to any end of the rails or edge of the load receptor will not cause the load receptor or any elements of the load transmitting device to yield unduly or cause the load receptor to disengage from any element of the load transmitting device;

(b) where any load, the mass of which the scale is required to measure, having a mass of more than one-half of the capacity of the scale or of the maximum safe load, as the case may be, can be concentrated on an area of less than one-half of that of the load receptor under normal conditions of use, it will support such mass, so concentrated, without undue yielding of the load receptor or of any element of the load transmitting device.

Installation and maintenance

(5) A vehicle scale shall be so installed and maintained that -

(a) any pit is kept free from any accumulation of water, mud or debris; and

(b) there is a clearance of not less than 5 mm and not more than 20 mm between any edge of any load receptor or fixture thereon and any edge surrounding the load receptor, and such clearance shall be greater at the bottom edge than at the top:

Provided that the maximum clearance may be exceeded where the director has approved some other means of reducing the impact when loads pass from the approaches on to the load receptor and vice versa.

(6) A new vehicle scale installed or a vehicle scale reinstalled shall -

(a) have adequate provision for the inspection of any pit, of the foundations and of the load transmitting device and for the draining of such pit and the foundation area;

(b) except as otherwise provided in any regulation of this Part, or unless exempted by the director from compliance with the requirements of this paragraph, have its approaches at each end smooth, level and straight in line with any load receptor of the scale, for a distance of not less than 10 m or half the length of any load receptor or of combinations thereof, including the space between them, as the case may be, whichever is the greater:

Provided that -

(i) in the case of a rail or road/rail vehicle scale the approach rails may be at a gradient of not more than one in three hundred;

(ii) in the case of a road vehicle scale the approaches may be at a gradient of not more than one in fifty with suitable camber; and

(iii) a road vehicle scale may have an approach at one end only;

(c) in the case of a road or road/rail vehicle scale, unless exempted by the director from compliance with the requirements of this paragraph, have side rails or similar means which shall extend from end to end of the load receptor or receptors so as to allow vehicles to pass on to and off such scale at the ends thereof only;

(d) unless exempted by the director from compliance with the requirements of this paragraph -

(i) have no overhead obstruction for a height of 4 m above any approach or load receptor;

(ii) in the case of a rail or road/rail vehicle scale, have no obstruction on either side along the entire length within a distance of 2 m from the longitudinal centre line of any load receptor;

(e) be maintained in accordance with the provisions of this subregulation; and

(f) unless otherwise approved by the director, have the load indicating device thereof protected by a building or cabin.

Method of testing

(7) In addition to the tests to be applied in terms of any applicable regulation of this Part, a vehicle scale shall indicate the same mass, within the prescribed allowance of error, when a vehicle, having a mass as nearly as practicable equal to the capacity of the instrument, is run repeatedly on to and off any load receptor.

Measuring systems used for determination of the mass of any railway truck coupled in a train and in motion

Conformity to appropriate regulations

61. (1) Any massmeter used for the measurement of the tare or gross mass of a railway truck or railway trucks in accordance with the provisions of regulation 14(2)(b) of this Part which relates to such measurement by adding together the individual axle mass loads of trucks in a train shall be designed to perform such measurement while the train is in motion and shall conform to any appropriate provision of any other regulation of this Part consistent with the design of the massmeter:

Provided that the provisions of regulation 27 of this Part shall not apply to such a massmeter which operates entirely automatically, if it is so constructed that any malfunction becomes immediately apparent at the remote indicator and is clearly recorded as such on any printed record of the results of measurements recorded by the instrument.

Constitution of a measuring-in-motion system

(2) A measuring system for the determination of the mass of railway trucks coupled in a train and in motion, hereinafter referred to as a "system", shall consist of a rail vehicle scale or combination of such scales situated in a specially prepared length of straight, smooth and stable railway track, together with controls and apparatus for indicating and recording the results of measurement of the mass loads of axles or combinations of axles in such a manner as to provide either the mass of each truck or the total mass or both the mass of each truck and the total mass

of all trucks coupled in a train passing over the scale or combination of scales, excluding the axle mass loads of the locomotive where required:

Provided that for the purpose of controlling the loading of trucks only, the system may in addition provide for the measuring, indicating and recording of the individual axle mass loads or of individual wheel mass loads.

Maximum safe load or strength

(3) The strength of the rail vehicle scale or combination of such scales and its foundations in a system shall be such that the scale will support, without appreciable distortion or deflection or the impairment of the proper function of such scale, the greatest axle mass load, including the mass load of the axles of any locomotive, whether measured or not, which is intended to pass over the scale.

Capacity and graduations

(4) (a) The measuring capacity of the rail vehicle scale or combination of such scales in a system shall be appropriate and adequate for the measurement of the greatest mass load of any axle or combination of axles for which the scale is to be used.

(b) Notwithstanding the provisions of regulation 44(4) of this Part, where the capacity of the rail vehicle scale or combination of such scales in a system is 20 t or more, the value of the smallest graduations of the indicator shall be either 10 kg or 20 kg.

Range of total mass indication

(5) The rail vehicle scale or combination of such scales in a system shall be capable of indicating the sum of the results of the measurement of the axle mass load of all axles which it is required to measure in one operation, where each axle mass load is equivalent to the measuring capacity as prescribed in subregulation (4)(a) of this regulation.

Printing of results of measurement

(6) (a) Provision shall be made in a system for the automatic printing of the mass of each truck or of all the trucks in a train, as the case may be.

(b) Any system which is intended to record only the total mass of all the trucks in a train shall be arranged so that the mass of individual trucks in a train may also be recorded when required during testing.

(7) The printer in a system may be provided with a means of computing net mass from the gross mass measured and entered automatically and a previously determined tare entered manually by means of a keyboard, or a tare otherwise determined and entered.

Operating controls

(8) Controls shall be provided in a system -

(a) for the automatic initiation of the measuring process when the first axle of a truck, the mass of which is to be measured, reaches the rail vehicle scale or combination and further for the automatic resetting of the indicator when this process is complete;

(b) for the automatic selection of the summing process as may be required in respect of any truck the mass of which the system is required to measure;

(c) for the automatic prevention of the recording of the mass of a locomotive or other vehicle the mass of which is required to be excluded;

(d) to indicate when the speed of an approaching train is within the limit for proper measurement and, when the speed is beyond this limit, either to prevent the recording of the result of a measurement or to provide an indication on the printed record that such measurement is not to be accepted.

Approach and departure rails

(9) (a) Except as otherwise provided in this regulation, approach and departure rails in a system shall for a sufficient distance be straight, level, smooth, stable and without any points, turn-outs or similar obstructions and shall be so constructed as to ensure that the motion of a train, comprising any number and type of trucks the mass of which the system is required to measure in one pass, is stabilised as the train approaches and leaves the vehicle scale or combination:

Provided that, taking into consideration the purpose and method of use of a system, the approach and departure rails and the rails over the vehicle scale or scales may be at suitable constant gradients, which constant gradients shall extend a distance from the vehicle scale of not less than twice the length of the longest truck the mass of which the system is required to measure.

(b) In addition to the requirements specified in paragraph (a) of this subregulation, the approach and departure rails in a system shall be mounted on foundations of similar strength and rigidity to the foundations of the vehicle scale or combination, for a distance of not less than the length of the longest truck the mass of which the system is required to measure, and the rails over at least this distance shall preferably be in one piece, or if not in one piece, shall be provided with bevelled joints and the tops of the rails over the scale or scales and of the approach and departure rails for the said distance shall be as nearly as possible in the same plane throughout.

(c) Provision shall be made in a system to prevent the approach and departure rails from creeping at their ends nearest to the scale.

(d) Any suitable and acceptable device may be provided in a system to ensure that axles are properly aligned with the rails on the vehicle scale or combination of such scales so that wheel flanges do not come in contact with the rails:

Provided that such device does not itself constitute an obstruction in terms of paragraph (a) of this subregulation.

(e) Junctions between approach and departure rails and the rails on the vehicle scale or combination of such scales in a system shall be bevelled or other means shall be provided to reduce impact when wheels pass from the approaches on to such scale rails and vice versa.

Method of testing a rail vehicle scale

(10) The rail vehicle scale or combination of rail vehicle scales in a system shall be tested with static loads of certified masspieces up to the capacity prescribed in subregulation (4) (a) of

this regulation or as near thereto as is practicable, in accordance with the applicable provisions of regulations 32 and 44 of this Part:

Provided that, in the case of a system for measuring axle mass loads, the load in respect of the test prescribed in regulation 32(6)(b) shall be equal to capacity or as near thereto as is practicable, and if the load applied is less than capacity, the allowance of error shall be reduced in proportion to the load applied.

Method of testing a system

(11) (a) (i) The mass of 11 trucks of the various types, the mass of which the system is required to measure, with as far as practicable one or two trucks empty and not less than two or more than four loaded with random masses of solid product up to half maximum load and the remainder similarly loaded up to maximum load, or if necessary where a system is used for measuring the masses of trucks loaded with an approximately constant mass of material, with all the trucks loaded with such constant mass, shall, prior to the testing of the system, be individually determined by means of a conveniently situated, certified rail vehicle scale suitable for measuring the mass of each truck uncoupled and stationary with all its axles on the load receptor; or

(ii) the mass of the 11 trucks referred to in subparagraph (i) shall be determined by some other means approved by the director.

(b) The 11 trucks, then formed into a train, shall be pulled or pushed, according to required usage, over the system 10 times in each direction in which measurement is required to be taken, thus providing and recording 110 truck measurements in each direction.

(c) Adjustments may be made during or at the conclusion of the test referred to in the preceding paragraph, if necessary, to compensate for any difference between the previously determined masses of the trucks as prescribed in paragraph (a) hereof and the results of their measurement obtained in motion.

(d) When any adjustment referred to in paragraph (c) has been made, the train shall be passed over the system at least three times in each required direction, each of the three or more times at a different constant speed within the limits for proper measurement, and the results of the different measurements shall be compared in order to ensure that the adjustment holds good at the different speeds.

(e) Any adjustment referred to in paragraph (c) shall be followed by a test as set out in paragraph (b) of this subregulation.

Allowance of error

(12) (a) The total result of 100 of the prescribed measurements by the system during the final operation of testing shall not differ from 10 times the total mass of 10 of the 11 trucks, as previously determined in accordance with paragraph (a) of subregulation (11), by more than plus or minus 0,3 per cent, the results for the truck in respect of which the results differ most from the relative previously determined mass being ignored.

(b) Except as provided in paragraph (e) of this subregulation, the results of not more than 40 of the 100 measurements may differ from the masses of the respective trucks,

as previously determined in accordance with paragraph (a) of subregulation (11), by more than plus or minus 0,3 per cent.

(c) Except as provided in paragraph (e) of this subregulation, the results of not more than 10 of the 100 measurements may differ from the masses of the respective trucks, as previously determined in accordance with paragraph (a) of subregulation (11), by more than plus or minus 0,5 per cent.

(d) Except as provided in paragraph (e) of this subregulation, the result of none of the 100 measurements may differ from the mass of any particular truck, as previously determined in accordance with paragraph (a) of subregulation (11), by more than plus or minus 1 per cent.

(e) The provisions of paragraphs (b), (c) and (d) of this subregulation shall not apply to a system which is used for measuring the total mass of all the trucks in a train only, and which is approved for such use only.

Conventional length measuring instruments

Definitions and conformity

62. (1) (a) The term "measure of length" means a measure bearing scale marks or graduation lines of having end surfaces which indicate distances in units of length.

(b) The term "nominal length" in reference to a measure of length means the maximum length which the measure is designed to measure.

(c) The term "principal scale marks" means the two marks or end surfaces the distance apart of which represents the nominal length of a measure of length.

(d) The term "graduated measure" means a measure of length on which graduations between the principal scale marks represent distances less than the nominal length of the measure.

(e) The term "reference temperature" means the temperature marked on a measure of length as that at which the measure is calibrated or 20 °C if not marked on the measure.

(f) The term "specified tension" means the tension marked on a measure of length as that at which the measure is calibrated or the tension specified in subregulation (9)(d) of this regulation if not marked on the measure.

(2) A measure of length shall conform to the applicable provision of the regulations of this Part consistent with its design and any such measure which so conforms may be certified without requiring to be of a model approved in terms of section 18 of the Act unless, in the opinion of an inspector, any new measure of length is made of unusual material or is of unusual or novel design or has any feature which may facilitate incorrect measurement.

Material

(3) (a) A measure of length shall be made of stainless steel, steel, brass, ivory, hard wood, woven tape, reinforced fibreglass or other usual suitable material.

(b) The principal qualities of the material of which a measure of length is made shall be such that -

(i) an increase or decrease in temperature of 8 °C above or below the reference temperature does not result in a variation in its measuring length exceeding the allowance of error;

(ii) in the case of a measure of length which is required to be used under a specified tension or in respect of which a tension is specified in subregulation (9)(d) of this regulation, an increase or decrease of 10 per cent in tension does not result in a variation in its measuring length exceeding the allowance of error;

(iii) the measure cannot become permanently distorted with normal use or with changes in environmental conditions.

Construction

(4) (a) A measure of length shall be straight, the material free from flaws and of sufficient strength to withstand normal use.

(b) A new measure of length made of wood or of another material of similar durability and rigidity shall have both ends capped or tipped with metal which shall be securely riveted in position.

(c) Any sliding or calliper arm of a measure of length shall have no more play than is required for easy movement and when the measuring surface of such arm moved shall remain perpendicular to the longitudinal edge of the measure.

(d) A measure of length made of wood or of another material of similar durability and rigidity and constructed as a T-square shall have the free end of the measuring blade capped or tipped with metal securely riveted in position and shall have the measuring edge of the crosspiece provided with a securely fixed edging of metal or extra hard wood.

(e) A measure of length made of any material other than brass or wood shall be provided with a suitable means, near the beginning of the measuring scale; for receiving the certifying stamp.

Nominal lengths and values of graduations

(5) The nominal lengths and values of graduations of graduated measures of length shall be in accordance with the following Table:

TABLE

Nominal Lengths:		
200 m	10m	1 m
100 m	5m	0,5 m or 50 cm
50 m	3m	0,3 m or 30 cm
30 m	2 m	0,2 m or 20 cm
20 m	1,5m	0.1 m or 10 cm

Partial nominal values (nominal values of graduations)

1 m or 1 x 10^n, 2 x 10^n or 5 x 10^n of 1 m where the exponent "n" is a negative whole number :

Provided that major graduations of the measure may be subdivided.

Scale marks and graduation lines

(6) (a) The surfaces forming the principal end scale marks of a measure of length shall be flat, parallel to each other and perpendicular to the longitudinal edge of the measure.

(b) The graduation lines of a measure of length shall be clear, distinct, of equal width, parallel to each other and shall extend to and be perpendicular to the longitudinal edge of the measure:

Provided that, in the case of a measure of length made of round section one end of such lines shall be on a straight line running along the length of the measure and in the case of a measure of length provided with sliding or calliper arms the lines need not extend to an edge.

(c) The width of graduation lines of a graduated measure of length shall be such that it cannot cause any appreciable inaccuracy in the results of measuring:

Provided that the width of any such line shall not be more than 1 mm.

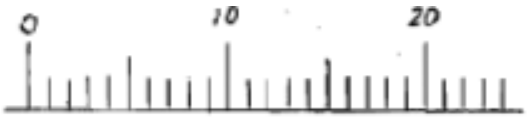
(d) Figured graduation lines of a graduated measure of length shall be distinguished by their being longer than the nearest four intermediate lines on either side.

(e) Where every graduation line of a measure of length is figured all such lines may be of equal length or where every second graduation line of a measure of length is figured all such figured lines may be of the same length and all intermediate graduation lines shall be of the same length but shorter than the figured lines.

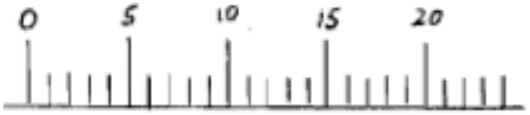
(f) Measures of length not figured or marked in accordance with the provisions of the preceding paragraph, shall bear figuring and marking in accordance with the following diagram -

Numerical value of smallest graduation	*Arrangement of graduation lines and figures*

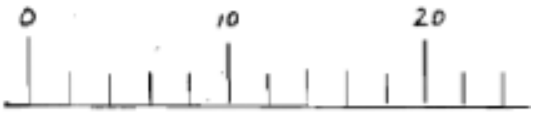
(a) $1x10^n$



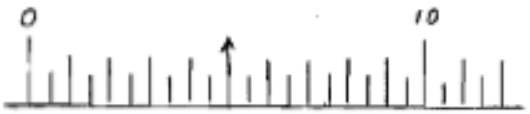
or



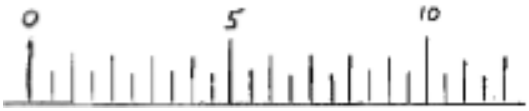
(b) $2x10^n$



(c) $5x10^n$



or



(g) On a tape measure provided with a link at the zero end, which forms a part of the measuring length, the link section need not be graduated.

(h) On a tape measure, the zero mark shall be either at the end of the link or at the inside of a hook where one is provided, or at any point on the tape:

Provided that where the zero mark is on the tape, there shall be no scale marks or graduations in advance of the zero, but this part of the tape may bear the marking of the nominal length of the measure and other marking required.

(i) A tape measure which is wound in a case or frame when not in use may be graduated beyond its nominal length for a distance equal to not more than 0,05 of its nominal length or 0,05 m, whichever is the lesser.

Denomination

(7) (a) A rigid measure of length shall be marked with the denomination denoting its nominal length near the extreme end of the measure:

Provided that the letters of the denomination shall be of a size compatible with that of the figures denoting numerical values, but in no case less than one half of the size of such figures.

(b) A tape measure of length shall be marked with the denomination denoting its nominal length near the beginning of the measuring scale, or on the case or frame.

(c) Figures on a measure of length denoting values in decimal submultiples of the metre or in mm or, where permitted, in cm, do not require to be followed by the relevant symbol of the measuring unit:

Provided that, where the figures denote mm or cm rather than decimal submultiples of the metre, the figure denoting each metre shall be followed by the symbol m and these figures and symbols shall be larger than, or of a contrasting colour to, the intermediate figures.

Other marking

(8) Where a measure of length is calibrated at a temperature other than 20 °C or under a tension greater than that specified in subregulation (9)(d) of this regulation, such other temperature or tension shall be marked on the measure near the beginning of the measuring scale.

Method of testing

(9) (a) The allowances of error on measures of length are prescribed in the Annexure to this Part.

(b) A measure of length shall be tested for accuracy at its principal scale marks and at as many graduations as the inspector considers necessary, by comparison with a certified measure of length.

(c) During testing, a measure of length shall, as far as is practicable, be supported through its whole length on a plane and even base.

(d) A tape or linked measure of length shall be subjected, during testing, to the tension marked on the measure, or if this is not marked, to the following tension:

(i) A tape measure made of a material other than metal: 10 N.

(ii) A metal tape measure: 50 N.

(iii) A linked measure: 70 N.

Position of certifying stamp

(10) A measure of length shall have the certifying stamp placed near the beginning of the measuring scale on each graduated side:

Provided that, in the case of a linked measure or a tape measure, the certifying stamp may be placed upon a metal label or disc permanently secured to such measure.

Length and area measuring instruments which require approval in terms of section 18 *of the Act*

63. (1) Any new length or area measuring instrument or self-indicating measure of length requires to be of a model approved in terms of section 18(2) of the Act, unless exempted in terms of section 23(2) of the Act from certification or recertification.

Conformity to appropriate regulations

(2) Except as otherwise provided in a regulation of this Part relating to an instrument of a specific class or kind or in a certificate issued in terms of section 18(2) of the Act, any length or area measuring instrument shall conform to any applicable provision of the regulations of this Part consistent with the design of such instrument and, in particular, to any applicable provision of regulation 64 or 65 of this Part relevant to length measuring instruments and area measuring instruments, respectively.

Submission for approval of installations

(3) Any new installation or any new length or area measuring system of a design not previously approved, which incorporates any length or area measuring instrument of a model approved in terms of section 18(2) of the Act together with ancillary equipment which is necessary for the operation of such instrument or which extends the scope of its operation and may affect

its measuring accuracy, shall, before the instrument and such ancillary equipment are put into use for a prescribed purpose, be referred to the director for examination, testing and approval by him in terms of section 18(9) of the Act, unless approval of the equipment comprising such installation or system was incorporated in the approval of the instrument.

(4) Subject to the provisions of sections 20 and 21 of the Act, any person who uses a self-indicating measure of length, such as a depth gauge, for determining the depth of the threads of tyres of any road vehicle for the purpose of the relevant provisions of any road traffic ordinance, shall produce it at least once in every year at any regional office of metrology for the purpose of examination and certifying or recertifying of the instrument by an inspector, but need not comply with a notice under section 19(1) of the Act.

Length measuring instruments

Definition

64. (1) The term "length measuring instrument" means a measuring instrument which is designed and constructed to measure and automatically indicate the length of fabrics or other approved materials passed through it.

Capacity marking

(2) The capacity of a length measuring instrument and the value of the smallest graduation of indication shall be marked on the indicating dial or on a metal plate securely attached to an essential part of the instrument and in a prominent position.

Construction

(3) On a length measuring instrument of which the measuring device is a roller -

(a) the measuring roller shall be made of a material sufficiently strong and having a sufficient degree of durability to preclude any deformation of the roller or change in its dimensions in normal use;

(b) the peripheral surface of the measuring roller shall be roughened sufficiently to prevent slipping of the material being measured relative to the roller;

(c) the axis of the measuring roller shall be perpendicular to the direction of travel of the material;

(d) the measuring roller and any pressing or driving roller or device shall be truly parallel when in position for measuring;

(e) where required due to the construction or method of introducing the material to be measured into the instrument, an index or datum line shall be provided on the length measuring instrument for denoting the. beginning and the end of the quantity of material measured;

(f) a device shall be provided to prevent indication of measurement without material passing through the instrument and to prevent the instrument from continuing to register when the end of a piece of material being measured has passed the measuring roller.

Indicator or counter resetting

(4) In the case of a length measuring instrument for use in the retail trade -

(a) a device for resetting the indicator or counter to zero shall be provided;

(b) the resetting device shall be so arranged that the rollers are freed when the device is operated;

(c) the resetting device may operate automatically in conjunction with a marking or cutting device or manually by means of a special control;

(d) the device specified in paragraph (f) of subregulation (3) of this regulation shall be interlocked with the resetting device so that material cannot be introduced into the instrument until it has been reset;

(e) the lengths measured and the money values, where provided, shall be indicated on both the seller's and purchaser's sides of the instrument.

Graduations

(5) (a) The value of the smallest graduation of a length measuring instrument shall be 1 m or 1×10^n, 2×10^n or 5×10^n of 1 m where the exponent "n" is a negative whole number.

(b) In the case of a length measuring instrument for use in the retail trade -

(i) the value of the smallest graduation on the dial shall be not more than 0,1 m;

(ii) where the value of the smallest graduation is 0,1 m, the distance between graduation lines measured from centre to centre shall be not less than 15 mm and where the value of the smallest graduation is less than 0,1 m such minimum distance shall bear the same relation to the value of the graduations, but shall be not less than 1,5 mm:

Provided that this requirement shall not apply to an instrument which indicates lengths by means of a digital or semi-digital counter on which each graduation is figured;

(iii) where an instrument indicates money values, the distance between money value graduation lines measured from centre to centre shall be not less than 0,6 mm;

(iv) the width of any graduation line shall be not more than one quarter of the distance between graduation lines but not less than 0,2 mm or more than 1 mm;

(v) the width of any index pointer, line or cord shall be not greater than the width of the graduation lines.

(c) In the case of a length measuring instrument for use in the wholesale trade -

(i) the value of the smallest graduation on the dial shall be not more than one ten-thousandth of the capacity of the instrument;

(ii) where the value of the smallest graduation is 1 m, the distance between graduation lines measured from centre to centre shall be not less than 15 mm and where the value of the smallest graduation is less than 1 m such minimum distance shall bear the same relation to the value of the graduations but shall be not less than 1,5 mm:

Provided that this requirement shall not apply to an instrument which indicates lengths by means of a digital or semi-digital counter on which each graduation is figured.

Figuring of graduations

(6) Graduations of a length measuring instrument shall be figured at intervals of not more than 10 graduations and where the indications are partly enclosed the aperture through which the indication is read shall be large enough to permit the next lower figured graduation to be read.

General

(7) (a) Any totalising counter, ticket printer, pre-setting device or other ancillary device on a length measuring instrument shall function properly throughout its range and printed results of measurements shall be clearly legible.

(b) Any length measuring instrument approved after the promulgation of these regulations which is intended for measuring a stretchable fabric shall be provided with a relaxing device to ensure that the fabric is not stretched while it is being measured.

(c) A length measuring instrument provided with a pre-setting counter shall be provided with a locking device which, once the required length has been measured, will prevent any further measurement until the counter is again set.

Method of testing

(8) (a) A length measuring instrument provided with a price computing chart shall be examined to ensure that the indications of unit prices and money values are in correct alignment with the indications of length and a sufficient number of computations shall be checked to ensure their general accuracy.

(b) When a certified testing tape or a measured length of material normally measured by a length measuring instrument is passed through the instrument at right angles to the axis of the measuring roller, indications shall be correct throughout the measuring range of the instrument whether the test is forward or backward.

(c) In the case of a length measuring instrument for use in the retail trade the indications on both the seller's and purchaser's sides shall agree.

(d) Unless a length measuring instrument is provided with a device to prevent reverse action, a certified tape or measured material shall be passed through the instrument in a backward direction in order to discover any possible backlash in the mechanism and such backlash shall not exceed one-tenth of the value of the smallest graduation.

(e) When the end of a piece of material being measured by a length measuring instrument has passed the measuring roller, the instrument shall not over indicate the measurement by more than one half of the value of the smallest graduation.

Errors permitted

(9) The errors permitted on length measuring instruments are shown in the following Table:

TABLE

Length tested	Error permitted	
	In deficiency (over registration)	In excess (under registration)
Up to 1 m.....	5 mm	10 mm
Over 1 m but under 5 m	10 mm	20 mm
5 m and over.....	0,2 per cent of the length measured	0,4 per cent of the length measured

Position of certifying stamp and sealing

(10) The certifying stamp shall be placed upon a lead plug in an undercut hole inserted in a conspicuous, essential and accessible part of a length measuring instrument or in a cup securely attached thereto and seals shall be affixed to the instrument to prevent unauthorised access to any adjusting device or to the working parts,

Area measuring instruments

Definition

65. (1) The term "area measuring instrument" means a measuring instrument which is designed and constructed to measure and automatically indicate the superficial area of leather or other approved materials passed through it.

Capacity marking

(2) The measuring capacity of an area measuring instrument and value of the smallest graduation of indication shall be indelibly marked on the indicating dial or on a metal plate permanently secured to an essential part of the instrument and in a prominent position.

Construction

(3) (a) An area measuring instrument of the multi-roller type shall be so constructed that the material to be measured is flattened but not stretched when fed through the measuring rollers.

(b) The correct adjustment of any device for resetting the indicating mechanism of an area measuring instrument or for setting the adjusting shaft which effects the raising and lowering of the rollers shall be ensured by means of lock nuts or by other satisfactory means.

(c) An area measuring instrument of which the measuring device does not comprise measuring rollers shall be so constructed that the material to be measured is not stretched when fed through the measuring device:

Provided that the transporting device may be so arranged as to flatten the material.

Indication

(4) (a) The measuring unit for the indication of the area measured by an area measuring instrument shall be the dm^2.

(b) An area measuring instrument referred to in subregulation (3)(c) which does not flatten the material being measured may be provided with a device for compensating, in the indication of area, for unevenness or wrinkling of the material:

Provided that such compensation shall not exceed 0,5 per cent of the area measured.

Method of testing

(5) (a) An area measuring instrument shall be tested for accuracy of measurement by means of certified templets.

(b) Each templet shall be passed through an area measuring instrument at least five times in various positions, the indication being reset to zero before each pass, and the error in respect of each pass shall not exceed the allowance of error prescribed in subregulation (6) of this regulation, while the average error in respect of the five or more passes shall not exceed one half of such prescribed allowance of error.

(c) A templet may also be passed through an area measuring instrument several times without the indication being reset to zero, and the total error shall not exceed the allowance of error prescribed in subregulation (6) of this regulation.

(d) For an area measuring instrument having a sufficiently large capacity a combination of the templets may be used and such combination of templets may be passed through the instrument successively, or together without overlapping, in such a manner as to pass under as many sets of measuring rollers as possible, or through as wide a section of a measuring device not provided with rollers as possible, the indication in either case not being reset to zero until all templets used in combination have been passed through the instrument:

Provided that only templets of the same thickness shall be used in such a combination.

[Subsection (5) refers throughout to "templets". The word "templates" may have been intended here. The term in the Afrikaans text is "maatvorm".]

Errors permitted

(6) The errors permitted on area measuring instruments are shown in the following Table:

TABLE

Area tested	Error permitted in excess (under registration) or in deficiency (over registration)

Up to 100 dm^2	1,5 dm^2
Over 100 dm^2 to 200 dm^2	2 dm^2
Over 200 dm^2 to 500 dm^2	2,5 dm^2
Over 500 dm^2	0,5 per cent of area measured

Position of certifying stamp and sealing

(7) The certifying stamp shall be placed upon a lead plug in an undercut hole inserted in a conspicuous, essential and accessible part of an area measuring instrument or in a cup securely attached thereto and seals shall be affixed to the instrument in accordance with any relevant requirement in terms of the approval of the model under section 18 of the Act.

Convential measures of volume

[The word "conventional" is misspelt in the *Government Gazette*, as reproduced above.]

66. (1) A conventional measure of volume of any of the following classes or kinds shall conform to any applicable provision of the regulations of this Part consistent with the design of the measure and, in particular, to regulations 67 to 70 of this Part relative to each class or kind, and any such measure which so conforms may be certified without requiring to be of a model approved in terms of section 18 of the Act, unless, in the opinion of an inspector, any such measure is of unusual or novel design or has any feature which may facilitate inaccurate measurement:

(a) Any measure of volume of conventional design;

(b) dipping measures used for the measurement of milk;

(c) measures used for the testing of water meters;

(d) vehicle tanks calibrated to hold a fixed quantity; and

(e) graduated glass measures for pharmaceutical dispensing.

Measures of volume

Definitions

(2) The term -

(a) "measure of volume" referred to as a "measure" in this regulation and in regulations 67 to 70 of this Part means a measure of conventional design used for measuring liquid substances and having a datum level or levels which define the quantity or quantities which can be measured by means thereof;

(b) "containing measure" means a measure of volume intended to contain the defined quantity when filled to any datum level;

(c) "delivering measure" means a measure of volume intended to deliver a defined quantity after having been filled to any datum level;

(d) "capacity" in reference to a measure of volume means the maximum defined quantity for which it is designed;

(e) "conical measure" means a measure of volume of which the diameter at the brim is not more than two thirds of the diameter at the bottom.

Material

(3) (a) Any measure shall be made of glass, tin, tin alloy, pewter, brass, bronze, copper, tin plate, white metal, aluminium, aluminium alloy, nickel, nickel-plated steel, chromium-plated steel, stainless steel or galvanised sheet iron or any other material approved by the director.

(b) Any measure made of brass, bronze or copper shall be well tinned all over on the inside.

(c) The coating of tin, nickel or chromium on a plated measure shall be uniform and shall show, no sign of peeling.

(d) Where the director has approved iron or mild steel which is not plated or galvanised as the material of which a measure for a special purpose may be made, such measure shall, where necessary with regard to the material to be measured, be coated all over on the inside with a suitable protective coating.

Construction

(4) (a) A measure shall be so constructed as not to be easily dented or to lose its shape.

(b) Where a measure has strengthening ribs or bands, such ribs or bands shall not be of such form as to show, by indentation or otherwise, divisions inside the measure which might be mistaken for quantity indications.

(c) Except as otherwise provided in any regulation of this Part, a single value metal measure having a capacity of 200 ml or more, except a dipping measure for milk, shall be provided with a lip or other suitable retainer to prevent spilling:

Provided that -

(i) such lip or retainer shall not increase the size of the measure by more than 10 per cent of the nominal capacity;

(ii) such lip or retainer shall extend from the brim of the measure at an angle of not less than 30° from the vertical;

(iii) such retainer may incorporate a bonnet or funnel:

Provided further that the retainer shall extent from the brim at an angle of not less than 30° from the vertical for not less than one third of its circumference.

[The word "extend" in the last proviso is misspelt in the *Government Gazette*, as reproduced above.]

(d) Except as otherwise provided in any regulation of this Part, a measure shall be of such shape that it is completely emptied when tilted to an angle of 120° from the vertical.

(e) A measure provided with a discharge tap shall be of such shape and the tap shall be so positioned that the measure can be completely emptied without tilting.

(f) A metal measure may be provided with a bottom rim:
Provided that the depth of such rim is not greater than is required to protect the bottom of the measure.

(g) A measure shall not have a false bottom.

Denomination

(5) (a) The denomination of a measure, other than a measure used for testing water meters or a vehicle tank or a graduated glass measure for pharmaceutical dispensing, shall be in accordance with the following Table:

TABLE

(i) Single value measures:

Denominations

Any multiple of 10 *l* above 500 *l*

500 *l*	2 *l*	20 ml
200 *l*	1 *l*	10 ml
100 *l*	750 ml	5 ml
50 *l*	500 ml	2 ml
25 *l*	375 ml	1 ml
20 *l*	200 ml	
10 *l*	100 ml	
5 *l*	50 ml	

and for the sale of potable spirits only – 25 ml

(ii) Subdivided or graduated glass measures, other than graduated measures for pharmaceutical dispensing, pipettes and burettes:

Total denominations

5.1 and under, as prescribed in section (1) of this Table.

Value of graduations

0,2 ml or 0,5 ml or 1 x 10^n, 2 x 10^n or 5 x 10^n of 1 ml or of 1 *l,* where the exponent "n" is a positive whole number or zero.

(iii) Subdivided or graduated non-transparent measures provided with gauge glasses:

Total denominations

5 *l* and above, as prescribed in section (1) of this Table:

Provided that graduations may extend to not more than 10 per cent above the total value.

Value of graduations

0,05 *l*; 0,1 *l*; 0,2 *l*; 0,5 *l* or 1 x 10^n, 2 x 10^n or 5 x 10^n of 1 *l*, where the exponent "n" is a positive whole number or zero.

(b) Every measure shall have its denomination clearly and indelibly marked on the outside of the body thereof and not on any handle, bottom, rim or lid.

Datum level

(6) Except as otherwise provided in any regulation of this Part, the datum level or levels, respectively, defining the capacity of values of -

(a) a single value metal measure shall be the brim which, in the case of such measure provided with a lip or retainer, is the bottom of the lip or retainer;

(b) a single value glass measure having a capacity of less than 200 ml shall be the brim and a glass measure having a capacity of 200 ml or more, where the datum level is the brim shall not be permitted;

(c) a single value glass measure of which the datum level is not the brim shall be an indelible, horizontal line not less than 25 mm in length, placed not less than 10 mm or more than 35 mm from the brim;

(d) a graduated glass measure, having a total capacity of 5 *l* or under, other than a measure for pharmaceutical dispensing, shall be the respective graduations defined by indelible horizontal lines not less than 25 mm in length, and not less than 2,5 mm apart.

(7) Except as otherwise provided in any regulation of this Part, a non-transparent measure shall not be subdivided unless the measure is fixed in position and is provided with a graduated gauge.

Method of testing

(8) (a) Every measure of volume shall be tested for accuracy, by means of water, against a corresponding certified measure, pipette or burette.

(b) A containing measure shall be tested for accuracy by transferring the water from a certified delivering measure to the containing measure being tested.

(c) A delivering measure shall, where practicable, be tested by transferring the water from the delivering measure being tested to a certified containing measure, or, where this is not practicable, the inside of the delivering measure shall be thoroughly wetted and drained before the water is transferred from a certified delivering measure to the delivering measure being tested.

(d) in testing a graduated glass measure or other glass measure of which the datum level is a line, the level of the water shall be taken at the bottom of the meniscus and readings shall be taken at the top of the lines.

[The word "In" at the beginning of paragraph (d) should be capitalised.]

Errors permitted

(9) (i) The errors permitted on vehicle tanks or compartments thereof are prescribed in regulation 69(12) of this Part.

(ii) The errors permitted on measures other than vehicle tanks are prescribed in the Annexure to this Part.

Certifying stamp

Position and method of application

(10) (a) The certifying stamp on a glass measure shall be etched or sandblasted beneath or near the denomination mark.

(b) The certifying stamp on a metal measure other than one provided with a lip or retainer shall be placed on a solder stud near the denomination mark.

(c) The certifying stamp on a metal measure provided with a lip or retainer shall, wherever practicable, be placed on a solder stud at a convenient point on the inside of the lip or retainer.

Dipping measure

67. A metal dipping measure for measuring milk shall conform to the applicable provisions of regulation 66 of this Part and, in addition, to the following provisions -

(a) A metal dipping measure shall -

(i) have a capacity not exceeding 1 *l;*

(ii) be of circular or elliptical section with vertical sides; and

(iii) be provided with a long handle to preclude the hand from being placed in the milk into which the measure is dipped.

(b) The height of a metal dipping measure shall be not less than one and one half times or more than twice the mean diameter of the section.

Measures used for testing of water meters

68. A measure used for the testing of water meters shall conform to the applicable provisions of regulation 66 of this Part and, in addition, to the following provisions:

(a) A measure used for the testing of water meters shall, unless otherwise permitted by the director -

(i) be of circular or elliptical section, with vertical sides;

(ii) be provided with a gauge glass and scale graduated in divisions of 1 *l* to indicate quantities of water contained in the measure at values required for testing the meters and for not less than 5 per cent in excess and 2 per cent in deficiency of such quantities:

Provided that the smallest graduation of a measure for test quantities of 500 *l* or more may be 2 *l*;

(iii) be fixed in position and shall be provided with a valve to empty it;

(iv) have such diameter relative to the depth that the distance apart of the graduations on the gauge, measured from centre to centre, is not less than 2 mm;

(v) have scale marks on the graduated scale in the plane of the diameter of the gauge glass.

Vehicle tanks

Definition

69. (1) In this regulation the term -

(a) "vehicle tank" or "tank" means a measure of volume in the form of a container, which may or may not be subdivided into two or more compartments, the tank or each compartment having a capacity of not less than 200 *l*, mounted on a motor truck or trailer or on a railway truck and used for the sale or delivering of liquids by measure of volume, but excludes a vehicle tank provided with a removable measuring gauge or gauges and a vehicle tank provided with a liquid meter; and

(b) "compartment", in reference to a vehicle tank, means any one of the portions into which the tank may have been subdivided.

Design and construction

(2) (a) A vehicle tank shall be designed to deliver a single value quantity of liquid or a single value quantity from each compartment into which it may have been subdivided.

(b) The strength and construction of a vehicle tank shall be such that, when containing any quantity of liquid which it is designed to measure, any distortion of the tank will not cause incorrect measurements.

(c) All quantity indicators, piping and valves of a vehicle tank shall be of such strength, design, construction and material that they may reasonably be expected to withstand ordinary usage without the accuracy of the instrument being impaired.

(3) The delivery piping connected to a tank shall be of such design and construction that, when the vehicle on which the tank is mounted is standing on a level plane, complete delivery can be made from the tank or from any compartment thereof.

(4) The delivery piping of a vehicle tank, including the manifold outlet where one is provided, shall be so constructed as to preclude any liquid being trapped in any empty compartment while delivery is taking place from a full compartment.

(5) A tank, or each compartment thereof, shall be provided with an air-release vent pipe or pipes so as to prevent the formation of interior air pockets and so as to permit the influx of air to the compartment during the discharge of liquid.

(6) The filler opening of a tank or compartment shall be of such size and construction as to readily permit visual internal inspection.

(7) (a) A tank, or each compartment thereof, shall be provided with a dome, centrally situated at the highest part of the top of the tank or compartment and having a cross-section area such that, when the surface of the liquid contained in the tank is within the dome, the addition of a quantity of liquid equal to the allowance of error will cause a rise in the surface of not less than 5 mm

(b) A dome referred to in paragraph (a) shall be of such size that when the tank or compartment is filled to its capacity, there remains not less than 1,75 per cent of the capacity as ullage space for expansion of the liquid.

Number and capacity marking

(8) (a) Each compartment of the tank or the tank shall have its nominal capacity clearly and indelibly marked on at least one side thereof or on the dome thus:

"CAPACITY ..... l TO INDICATOR".

(b) Where a tank has more than one compartment, each compartment shall be marked with a number and its outlet valve shall bear the same number.

Position, design and seating of indicator

(9) (a) The datum level of a tank or compartment shall be defined by an indicator comprising a plated or polished flat circular metal disc of at least 25 mm diameter, rigidly fixed within the dome and at the centre thereof.

(b) If the indicator referred to in paragraph (a) is adjustable, it shall be so constructed that it can be sealed in such a manner as to prevent any change in its position without the seal being broken.

Emergency valves and calibration

(10) (a) Where an emergency valve is provided for closing the discharge outlet from a tank or compartment, calibration of the tank or compartment shall be done with such emergency valve open and the tank shall bear a conspicuous notice that such emergency valve must be open when the tank is filled in use.

(b) The whole of the inside of a tank or compartment shall be thoroughly wetted and then drained before calibration.

Method of testing

(11) (a) All tests for accuracy of a tank or compartment shall be made with the tank in a level position and with all emergency valves open.

(b) The whole of the inside of a tank or compartment shall be thoroughly wetted and then drained before any test for accuracy.

(c) A tank or compartment shall be tested for accuracy, by means of water, against a certified measure or measures, or by other means approved by the director.

Errors permitted

(12) Errors shall be allowed on a tank or compartment, in excess or in deficiency, in accordance with the following Table:

TABLE

Capacity of tank or compartment	Error allowed	
	In excess	In deficiency
	l	*l*
200 *l*.....	1,5	0,75
over 200 *l* and up to 500 *l*	3	1,5
over 500 *l* and up to 1 000 *l*	5	2,5
over 1 000 *l* and up to 2 000 *l*	8	4
over 2 000 *l*	8 *l* and in addition 2 *l* for every 1000 *l* in excess of 2 000 *l*	4 *l* and in addition *l* for every 1 000 *l* in excess of 2 000 *l*

Certifying stamp and seals

(13) The certifying stamp shall be placed upon a lead plug on the dome or at the outlet valve of a tank or compartment and the indicator shall be suitably sealed.

Graduated glass measures for pharmaceutical dispensing

70. (1) A graduated glass measure for pharmaceutical dispensing may be of inverted conical, of beaker or of cylindrical shape and shall have a level base at right angles to the vertical axis of the measure.

(2) (a) The datum levels of a graduated glass measure for pharmaceutical dispensing shall be the respective graduations, which shall be clear and distinct and etched or engraved parallel to the base and to one another,

(b) Where back graduations are provided on the glass measure they shall correspond to front graduations when the measure is standing on a level plane.

(c) The clear interval between graduations shall be not less than 1,5 mm.

Denominations

(3) The denominations of graduated glass measures for pharmaceutical dispensing shall be in accordance with the following Table:

TABLE

Total denominations:
1 *l* or 1 000 ml, 500 ml, 250 ml, 200 ml, 100 ml, 50 ml, 20 ml, 10 ml, 5 ml.

Value of graduations:
0,5 ml, 1 ml, 2 ml, 5 ml, 10 ml, 20 ml, 50 ml, 100 ml.

Testing

(4) (a) A graduated glass measure for pharmaceutical dispensing shall be placed upon a level plane during its testing for accuracy.

(b) All figured graduations and as many intermediate graduations as the inspector considers necessary shall be tested.

Position of certifying stamp

(5) The certifying stamp shall be etched or sandblasted near to the mark denoting the total capacity of the measure.

Volume measuring instruments which require approval in terms of section 18 of the Act

71. (1) New measures of volume and volume measuring instruments of the following classes or kinds require to be of models approved in terms of section 18(2) of the Act, unless exempted in terms of section 23(2) of the Act from certification:

(a) Any measure of volume of a class or kind to which the provisions of regulations 66 to 70 of this Part apply and which is of unusual or novel design or which has any feature which is not in accordance with such provisions;

(b) any vehicle tank provided with a measuring gauge;

(c) any liquid measuring device;

(d) any liquid meter or liquid meter system, including -

(i) any milk meter system;

(ii) any liquid petroleum gas meter system;

(iii) any liquid meter system for predetermined quantities;

(iv) any lubricating oil dispenser fitted with a meter;

(e) any liquid fuel dispenser;

(f) any water meter not exempted under Part III of these regulations;

(g) any gas meter not exempted under Part III of these regulations;

(h) any volume measuring instrument which measures volume on any principle or by any means in respect of which no provisions have been prescribed in the regulations of this Part.

Conformity to appropriate regulations

(2) Except as otherwise provided in any regulation of this Part relating to an instrument of a specific class or kind or in a certificate issued in terms of section 18(2) of the Act, any measure of volume or any volume measuring instrument which requires to be of a model approved in terms of section 18 of the Act shall conform to any applicable provisions of the regulations of this Part consistent with the design of the instrument and, in particular, to any applicable provision of regulations 72 to 81 of this Part in respect of instruments of each class or kind.

Submission for approval of installations

(3) Any new installation, any new bulk delivery vehicle or any new system of measurement of a design not previously approved, which incorporates any volume measuring instrument of a model approved in terms of section 18(2) of the Act together with ancillary equipment which is necessary to the operation of the volume measuring instrument or which extends the scope of its operation and which may affect its measuring accuracy shall, before such instrument and such ancillary equipment are put into use for a prescribed purpose, be referred to the director for examination, testing and approval by him in terms of section 18(9) of the Act, unless approval of the equipment comprising such installation, vehicle or system was incorporated in the approval of the volume measuring instrument.

Vehicle tanks provided with gauges

Definition

72. (1) In this regulation, the term -

(a) "vehicle tank" or "tank" means a receptacle which may or may not be subdivided into two or more compartments, the tank or each compartment having a capacity of not less than 200 *l*, mounted on a motor truck or trailer, provided with a removable gauge for the measurement of the quantity of a liquid contained in the tank or a compartment thereof and graduated to indicate various volumes of such liquid;

(b) "compartment" in reference to a vehicle tank means any one of the portions into which the tank may be subdivided;

(c) "gauge" in reference to a vehicle tank means a gauge provided in terms of paragraph (a) of this regulation.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, a tank shall also conform to the provisions of subregulations (2)(b) and (c), (3), (4), (6) and (10) of regulation 69 of this Part.

Construction

(3) (a) A tank shall be of such shape as will make correct measurement possible at any graduation on a gauge.

(b) When of elliptical design, a tank shall have a horizontal major axis of a length not exceeding one and one-half times the length of the minor axis.

Position of gauge

(4) A separate gauge shall be provided for each compartment and, when the gauge is in the tank or compartment, it shall be centrally situated with respect to the longitudinal and diametrical axes in a cylindrical tank and the longitudinal and major axes in an elliptical tank.

Identification of gauges with compartments

(5) A gauge shall be identified with the tank or compartment to which it belongs by means of a number clearly and indelibly marked on the gauge and corresponding to a number similarly marked on the tank or compartment.

Construction of gauge

(6) (a) A gauge shall be so constructed as to retain, as required, the height of liquid when the gauge is removed from the tank or compartment.

(b) A gauge shall comprise a tube of glass or other suitable transparent material, protected by a metal casing and provided with a graduated scale indicating the volume of liquid contained in the corresponding tank or compartment to various levels.

(c) Graduation lines on a gauge shall be clear and distinct.

(d) The distance between graduation lines of a gauge, measured from centre to centre, shall be not less than 2 mm.

(e) The width of any graduation line of a gauge shall be not less than 0,2 mm or more than one-quarter of the distance between the lines measured from centre to centre:
Provided that the width of any such line shall be not more than 1 mm.

(f) Figured graduations of a gauge shall be distinguished by their lines being longer than the nearest four intermediate lines on either side.

Diagrams of gauges

(7) (a) The inspector in charge of the regional office of metrology concerned shall be provided by the user of the gauge with an accurate full scale diagram, on suitable drawing paper, of the quantity marks on each gauge.

(b) Each diagram referred to in paragraph (a) of this subregulation shall be numbered to identify it with the gauge and the tank,

(c) Each diagram referred to in paragraph (a) of this subregulation shall be retained by the regional office of metrology concerned and shall be used for the purpose of verifying any gauge which may have been repaired or replaced due to damage subsequent to its certification.

Method of testing and calibration

(8) (a) All tests for accuracy of a vehicle tank or compartment shall be made with the tank in a level position and with all emergency valves open.

(b) The whole of the inside of a tank or compartment shall be thoroughly wetted and then drained before any test for accuracy and before initial calibration.

(c) A vehicle tank or compartment shall be tested for accuracy, by means of water, against a certified measure or measures, or by other means approved by the director.

(d) Each figured graduation of each gauge and as many intermediate graduations as the inspector considers necessary shall be tested and the volume indicated at each graduation shall not differ from the contained volume by more than the allowance of error:

Provided that any error in the indication of the volume of the successive quantities added or withdrawn shall not exceed the allowance of error in respect of such added or withdrawn quantity.

Error permitted

(9) Errors stall be allowed on the gauge of a tank or compartment, in excess or in deficiency, in accordance with the following Table:

TABLE

Quantity tested or value of graduation	Error allowed	
	In excess	In deficiency
Up to 10 *l*	0,1 *l*	0,05 *l*
over 10 *l* up to 100 *l*	1%	0,5%
over 100 *l* up to 133 *l*	1 *l*	0,5 *l*
over 133 *l* up to 200 *l*	0,75%	0,375%
over 200 *l* up to 300 *l*	1,5 *l*	0,75 *l*
over 300 *l* up to 1 600 *l*	0,5%	0,25%
over 1 600 *l* up to 2 000 *l*	8 *l*	4 *l*
over 2 000 *l*.....	8 *l* and in addition 2 *l* for every 1 000 *l* in excess of 2000 *l*	4 *l* and in addition 1 *l* for every 1 000 *l* in excess of 2000 *l*

Certifying stamp and seals

(10) Each gauge of a tank shall be suitably sealed by means of a soft solder plug or stud and the certifying stamp shall be placed upon such sealing plug or stud.

Liquid-measuring devices

Definition

73. (1) The term "liquid-measuring device", referred to in this regulation as a "device", means an apparatus for delivering predetermined volumes of liquid into drums, barrels, bottles or other receptacles, but excluding a liquid fuel dispenser and any liquid meter system for predetermined quantities.

Design

(2) A device shall be designed to determine the quantity of liquid to be delivered and to repeat such determination indefinitely, without the quantity requiring to be reset:

Provided that provision may be made for the predetermination by an operator of various quantities to be delivered.

Capacity marking

(3) (a) A device shall have its measuring capacity marked on the body of the device or on a metal plate permanently affixed thereto:

Provided that, in the case of a device which incorporates a visible measuring chamber or chambers, the capacity of each such chamber shall be marked thereon and such measuring chamber shall not bear any legend other than the said capacity marking, and the number of the certificate of approval of the model if not marked near the indication of the measuring capacity of the instrument.

(b) Where provision is made on a device for the predetermination of various quantities to be delivered such predetermination shall be clearly defined on the device and the denomination of such quantities shall be clearly marked.

Construction

(4) A device shall be so constructed that -

(a) there is no leakage at any point, especially at any joints, glands and sight glasses, where the latter are provided;

(b) the formation of air pockets is prevented;

(c) all valves are effective for their purpose and, where gland nuts are provided, such nuts shall not require to be tightened to an extent which makes valve operation difficult;

(d) means are provided for sealing any calibrating or volume adjusting mechanism.

Devices with measuring chambers

(5) (a) Where a device is provided with a measuring chamber which is alternately filled and emptied, adequate means shall be provided for the expulsion of air from the chamber while it is being filled and for admission of air thereto while it is being emptied.

(b) Where measurement by a device is effected by means of a piston moving in a measuring chamber or chambers, such piston and chamber shall not comprise the pump for drawing the liquid into the chamber.

Devices measuring by inference

(6) (a) A device which measures a quantity of liquid by inference from the pressure on the liquid flowing through an orifice and the time for which the liquid flows through such orifice shall be provided with means for maintaining such pressure and time at levels which ensure the delivery of the correct quantity.

(b) Where a device referred to in paragraph (a) hereof is provided with a nozzle which remains filled at the end of a delivery, such nozzle shall be of a “non-drip” type and the outlet shall be protected so as to prevent draining of such nozzle.

Supply of liquid

(7) Where the supply of liquid for a device is not visible to an operator or where such instrument is not provided with a visible measuring chamber or chambers, means shall be provided for informing the operator when the supply of liquid is depleted and the device shall not operate when the supply of liquid is below the minimum level required for accurate measurement.

Totalisers

(8) Where a device is provided with a totaliser, the figures of such totaliser shall be clearly legible and where provision is made for resetting such totaliser, the figures shall be properly aligned when the totaliser is set to zero.

Use of liquid-measuring devices

(9) A device shall be installed and operated in such a manner as to deliver the correct volumes.

Method of testing

(10) (a) As far as is practicable, the liquid which is normally measured by a device shall be used for testing the device.

(b) After the device and any delivery hose or pipe attached thereto have been thoroughly flushed, each separate measuring chamber or measuring unit shall be tested for accuracy and constancy of delivery by allowing the liquid to flow from the device directly into an appropriate certified measure of volume:

Provided that, where the capacity of the device or some other factor precludes the method of direct comparison with a measure of volume, the net mass of the liquid delivered shall be determined by means of a certified massmeter and such net mass shall be converted to measure of volume on the basis of the density of the liquid.

(c) Where a device provides for the delivery of various predetermined quantities, each such quantity or as many such quantities as the inspector considers necessary shall be tested,

(d) Tests of a device shall be repeated a sufficient number of times to provide reliable data.

(e) As far as is practicable all tests of a device shall be made at a temperature of 20 °C.

Allowances of error

(11) Error shall be allowed on liquid-measuring devices, in excess or in deficiency, in accordance with the following Tables:

(a) For devices other than devices for delivering quantities of 25 ml or 50 ml of potable spirits in retail trade -

TABLE

Quantity delivered	*Error allowed in excess or in deficiency*
Up to 10 ml	0,4 ml

Over 10 ml and up to 20 ml	4%
Over 27 ml and up to 50 ml	3%
Over 50 ml and up to 60 ml	1 5 ml
Over 60 ml and up to 200 ml	2,5%
Over 200 ml and up to 250 ml	5 ml
Over 250 ml and up to 500 ml	2%
Over 500 ml and up to 666 ml	10 ml
Over 666 ml and up to 1 *l*	1,5%
Over 1 *l* and up to 1,5*l*	15 ml
Over 1,5*l* and up to 2 *l*	1%
Over 2 *l* and up to 2,9*l*	20 ml
Over 2,9*l* and up to 5 *l*	0,7%
Over 5 *l* and up to 5,8*l*	35 ml
Over 5,8*l* and: up to 10 *l*	0,6%
Over 10 *l* and up to 12 *l*	60 ml
Over 12 *l* and up to 50 *l*	0,5%
Over 50 *l* and up to 100 *l*	250 ml
Over 100 *l*	0,25%

(b) For devices for delivering quantities of potable spirits in retail trade -

TABLE

Quantity delivered	*Error allowed in excess only*
25 ml	1,25 ml
50 ml	2,5 ml

Certifying stamp and sealing

(12) (a) The certifying stamp shall be placed upon a lead plug inserted in a conspicuous, easily accessible and essential part of the device and, in the case of a device provided with metal displacers for altering the volume of the measuring chambers, the certifying stamp shall also be placed upon the displacers unless they can be sealed in position.

(b) Seals shall be affixed to the device to prevent unauthorised adjustment or access to the working parts, except as otherwise provided in terms of the approval of a model under section 18 of the Act.

Liquid meters and liquid meter systems

Definition

74. (1) The term "liquid meter", referred to in this regulation as a "meter", means a measuring instrument which is designed and constructed to measure and automatically to indicate the volume of liquids passed through it in a continuous stream, but excludes a water meter.

Material and construction

(2) (a) A meter shall be -

(i) so designed and constructed as to measure correctly the volume of the liquid or liquids for which it is to be used;

(ii) made of such materials as will effectively preclude inaccurate measurement due to any corrosive or other injurious property of the liquid being measured;

(iii) so constructed and installed that there is no leakage at any point of the installation;

(iv) provided with a means for taking the temperature of the liquid stream at the meter in the case of a fixed installation for wholesale delivery;

(v) provided with a suitable device for adjusting the relation between the indicated and actual volume of liquid passing through it, or suitable change gears shall be provided for such purpose:

Provided that a bypass arrangement shall not be used as an adjusting device;

(vi) provided with a means for sealing the calibration adjusting mechanism, the registering mechanism and any working parts of a meter to prevent unauthorised access thereto.

(b) (i) A meter may be provided with a manually operated or automatic temperature compensating device which adjusts the measuring or recording mechanism so as to indicate the volume of the measured quantity of liquid at 20 °C:

Provided that, where a manually-operated compensator is used, an accurate Celsius thermometer shall be fitted in the liquid stream immediately before the meter inlet opening, and provided further that, where an automatic compensator is used, a means for taking the temperature at such point shall be provided.

(ii) The temperature range of a compensating device referred to in subparagraph (i) hereof and the coefficient of expansion or other data on which the compensation is based shall be clearly and indelibly marked on the outside of the temperature compensating device.

Ancillary equipment

(3) A meter shall be equipped with -

(a) a means for automatically breaking the syphon action in the delivery piping or hose in the case where the delivery piping or hose is not detachable from the meter and where the delivery piping or hose is arranged to empty by gravitation at the end of a delivery;

(b) a device of suitable size, design and construction, fitted as closely as possible to the meter on the inlet side thereof, for the purpose of separating and eliminating any air or vapour from the liquid stream before the liquid enters the meter, such device being provided with effective means to allow air or vapour to escape therefrom or to by-pass the meter, as may be required, or for the purpose of stopping the flow of liquid and air or vapour to the meter in the event that air or vapour is present in the liquid stream:

Provided that, where the viscosity or other physical property of a liquid renders such separating or flow stopping device ineffective, other suitable means for preventing the entry of air or vapour into the meter shall be provided;

(c) a suitable filter or strainer, fitted in the liquid stream on the inlet side of the meter to prevent foreign particles from entering the meter;

(d) any other ancillary device that may be required by the director to ensure the accuracy of the meter under all conditions which may arise during its use;

(e) a plate, permanently attached to the meter unless it is a meter incorporated in a lubricating oil dispenser or in a liquid fuel dispenser, on which the maximum rate of flow for which the meter is designed is marked in terms of litres per minute (*l* / min); and

(f) a plate, permanently attached or sealed to the meter, on which the product or products for which the meter may be used is marked in addition to any other information required by the director.

Dials, counters and recorders

(4) The figures on all meter dials, counters and recorders shall -

(a) be clearly legible;

(b) in the case of any re-set type of counter, be in proper alignment when the counter is set to zero:

Provided that, where the figures are re-set in the forward or increasing direction, they shall be obscured during the entire re-setting operation unless the re-setting operation, once started, cannot be stopped until the zero indication is reached.

General requirements

(5) (a) Where a meter is not provided with a no return check valve, the registration mechanism of a recording device shall not be reversible by reversing the direction of liquid flow through the meter, unless so permitted by the director for a special purpose.

(b) A meter shall be installed in such a manner as to provide ready and convenient access to the plug for the certifying stamp and to the sealing arrangements.

(c) (i) Where a meter is provided with a flexible delivery hose and the control valve is situated at the outlet thereof, such hose shall be of a non-expansible type and a spring loaded check and non-return valve shall be provided downstream of the control valve to ensure that the hose remains filled, unless otherwise approved by the director for a special purpose.

(ii) Any hose which is required to be drained after a delivery shall be so fitted as to allow complete discharge of liquid.

(d) No meter shall be operated at a minimum rate of flow below one-fifth of the marked maximum rate, except during the commencement and conclusion of a delivery:

Provided that, where a minimum rate of flow of less than one-fifth of the marked maximum rate is marked on the meter, such meter may be operated at a rate of flow of not less than the marked minimum, and provided further that a meter may be operated at a rate of flow less than such minimum rate of flow where the accuracy

of measurement by the meter is not adversely affected thereby, and such operation has been approved by the director.

(e) (i) The maximum flow rate of a meter shall be limited during use to within any margins in the range between the marked maximum and the prescribed minimum flow rates if such limitation is required for the purpose of ensuring maximum efficiency of air or vapour elimination and accuracy of measurement which could be influenced by the physical properties of the liquid being measured or by any other adverse condition arising during its use.

(ii) The limiting of the flow rate provided for in paragraph (i) hereof shall be effected by such means and in such manner as may be required by the director.

(iii) Any orifice plate or flow rate controller required in terms of subparagraphs (i) and (ii) of this paragraph shall, unless otherwise approved by the director, be situated on the outlet side of the meter and means for sealing any such device which is adjustable shall be provided.

(f) The accuracy of any thermometer or hydrometer for use in testing a meter or in connection with a temperature compensating device shall have been certified by a competent authority.

Means for testing

(6) A meter system used for transferring of liquid where the piping both upstream and downstream of the meter is normally filled with the liquid, shall be provided with means for delivering the measured liquid to a test measure or to or through some other testing device.

Method of testing

(7) (a) Only such meters as the director permits may be certified other than in situ (e.g. batch testing) and any meter so exempted shall be re-tested in situ by a registered mechanic or by an inspector before being put into use for a prescribed purpose.

(b) As far as is practicable, the liquid which is normally measured by a meter shall be used for testing the meter.

(c) After the system has been thoroughly flushed, a meter shall be tested for accuracy and constancy by direct comparison with a certified measure of volume, or by other means approved by the director -

(i) at its maximum rate of flow or at the maximum rate of which the system is capable:

Provided that the latter rate shall not exceed the maximum flow rate marked on the meter;

(ii) at one-half of its maximum rate of flow; and

(iii) at one-fifth of its maximum rate of flow or at the minimum flow rate where this is less than one fifth of the maximum and is marked on the meter.

(d) For the purpose of the tests prescribed in paragraph (c) of this subregulation, the reduced flow rates shall be effected by manipulation of the discharge control valve or by other suitable means.

(e) For tests (i), (ii) and (iii) prescribed in paragraph (c) of this subregulation, the measurement by the meter shall be correct, whether the reset counter, where fitted, is or is not reset to zero before a test is commenced.

(f) Special tests may be carried out to establish -

(i) the efficiency of any ancillary equipment used with the meter; and

(ii) the effect on the accuracy of the meter of any possible condition which may arise during the use of the meter as a result of the peculiarities of the system as a whole.

(g) Any inefficiency or adverse effect revealed during the tests referred to in paragraph (f) of this subregulation shall not affect the accuracy of measurement by the meter by more than the prescribed allowance of error:

Provided that where the efficiency of an air or vapour eliminating device is tested the volume indicated by the meter may be in excess of the quantity delivered to such an extent as may be permitted by the director.

(h) Where a meter is provided with a temperature compensating device, such device shall be tested for efficiency.

(i) Where an automatic temperature compensating device is provided with a setting device for selecting various densities or coefficients of expansion of liquid to be measured, such setting device shall be tested for efficiency.

(j) Any test may be repeated as many times as the inspector considers necessary.

(k) Where practicable, the through-put during a test shall be not less than the quantity delivered by the meter in the course of one minute.

(*l*) Where the flow rate or capacity or other circumstance precludes the testing of a meter by direct comparison with a certified measure of volume, the net mass of liquid delivered through the meter shall be determined by means of a certified or recertified massmeter and, for the purpose of comparing its volume with the meter reading, such net mass shall be converted to measure of volume on the basis of the average temperature at which the liquid has passed through the meter and the density of the liquid at such average temperature, and where a meter is provided with a temperature compensating device the mass so determined shall, for the purpose of comparing its volume with the meter reading, be converted to a measure of volume at 20 °C on the basis of the density of the liquid at 20 °C .

(m) The director may compile and supply test sheets and tables of density and conversion factors for use by an inspector in carrying out the various prescribed tests applicable to meters,

Allowance of error

(8) Except as otherwise provided in this regulation or in any regulation relating to a meter of a specific class or kind or used for a specific purpose, error shall be allowed on a meter in accordance with the following Tables -

TABLE A

For a new or repaired meter

Quantity tested	Error allowed	
	At flow rates from half-maximum up to maximum	At flow rates below half-maximum
	In excess only	In excess only
Up to 500 ml	5 ml	5 ml
Over 500 ml and up to 2 *l*	1%	1%
Over 2 *l* and up to 4 *l l*	20 ml	20 ml
Over 4 *l* and up to 50 *l*	0,5%	0 5%
Over 50 *l* and up to 100 *l*	250 ml	0,5%
Over 100 *l*	0,25%	0,5%

TABLE B

For a meter in actual trade use when verified by an inspector

Quantity tested	Error allowed			
	At flow rates from half-maximum up to maximum		At flow rates below half-maximum	
	In excess	In deficiency	In excess	In deficiency
Up to 500 ml	5 ml	2,5 ml	5 ml	2,5 ml
Over 500 ml and up to 2 *l*	1%	0,5%	1%	0,5%
Over 2 *l* and up to 4 *l*	20 ml	10 ml	20 ml	10ml
Over 4 *l* and up to 50 *l*	0,5%	0,25 %	0,5%	0,25%
Over 50 *l* and up to 100 *l*	250 ml	125 ml	0,5%	0,25%
Over 100 *l*	0,25%	0,125%	0,5%	0,25%

Position of certifying stamp and sealing

(9) The certifying stamp shall be placed upon a lead plug inserted in an undercut hole in a conspicuous and easily accessible part of the meter housing and seals shall be affixed to prevent unauthorised access to working parts and unauthorised adjustments.

Milk meter systems

Definition

75. (1) The term "milk meter system," referred to in this regulation as a "system", means an installation comprising a liquid meter as defined in regulation 74(1) of this Part and ancillary equipment, designed and constructed specifically for measuring milk in bulk and used for the reception of milk by collecting tankers or in dairies or depots or for the delivery of milk.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, the meter in a system shall conform in particular to any applicable provision of regulation 74 of this Part.

Construction

(3) (a) The meter in a system shall be so constructed that the end cover of its measuring chamber may be easily detached to facilitate cleaning of the chamber and its associated parts.

(b) Any removable part of the measuring chamber referred to in paragraph (a) of this subregulation, such as an oscillating piston or gears, shall be clearly and indelibly marked with at least the last three figures of the serial number of the meter, which whole number shall also be similarly marked on the meter, or such part shall be identified with the meter to which it belongs in such a manner as may be specified when the model is approved in terms of section 18 of the Act.

Receiving systems

(4) In a receiving system -

(a) before the start of any normal measuring operation, the meter, piping and air eliminator shall be primed, unless otherwise provided by the director;

(b) where the director has provided that the meter, piping and air eliminator may be completely empty before the first intake in a series of measurements, the inspector shall, when the meter is first verified, determine, by means of tests, the difference between the indication of the quantity of the first intake and the average indication of the quantity of the next three consecutive intakes of like quantities and a notice stating this difference shall be permanently and conspicuously affixed on or close to the meter in the following manner:

"QUANTITY TO BE ADDED TO METER READING FOR FIRST INTAKE ... *l*";

(c) at the end of any normal measuring operation, the intake hose and any piping upstream of the air eliminator shall be automatically emptied of liquid;

(d) where the receiving tank is at a lower level than that of the meter outlet, a device shall be provided for automatically maintaining the meter full of liquid at the end of a delivery; and

(e) where milk is received by a collecting tanker, the length of the intake hose shall be not more than 6 m and the hose shall have such a bore and be so arranged that it will be emptied of all liquid by the suction of the pump.

Delivery systems

(5) The provisions of subregulation (4) of this regulation shall not apply to delivery systems.

Testing facilities

(6) (a) Provision shall be made in a receiving system for the disconnection or isolation of the outlet piping and the connection of a delivery hose or other suitable pipe at a suitable point for the purpose of testing the meter.

(b) The user of any milk meter system shall have in his possession -

(i) a certified test measure of suitable design and having a capacity sufficient for measuring the volume of liquid which will pass through the meter at its maximum rate of flow during a period of at least one minute:

Provided that the measure shall be so designed as to minimise frothing of milk delivered into it;

(ii) all such ancillary equipment, including valves, couplings and other items, as may be required for testing the meter and including, in the case of a receiving system, a non-expansible delivery hose or other suitable delivery pipe, fitted with a control valve near to its outlet and an air vent valve downstream of the control valve where such control valve is fitted to the filler pipe of a test measure.

Tests for accuracy of the meter

(7) (a) As far as is practicable, milk shall be used for testing a milk meter system and the through-put during each test shall be not less than the quantity measured by the meter in the course of one minute at the maximum rate of flow of the meter.

(b) A receiving system shall be prepared for the tests for accuracy of the meter by having the outlet piping disconnected or otherwise isolated and by having the delivery hose or pipe referred to in subparagraph (6)(a)(ii) of this regulation suitably connected.

(c) (i) The meter in any system shall be tested for accuracy in accordance with paragraph 7(c), (d) and (e) of regulation 74 of this Part:

Provided that, where the pump in a receiving system is of a positive displacement type and is arranged for a single fixed rate of flow only, the meter may be tested at such rate of flow only.

(ii) The proviso to subparagraph (i) hereof shall not apply where the director has permitted the certification of the meter in a system other than in situ and the normal pump referred to in that proviso is not used.

(iii) At the end of each delivery to the test measure during tests prescribed in subparagraph (i) of this paragraph, the air vent valve on the filler pipe downstream of the control valve shall be opened to atmosphere where a measure having the control valve fitted to its filler pipe is used.

(d) When a meter is tested in accordance with this subregulation, any error shall not exceed 0,25 per cent in excess or in deficiency of the volume measured.

Tests for accuracy of intake in a receiving system

(8) When the meter in a receiving system has been found to measure correctly when tested in accordance with subregulation (7) of this regulation the system shall be tested for accuracy and constancy when measuring predetermined quantities of milk by the following method -

(a) After the test measure has been drained, a quantity of milk, equivalent to approximately half the capacity of the test measure shall be measured through the meter into the test measure and the meter reading shall be noted.

(b) The meter shall then be operated, with its outlet disconnected from the test measure, until the supply of milk is depleted and the meter stops registering.

(c) The milk in the test measure shall then be drained into the empty supply vessel and again measured through the meter into the test measure until the meter stops registering, and the meter reading shall be noted.

(d) The operation decribed in paragraph (c) shall be repeated as many times as the inspector considers necessary.

[The word "described" is misspelt in the *Government Gazette*, as reproduced above.]

(e) At the end of a test according to paragraphs (a), (b), (c) and (d), any difference between the various meter readings shall not exceed 1,5*l*.

Sealing

(9) Seals shall be affixed to prevent unauthorised access to the adjusting mechanism of the meter in a system.

Liquid petroleum gas meter systems

Definition

76. (1) The term "liquid petroleum gas meter system", referred to in this regulation as a "system", means an installation comprising a liquid meter as defined in regulation 74(1) of this Part and ancillary equipment, designed and constructed specifically for measuring liquid petroleum gas in bulk.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, the meter in a system shall conform in particular to any applicable provision of regulation 74 of this part.

Construction, ancillary equipment and operation

(3) (a) The meter in a liquid petroleum gas meter system shall be operated under pressure from a pump.

(b) A device shall be provided in a system, situated as closely as possible to the meter on the outlet side thereof, for automatically maintaining the pressure required in the system in order to prevent vaporisation of the product being measured.

(c) Any flexible delivery hose provided in a system shall be non-expansible and suited to the product being measured, and shall have the control valve together with a spring-loaded check and non-return valve situated at its outlet, or shall have a self-sealing coupling for connection to the receiving vessel.

(d) A vapour line shall be provided in a system for use when required for equalising the pressure in the supply tank and in the measure used for testing the meter.

(e) A vapour line in a system shall not be used between the supply tank and the receiving vessel during the delivery of the product to a purchaser.

Method of testing

(4) (a) The vapour line referred to in subregulation (3)(d) of this regulation shall be connected, the pressure equalised and the system, including the test measure, flushed before any initial test of a meter is commenced.

(b) The meter in a system shall be tested in accordance with the applicable provisions of regulation 74(7) of this Part.

Allowance of error

(5) The errors allowed on a meter in a liquid petroleum gas meter system shall be twice those specified in regulation 74(8) of this Part.

Liquid meter systems for predetermined quantities

Definition

77. (1) The term "liquid meter system for predetermined quantities", referred to in this regulation as a "system", means an installation comprising a liquid meter as defined in regulation 74 (1) of this Part and ancillary equipment, designed and constructed specifically for measuring and delivering predetermined quantities of liquid into drums, barrels, bottles or other receptacles.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, the meter in a system shall conform in particular to any applicable provision of regulation 74 of this part.

Design

(3) A system shall be designed to determine the quantity of a liquid to be delivered and to repeat such determination indefinitely, without the quantity requiring to be reset:

Provided that provision may be made for the predetermination by an operator of the system of various quantities to be delivered.

Capacity marking

(4) (a) A system shall have its measuring capacity marked on the meter or on the housing if the meter is enclosed or on a metal plate permanently affixed thereto.

(b) Where provision is made in a system for the predetermination of various quantities to be delivered, such predetermination shall be clearly defined on the system and the denomination of such quantities shall be clearly marked on the system.

Supply of liquid

(5) A system not provided with an eliminator referred to in regulation 74(3)(b) of this Part, shall not operate when the supply of liquid is reduced to the minimum level to prevent air from entering the meter.

Method of testing

(6) (a) As far as is practicable, the liquid which is normally measured by a system shall be used for testing the system.

(b) After the system and any delivery hose or pipe attached thereto have been thoroughly flushed, the meter shall be tested for accuracy and constancy of delivery by allowing the liquid to flow from the system directly into an appropriate certified measure of volume:

Provided that, where the capacity of the system or some other factor precludes the method of direct comparison with a measure of volume, the net mass of the liquid delivered shall be determined by means of a certified massmeter and such net mass shall be converted to the measure of volume on the basis of the density of the liquid.

(c) Where a system provides for the delivery of various predetermined quantities, each such quantity or as many such quantities as the inspector considers necessary, shall be tested.

(d) Tests of a system shall be repeated a sufficient number of times to provide reliable data.

Allowance of error

(7) Error shall be allowed on the meter of a system, in excess or in deficiency, in accordance with Table (a) in regulation 73(11) of this Part.

Lubricating oil dispensers

Definition

78. (1) The term "lubricating oil dispenser", referred to in this regulation as a "dispenser", means a liquid measuring system comprising a liquid meter as defined in regulation 74 (1) of this Part and ancillary equipment designed and constructed specifically for measuring and dispensing lubricating oil for servicing motor vehicles.

Conformity to appropriate regulations

(2) Except as otherwise provided in this regulation, the meter in a dispenser shall conform in particular to any applicable provision of regulation 74 of this part.

Construction, ancillary equipment and operation

(3) (a) The meter in a dispenser shall be operated under pressure from a pump.

(b) Where the pump of a dispenser is driven by a compressed air motor, the air gland on the motor and the oil gland on the pump shall be separated by a space open to the atmosphere, or an air escape vent shall be provided between the glands.

(c) Where it is impracticable to provide a dispenser with an air or vapour eliminating device referred to in regulation 74(3)(b) of this Part, it shall be provided with a float-operated valve at the upstream end of the intake pipe, to stop the supply of oil to the dispenser before the oil in the supply tank reaches a level which will permit air to enter the system.

(d) The valve referred to in paragraph (c) of this subregulation may be provided with a small vent or other suitable device, opening below the surface of the oil at its lowest level, to release the vacuum in the suction pipe when the supply of oil is exhausted.

(e) The delivery outlet nozzle of a dispenser shall be of a "non-drip" type and shall incorporate a spring-loaded check and non-return valve to ensure that the delivery spout, nozzle and any delivery hose remain filled.

(f) Any clock-type indicator on the meter of a dispenser shall be so constructed that the index pointers can be reset to zero in the decreasing direction only.

(g) All pointers of a clock-type indicator on a meter of a dispenser shall be reset in one operation and there shall be a stop to prevent resetting below zero.

Graduations

(4) (a) The value of the smallest graduation on the meter of a dispenser shall be not more than 0,01 *l*.

(b) The distance between the graduation lines on any clock-type indicator on the meter of a dispenser shall be not less than 2 mm when measured from centre to centre at the base line.

Delivery hoses and piping

(5) (a) Any delivery hose or hose connecting the pump and meter of a dispenser shall be non-expansible.

(b) Where any hose of a dispenser is retractable on a reel, the length of the hose, measured from the reel to the tip of the delivery outlet nozzle, shall be not more than 7 m.

(c) Where any hose of a dispenser is not retractable, the length of the hose, measured from the meter in the case of a rigidly mounted meter, or from the end of the rigid piping in the case of a meter situated at the delivery end of the hose, shall be not more than 4 m.

(d) The length of any hose connecting the end of a rigid delivery pipe and a hose reel of a dispenser shall be not more than 0,6 m.

(e) The pump of a dispenser shall be appropriate for the viscosity of the product being measured and shall be such that the rate of flow of the product through the meter is within the limits for proper measurement.

General provisions

(6) (a) The meter of a dispenser shall be so installed that the indicator is visible to the operator and, where required, to a purchaser;

(b) Any cover over the meter of a dispenser or any aperture or recess in which the meter is mounted shall be Of such size and shall be so constructed and fitted as to allow read access to the meter and particularly to the certifying stamp and seals thereon.

(c) Not more than two meters of a dispenser, which can be operated simultaneously, shall be fed by one pumping unit,

(d) The maker's model designation shall be clearly and indelibly marked on the pumping unit of a dispenser.

Facilities for testing

(7) The user of a dispenser shall provide any cleaning fluid required for cleaning any measures used for testing the meter.

Method of testing

(8) (a) The meter of a dispenser shall be tested in accordance with the applicable provisions of regulation 74(7) of this Part.

Tests for accuracy

(b) The meter of a dispenser shall be tested for accuracy and constancy -

(i) at the maximum rate of flow of which the dispenser is capable; and

(ii) at one quarter of such maximum rate of flow.

(c) At least one delivery of a quantity of not less than 5 *l* shall be tested during each test according to paragraphs (a) and (b) of this subregulation and the inspector may, in addition, test any number of deliveries of such other quantities as he considers necessary.

Test of float-operated valve

(d) To test the efficacy of the float-operated valve referred to in subregulation (3)(c) of this regulation, oil shall be pumped through the meter at the maximum rate of flow obtainable and delivered into a certified measure from a supply which is insufficient to fill the measure, and when the meter stops indicating, the supply shall be replenished and delivery continued until the measure is filled to the same level as was obtained during the test specified in paragraph (b)(i) of this subregulation and the volume then indicated by the meter shall not differ from the volume in the measure by more than 10 ml .

(e) In order to stimulate the condition required for the test specified in paragraph (d) of this subregulation the suction pipe may be removed from the normal supply and placed in a supply which just covers the floatoperated valve and be returned to the normal supply when the meter stops indicating, the pump being stopped while the transfer takes place.

Allowance of error

(9) Error shall be allowed on the meter of a dispenser, in excess only, in accordance with the following Table:

TABLE

Quantity delivered	Error allowed in excess only
up to 500 ml	5 ml
over 500ml and up to 2 *l*	1%
over 2 *l* and up to 4 *l*	20 ml
over 4 *l*	0,5%

Liquid fuel dispensers

Definition

79. (1) The term "liquid fuel dispenser", referred to in this regulation as a "dispenser", means a liquid measuring system comprising a pump together with one or more measuring chambers or with a liquid meter as defined in regulation 74(1) of this Part and with ancillary equipment, for the measurement and delivery of petrol, paraffin, automotive diesel oil or other liquids approved by the director, into the tanks of road vehicles, boats or small aircraft or into other receptacles.

General provisions - all dispensers

(2) (a) A dispenser, other than a portable dispenser, shall be securely mounted on a solidly constructed level base.

(b) A dispenser shall be so installed -

(i) that the indicator is visible to the operator and, where required, to a purchaser; and

(ii) as to allow ready access to the certifying stamp and seals thereon.

(c) Any glands, joints or valves on a dispenser shall be so constructed, adjusted and maintained that they do not leak.

Dispensers with measuring chambers

General requirements

(3) (a) A dispenser incorporating a measuring chamber or chambers shall -

(i) be so installed that the longitudinal axis of each measuring chamber is vertical;

(ii) have a capacity of not less than 1 *l* or more than 20 *l* in respect of each or any measuring chamber, each measuring chamber being clearly marked with its denomination;

(iii) unless the valves for filling and emptying the measuring chambers operate automatically, have visual indication that a chamber is full or is empty;

(iv) have a delivery hose not more than 5 m long and so fitted as to allow complete discharge of the liquid from the delivery outlet of the dispenser into the purchaser's vehicle or receptacle;

(v) in the case of a dispenser incorporating measuring chambers alternately filled and emptied -

(aa) have a dial and index for indicating the quantity delivered in any continuous operation:

Provided that such indicator may provide for the pre-setting of a quantity required;

(bb) have any means for resetting the indicator to zero operable in the decreasing direction only and have a stop to prevent resetting below zero; and

(cc) have a quantity totaliser, which shall not be resettable, in addition to the main indicator.

Method of testing

(b) To test a dispenser incorporating a measuring chamber or chambers -

(i) at least 5 *l* of liquid shall be run through the dispenser and delivery hose before tests for accuracy and correct functioning are commenced;

(ii) all glands and joints shall be examined to ensure that they do not leak;

(iii) each measuring chamber shall be kept under observation, when full, for a period sufficient to determine that there is no back-drainage;

(iv) where an air duct joins the tops of two measuring chambers, the efficacy of float valves intended to prevent the transfer of liquid from a full to an empty chamber shall be tested;

(v) each measuring chamber shall be tested for accuracy at its maximum capacity as well as at each graduation where a chamber is subdivided;

(vi) in the case of a dispenser incorporating measuring chambers alternately filled and emptied, at least one continuous delivery totalling not less than two deliveries from each chamber shall be tested and the inspector may test any number of such deliveries and deliveries of such other quantities as he may consider necessary; and

(vii) the quantity of liquid delivered shall be compared with certified measures of volume and shall be correct within the limits of error allowed in accordance with paragraph (c) of this subregulation, irrespective of whether the dispenser is operated rapidly or slowly or whether the reset indicator, where fitted, is or is not reset to zero before a test is commenced.

Error allowed

(c) Error shall be allowed on a dispenser incorporating a measuring chamber or chambers in accordance with the following Tables -

TABLE A

For a new or repaired dispenser:

Quantity tested	*Error allowed in excess only*
1 *l*	10 ml
2 *l*	20 ml
3 *l*	20 ml
4 *l* and over	0,5 %

TABLE B

For a dispenser in actual trade use when verified by an inspector:

Quantity tested	Error allowed	
	in excess	in deficiency
1 *l*	10 ml	5 ml
2 *l*	20 ml	10 ml
3 *l*	20 ml	10 ml
4 *l* and over	0 5%	0,25%

Dispensers with meters

Conformity to appropriate regulations

(4) (a) Except as otherwise provided in this regulation, any meter incorporated in a dispenser shall conform in particular to any applicable provision of regulation 74 and, in the case of a dispenser for liquid petroleum gas, of regulation 76 of this Part.

General requirements

(b) A dispenser incorporating a meter shall -

(i) when a delivery has been completed and the dispenser switched off, be incapable of further operation until the indicator for quantity and, if provided, the indicator for money value have been reset to zero;

(ii) have all its quantity and money value indications clearly legible and coincident on all dials:

Provided that money value indications shall not be more prominent than quantity indications;

(iii) have the dial apertures suitably denominated for quantity and money value;

(iv) have a quantity totaliser, which shall not be resettable, in addition to the main indicator;

(v) unless otherwise approved by the director, have a delivery hose of non-expansible type of a length not exceeding 5 m, including the nozzle but excluding any metal swing-arm:

Provided that a delivery hose used for refuelling aircraft or a hose which is automatically retracted or elevated when not in use shall not be so restricted as to its length; and

(vi) have a non-return valve, which may incorporate a pressure release valve, between the air eliminator and the meter.

Individual and grouped dispensers

(c) A dispenser incorporating a liquid meter may -

(i) have its own supply of liquid and pump, in which case the air or vapour eliminator required in terms of regulation 74(3)(b) of this Part shall be situated at the dispenser and the interlock required in terms of subregulation (4)(b)(i) of this regulation shall, when the dispenser has been switched off, prevent operation of the pump until the indicators have been reset to zero; or

(ii) be installed with other dispensers in a central supply system having a single pump supplying the several dispensers with liquid, in which case the air or vapour eliminator required in terms of regulation 74(3)(b) of this Part may be situated at the pump to serve all of the dispensers and the interlock required in terms of subregulation (4)(b)(i) of this regulation shall, when the dispenser has been switched off, shut off the liquid supply to that dispenser until the respective indicators have been reset to zero.

Blending dispensers

(d) A dispenser may incorporate two liquid meters with one indicator and be arranged so that either of two liquids may be delivered through the appropriate meter, or blends of the two liquids, in predetermined proportions, may be delivered according to the product or blend selected by an appropriate mechanism, the money value of the delivered quantity of product or blend being computed according to the value of the product or blend selected.

Method of testing

(e) To test a dispenser incorporating a liquid meter -

(i) at least 5 *l* of liquid shall be run through the dispenser before tests for accuracy and correct functioning are commenced;

(ii) the dispenser shall be examined to ensure that the system does not leak;

(iii) at least one continuous delivery of not less than 20 *l* shall be tested and the inspector may test any number of such deliveries and deliveries of such other quantities as he may consider necessary;

(iv) the quantity of liquid delivered shall be compared with certified measures of volume and shall be correct within the limits of error allowed in accordance

with paragraph (g), irrespective of whether the dispenser is operated rapidly or slowly or whether the indicator is or is not reset to zero before a test is commenced:

Provided that -

(aa) any rapid delivery shall be made at the maximum rate of flow of which the dispenser is capable or as near thereto as may be practicable; and

(bb) any slow delivery shall occupy a time of not less than six seconds per litre or more than eight seconds per litre of any quantity delivered;

(v) any device for pre-setting the quantity to be delivered, whether such quantity is pre-set directly or according to its money value, shall be tested when pre-set for various quantities and the quantity indicated by the dispenser after delivery shall not differ from the pre-set quantity in the case of a digital indication, or shall not differ from the pre-set quantity by more than one-fifth of the value of the smallest graduation in the case of an analogue indication;

(vi) money value indications on a dispenser having a price computer shall be checked to ensure that they agree, to the nearest smallest graduation, with the quantity indicated multiplied by the price per litre as set and indicated;

(vii) the nozzle control valve shall be opened immediately after the dispenser has been switched off and not more than 30 ml of liquid shall then be delivered;

(viii) the pump shall be started after having stood idle for 5 minutes and no advance of the indicating mechanism shall then occur.

Testing of blending dispensers

(f) (i) Each meter of a blending dispenser referred to in paragraph (d) of this subregulation shall be tested with the product selected and the proportions of the two products delivered according to the blends selected shall be checked.

(ii) For the latter part of the tests in accordance with subparagraph (i) of this paragraph, use may be made of the appropriate totalisers relating to the combined quantity and to one of the products and the proportions of the blend shall be correct to within the value of one smallest increment of the totaliser scale.

Error allowed

(g) Error shall be allowed on the meter incorporated in a dispenser in accordance with the provisions of regulation 74(8) of this Part:

Provided that in the case of a dispenser for liquid petroleum gas error shall be allowed on the meter, whether new or repaired or in use, in accordance with the following Table:

TABLE

Quantity tested	Error allowed at any rate of flow	
	in excess	in deficiency

Up to 500 ml	10 ml	5 ml
Over 500 ml and up to 2 *l*	2%	1%
Over 2 *l* ml and up to 2 *l*.....	40 ml	20 ml
Over 4 *l*.....	1%	0,5%

Certifying stamp and sealing

(5) (a) The certifying stamp shall be placed upon a lead plug inserted in an undercut hole in a conspicuous and easily accessible part of a dispenser incorporating measuring chambers or of the meter housing in the case of a dispenser incorporating a meter and seals shall be affixed to prevent unauthorised access to working parts and unauthorised adjustments.

(b) No person shall make illegible, by means of paint or in any other manner, any certifying stamp or any official die impressed on a seal of a dispenser.

Water meters

Definition

80. (1) (a) The term "water meter" means a measuring instrument which is designed and constructed for use in a water supply system to measure and automatically to indicate the volume of water passed through it in a continuous stream and used by a consumer for domestic purposes, but does not include a water meter having a nominal inlet and outlet bore in excess of 25 mm.

Classification

(b) A water meter known as size 3, size 5 or size 7 shall have a nominal bore and designed maximum rate of flow according to the following Table:

TABLE

Size	Designed maximum rate of flow	Nominal bore
3	3 kl/h	15 mm
5	5 kl/h	20 mm
7	7 kl/h	25 mm

Type

(2) A new water meter shall be of a positive displacement type.

Design and construction

Material

(3) (a) A water meter shall be made of such material as will effectively preclude inaccurate measurement as a result of any corrosive or other injurious property of the water being measured or because of the conditions to which the meter may be subjected during use.

Leakage

(b) A water meter shall be so constructed that there is no external leakage of water when the meter is subjected to an internal hydraulic pressure of 2 MPa for a period of not less than five minutes.

Strainer

(c) A water meter shall be equipped with a suitable filter or strainer, fitted in the water stream on the inlet side of the meter to prevent foreign particles from entering the meter.

Direction of flow

(d) The direction of flow of water through a new water meter shall be marked clearly and indelibly on the meter by means of an arrow or by means of the word IN" at the inlet.

Test indicator

(e) (i) The counter of a new water meter shall for purposes of testing, be provided with a graduated indicator by means of which the quantity of water measured is indicated continuously; and

(ii) the value of the smallest graduation on the test indicator shall be not more than 1 *l*:

Provided that a separate test indicator need not be provided on a meter on which the value of the smallest graduation on the main indicator is not more than 1 *l*.

Indicator graduations and capacity

(f) (i) The value of the smallest figured graduation on the indicator of a new water meter, excluding the test indicator referred to in paragraph (e) of this subregulation, shall be not more than 0,01 kl.

(ii) The capacity of the counter of a new water meter shall be not less than 9 999,99 kl for a size 3 or a size 5 meter and not less than 99 999,99 kl for a size 7 meter

(iii) The counter of a new water meter shall be denominated in "KILOLITRES", kilolitres" or "kl".

Rate of flow, absorbtion of pressure and starting rate of flow

[The word "absorption" is misspelt in the *Government Gazette*, as reproduced above.]

(4) A water meter shall be so designed and constructed that -

(a) the rate of flow of water through the meter, when the mean difference between the pressure at the inlet and the pressure at the outlet is 100 kPa, is -

(i) for a size 3 meter, not less than 2,9 kl/h;

(ii) for a size 5 meter, not less than 4,8 kl/h; and

(iii) for a size 7 meter, not less than 6,7 kl/h;

(b) the rate of flow of water through the meter, when the mean difference between the pressure at the inlet and the pressure at the outlet is 30 kPa, is -

(i) for a size 3 meter, not less than 1,6 kl/h;

(ii) for a size 5 meter, not less than 2,7 kl/h; and

(iii) for a size 7 meter, not less than 3,8 kl/h;

(c) the rate of flow which will start the meter operating and registering a flow on the indicator is -

(i) for a size 3 or a size 5 meter, not more than 5 *l*/h;

(ii) for a size 7 meter, not more than 10 *l*/h.

Marking

(5) The following shall be legibly and indelibly marked on a new water meter or on a plate permanently attached thereto:

(a) The maker's name or trade mark, type designation and serial number;

(b) the number of the approved model;

(c) the size; and

(d) any other information which may be required by the director.

Method of testing

(6) A water meter shall be tested for accuracy and constancy after thorough flushing of the system, by direct comparison with a certified measure of volume or by other means approved by the director -

(a) at not less than 75 per cent of the designed maximum rate of flow;

(b) at approximately 50 per cent of the designed maximum rate of flow; and

(c) at a rate of flow of approximately, but not more than -

(i) 25 *l*/h for a size 3 meter;

(ii) 30 *l*/h for a size 5 meter; and

(iii) 40 *l*/h for a size 7 meter,

Error permitted

(7) (a) In the case of a new or repaired water meter error shall not exceed -

(i) 2 per cent in excess (under-registration) or in deficiency (over-registration) when the rate of flow is that stipulated in paragraph (a) or (b) of subregulation (6) of this regulation; or

(ii) 3 per cent in excess or 2 per cent in deficiency when the rate of flow is that stipulated in paragraph (c) of subregulation (6).

(b) In the case of water meter in use, the error shall not exceed 5 per cent in excess or 2 per cent in deficiency at any rate of flow stipulated in subregulation (6) of this regulation.

Position of certifying stamp and seals

(8) The certifying stamp shall be placed upon a lead plug provided in an undercut hole in an essential and easily accessible part of the water meter casing or upon the lead seal which shall be provided to prevent unauthorised access to the working parts or unauthorised adjustment of the meter.

Gas meters

Definition

81. (1) The term "gas meter" means a measuring instrument which is designed and constructed for use in a gas supply system to measure and automatically to indicate the volume of combustible gas passed through it in a continuous stream and used by a consumer for domestic purposes.

Type

(2) A new gas meter shall be of a positive displacement type.

Construction

Material and strength

(3) (a) A gas meter shall be made of such material as will effectively preclude inaccurate measurement owing to any corrosive or other injurious property of the gas being measured and shall be sufficiently strong to withstand, without distortion, the maximum pressure at which it is designed to work.

External and internal leakage

(b) A gas meter shall be so constructed that -

(i) there is no external leakage of gas when the meter is subjected to an internal pressure of 1,25 times the maximum pressure at which it is designed to work or of 5 kPa, whichever is the greater, for a period of not less than two minutes; and

(ii) its indicator moves continuously when the meter is subjected to an inlet pressure, equivalent to the maximum pressure at which it is designed to work

or to 1,25 kPa, whichever is the greater, and when gas is passing through the meter at a rate of 0,2 per cent of its maximum rate of flow.

Direction of flow

(c) The direction of flow of gas through a gas meter shall be marked clearly and indelibly on the meter by means of an arrow or by means of the word "IN" at the inlet.

Test indicator

(d) (i) The counter of a new gas meter shall, for the purpose of testing, be provided with a graduated indicator by means of which the quantity of gas measured is continuously indicated and the value represented by the smallest graduation on the test indicator shall be not more than the quantity of gas passed through the meter during one working cycle.

(ii) A separate test indicator need not be provided on a gas meter on which the value of the smallest graduation on the main quantity indicator is not more than the value specified in subparagraph (i) of this paragraph.

Quantity indicator

(e) (i) The value represented by the smallest graduation on the quantity indicator of a gas meter, excluding the test indicator referred to in paragraph (d) of this subregulation, shall be not more than 0,05 of that quantity which will pass through the meter in one hour at the maximum rate of flow:

Provided that this value shall be 1×10^n of 1 m^3, where "n" is a positive or negative whole number or zero.

(ii) On any gas meter provided with a multi-pointer type of quantity indicator, the index pointers shall move in a clockwise direction only for increasing quantities.

Ancillary devices

(f) Any ancillary device, such as a pressure or flow rate controller, recording device, automatic or coin operated shut-off mechanism or the like, shall not be used on or in conjunction with a gas meter, unless any such ancillary device is approved in terms of section 18(2) of the Act.

(g) Where a gas meter has any protruding shaft or other working part for the attachment of an ancillary device and such shaft or part is not in use it shall be enclosed with a sealed cover.

General provisions

Marking

(4) The following information shall be legibly and indelibly marked on a gas meter or on a plate permanently attached thereto -

(a) the maker's name or trade mark, type designation and serial number;

(b) the approved model number;

(c) the maximum rate of flow at which the meter is designed to operate, in cubic metres per hour, which may be expressed as "Q max.....m^3/h";

(d) the capacity of the meter per revolution or working cycle, which may be expressed as "V ..... m^3" or "V.....dm^3"; and

(e) any other information which may be required on approval of the model in terms of section 18(2) of the Act.

Capacity per revolution

(5) The actual capacity of a gas meter per revolution or cycle of operation shall not differ by more than 5 per cent from the marked capacity per revolution.

Testing

Absorbtion of pressure

[The word "absorption" is misspelt in the *Government Gazette*, as reproduced above.]

(6) Subject to the provisions of subregulation (7) of this regulation, any difference between the pressure at the inlet and the mean pressure at the outlet of a gas meter shall not exceed 0,125 kPa when the meter is tested at any prescribed rate of flow and when the pressure at the inlet of the meter is 0,5 kPa:

Provided that in the case of a gas meter fitted with an automatic or coin-operated shut-off mechanism the requirements of this subregulation shall not apply during the automatic shutting-off period.

Pressure oscillation

(7) When a gas meter is tested as described in subregulation (6) of this regulation and there is any oscillation of pressure between the highest and the lowest pressure at the outlet such oscillation shall not exceed 0,075 kPa.

Testing medium

(8) Except where a gas meter is tested in situ or in other special circumstances, air shall be used as the testing medium.

Method of testing

(9) Unless other means or conditions for testing a gas meter have been approved by the director, such a meter shall be tested for accuracy and constancy by passing air through the meter from a certified holder at a pressure of 0,5 kPa.

Prescribed rates of flow

(10) The tests of a gas meter shall be carried out at -

(a) the marked maximum rate of flow of the meter, or, if this rate is greater than the maximum operating rate of the certified holder, at the maximum attainable rate;

(b) one-half of the marked maximum rate of flow of the meter;

(c) 0,6 per cent of the marked maximum rate of flow of the meter; and

(d) any other rate of flow, not less than 0,6 per cent of the marked maximum, which the inspector may consider necessary.

Temperature

(11) The temperature of the testing medium shall not differ by more than 1 °C from that of the surrounding air, the meter being at the same temperature as the surrounding air.

Errors allowed

(12) Any error on a gas meter shall not exceed the amounts shown in the following Table:

TABLE

Rate of flow	For new or repaired meters		For meters in use	
	in excess (under-registration)	in deficiency (over-registration)	in excess (under-registration)	in deficiency (over-registration)
Any prescribed rate of flow	3%	2%	5%	5%

Position of certifying stamp and sealing

(13) The certifying stamp shall be placed upon a lead plug provided in an undercut hole in, or in a cup irremovably fixed to, an essential and easily accessible part of the gas meter, or upon an inset seal, and seals shall be affixed so as to prevent unauthorised access to any part of the interior of the gas meter or any adjusting device.

Vessels or containers used for the scale of liquids

82. (1) Any vessel or container manufactured or supplied for the sale by volume of any liquid shall, subject to any applicable tolerance prescribed for prepacked liquids in Part I of the regulations, be large enough to hold the volume of liquid specified thereon or the volume it is intended to contain or specified on order by the user and over and above such volume the vessel or container shall have such ullage space as may be required or as may have been specified on order.

(2) A vessel or container used for the purpose of determining the quantity of a prepacked liquid sold therein shall be of a nominal volume not exceeding 5 *l*:

Provided that such a vessel or container may only be used for the measuring off of any liquid in the retail trade at the time of sale of such liquid if it has a narrow neck and is presented to the retail dealer by the purchaser and if the denomination of volume thereof is indelibly marked thereon.

(3) The volume of any glass or mug manufactured, supplied or used for the purpose of determining the quantity of beer or beer shandy sold from bulk for consumption on premises licensed for such sales shall be defined by an indelible line or indentation at least 25 mm in length,

distant not less than 10 mm and not more than 35 mm from the brim and when such glass or mug is filled up to the bottom of such line or indentation it shall hold at least the volume which shall be indicated thereon in a position close to such line or indentation in clear and legible figures and letters not less than 5 mm in height,

DATE OF COMMENCEMENT

83. Part II of the regulations promulgated by Government Notice R. 4007 of 31 December 1969, as amended by Government Notices R. 884 of 28 May 1971, R. 2294 of 15 December 1972, R. 496 of 30 March 1973 and R. 1190 of 9 July 1976 is repealed as from the date of publication hereof, when these regulations shall come into force.

ANNEXURE

TABLES OF ALLOWANCES

EXPLANATORY NOTES

Allowances for capacities not tabulated and for measuring instruments of approved models

1. (1) The allowances for massmeters of capacities not specified in Tables I to VIII (inclusive) of this Annexure shall be in proportion to the allowances tabulated in such tables.

(2) The allowances set forth in any specific table shall also apply to any model of measuring instrument if so specified in terms of the approval of the model under section 18(2) of the Act.

Allowances for new, repaired and contract massmeters

2. (1) Except where specific allowances have been prescribed in any regulation of this Part and subject to the provisions of Explanatory Note 4, the allowances set forth in Tables I to VIII (inclusive) of this Annexure shall apply to the following:

(a) New massmeters; or

(b) massmeters certified after repair or maintenance but before having been used for a prescribed purpose; or

(c) massmeters tested by a registered mechanic before issuing a certificate in terms of section 36(5) of the Act or before furnishing a guarantee of correctness and certifiability in terms of section 28(1) or 34(1)(b) of the Act.

(2) In the case of a massmeter specified in paragraph (1) of this Note, the prescribed turning allowance shall, where applicable, displace the beam or steelyard to the full extent of its travel either way from the horizontal position of equilibrium and hold it in its displaced position.

Allowances for massmeters in actual use for a prescribed purpose

3. (1) Except where specific allowances have been prescribed in any regulation of this Part or except as hereinafter provided and, subject to the provisions of Explanatory Notes 4 and 5, the allowances set forth in Tables I to VIII (inclusive) of this Annexure shall be -

(a) increased by one half in the case of -

(i) a massmeter, including a contract instrument when certified after having been used for a prescribed purpose since it was repaired; and

(ii) a contract massmeter when recertified, except in the case where Explanatory Note 2(1)(b) applies; and

(b) doubled in the case of a massmeter other than a contract instrument in actual use for a prescribed purpose when recertified.

(2) Subject to the provisions of paragraph (3) of this Note, only the allowances prescribed in Table V shall apply to Post Office letter beam scales whether new, repaired or contract instruments or instruments in actual use.

(3) In the case of massmeters specified in paragraph (1) of this Note and of instruments specified in paragraph (2) of this Note when in actual use, the appropriate turning allowance shall, where it applies, displace the beam or steelyard to the full extent of its travel either way from the horizontal position of equilibrium.

Errors allowed at loads up to capacity

4. Except as otherwise provided in any regulation of this Part, all massmeters may indicate or be in error, at all loads except zero, to the extent shown below:

(1) Subject to the provisions of Explanatory Note 3, all massmeters except the instruments specified in (2) and (3) below:

Load applied	Error allowed
Up to 0,5 of capacity	0,5 of tabulated or applicable turning allowance
Above 0,5 of capacity and up to capacity.....	Full tabulated or applicable turning allowance

(2) Subject to the provisions of Explanatory Note 3, balances and beam scales:

Load applied	Error allowed
Up to capacity	0,5 of tabulated or applicable turning allowance

(3) Self-indicating and semi-self-indicating scales, including scales with denominated difference charts:

(a) New massmeters; or

(b) massmeters certified after repair or maintenance, but before having been used for a prescribed purpose; or

(c) massmeters tested by a registered mechanic before issuing a certificate in terms of section 36(5) of the Act or before furnishing a guarantee of correctness and certifiability in terms of section 28(1) or 34(1)(b) of the Act:

(i) Mass meters graduated in accordance with Table A of regulation 44(4) of this Part:

Load applied	Error allowed
Up to 500 times the value of the smallest graduation	0,5 of the value of the smallest graduation
Above 500 times and up to 2 000 times the value of the smallest graduation	The value of the smallest graduation
Above 2 000 times the value of the smallest graduation	1,5 of the value of the smallest graduation

(ii) Mass meters graduated in accordance with Table B of regulation 44(4) of this Part:

Load applied	Error allowed
Up to 5 000 times the value of the smallest graduation	0,5 of the value of the smallest graduation
Above 5 000 times and up to 20 000 times the value of the smallest graduation	The value of the smallest graduation
Above 20 000 times the value of the smallest graduation	1,5 of the value of the smallest graduation

Provided that the appropriate allowance specified in Tables I to VIII of this Annexure shall be applied in the case of a massmeter with a difference chart having graduations of greater value than the maximum specified in respect of a semi-self-indicating scale of similar capacity and provided further that the allowances in (3)(i) and (ii) of this Note shall be -

(a) increased by 0,5 in the case of -

(i) a massmeter when certified after having been used for a prescribed purpose since it was repaired; and

(ii) a contract massmeter when recertified, except in the case where paragraph (3)(b) of this Note applies;

(b) and doubled in the case of a massmeter, other than a contract instrument, in actual use for a prescribed purpose when recertified.

Allowance for massmeters in actual use for certain special purposes

5. In the case of massmeters which are used solely for the determination of the mass of livestock, coal, coke, firewood, salt or salted hides, the applicable permissible error specified in Explanatory Note 4 shall be increased by an additional half.

TABLE I

Balances and beam scales, Class 1

Capacity of instrument	*Turning allowance*
10 g	3 mg
20 g	4 mg
50 g	5 mg

100 g	6 mg
200 g	10 mg
500 g	20 mg
1 kg	30 mg
2 kg	60 mg
5 kg	150 mg
10 kg	200 mg
20 kg	350 mg

TABLE II

Balances and beam scales, Class 2

Capacity of instrument	*Turning allowance*
10 g	8 mg
20 g	14 mg
50 g	25 mg
100 g	40 mg
200 g	60 mg
500 g	125 mg
1 kg	200 mg
2 kg	300 mg
5 kg	500 mg
10 kg	750 mg
20 kg	1 g
50 kg	1,25 g

TABLE III

Beam scales, Class 3

Capacity of instrument	*Turning allowance*
500 g	500 mg
1 kg	600 mg
2 kg	800 mg
5 kg	*l*,5 g
10 kg	2,5 g
20 kg	5 g
50 kg	10 g

TABLE IV

Beam scales, Class 4

Capacity of instrument	*Turning allowance*
1 kg	2 g
2 kg	3,5 g
5 kg	6 g
10 kg	9 g
20 kg	14 g
50 kg	20 g

TABLE V

Post Office letter beam scales

Capacity of instrument	Turning allowance	
	Box-end type	Continuous knife-edge type
20 g	120 mg	60 mg
50 g	180 mg	90 mg
100 g	240 mg	120 mg
200 g	300 mg	150 mg

TABLE VI

Counter scales

Capacity of instrument	*Turning allowance*
500 g	2,5 g
1 kg	4 g
2 kg	6 g
3 kg	9 g
4 kg	11 g
5 kg	13 g
6 kg	15 g
7 kg	16 g
10 kg	20 g
15 kg	28 g
20 kg	33 g
30 kg	44 g
40 kg	53 g
50 kg	62 g

TABLE VII

Dead mass scales, steelyards and wall scales

Capacity of instrument	*Turning allowance*
50 kg	62 g
60 kg	70 g
70 kg	78 g
80 kg	86 g
90 kg	93 g
100 kg	100 g
150 kg	130 g
200 kg	160 g
250 kg	190 g
300 kg	220 g
400 kg	270 g
500 kg	310 g
600 kg	350 g

TABLE VIII

Compound lever scales including counter-platform or bench scales, platform scales, hopper or tank scales, overhead track scales, vehicle scales and crane scales

Capacity of instrument	*Turning allowance*
50 kg	62 g
60 kg	70 g
70 kg	78 g
80 kg	86 g
90 kg	93 g
100 kg	100 g
150 kg	130 g
200 kg	160 g
250 kg	190 g
300 kg	220 g
400 kg	270 g
500 kg	310 g
600 kg	350 g
700 kg	390 g
800 kg	430 g
900 kg	470 g
1 t	500 g
l,5 t	750 g
2 t	1 kg
2,5 t	1,2 kg
3 t	1,5 kg
4 t	2 kg
5 t	2,5 kg
6 t	3 kg
7 t	3,5 kg
8 t	4 kg
9 t	4,5 kg
10 t	5 kg
20 t	8 kg
30 t	11 kg
40 t	13 kg
50 t	15 kg
60 t	17 kg
70 t	19 kg
75 t	20 kg
80 t	21 kg
90t	23 kg
100 t	25 kg
200 t	40 kg

TABLE IX

Masspieces

(a) Metric masspieces

(i) For coarse measurement

Denomination	*Allowance of error in excess only*
Over 1 000 kg	50 g per 1 000 kg
1 000 kg	50 g
500 kg	30 g
200 kg	15 g

100 kg	10 g
50 kg	6g
20 kg	3 g
10 kg	2 g
5 kg	1 g
2 kg	600 mg
1 kg	400 mg
500 g	250 mg
200 g	150 mg
100 g	100 mg
50 g	75 mg
20 g	50 mg

Denomination	*Allowance of error in excess or in deficiency*
10 g	35 mg
5 g	25 mg
2 g	15 mg
1 g	10 mg

(ii) For fine measurement (pharmaceutical dispensing, chemicals precious metals and comparable goods)

Denomination	*Allowance of error in excess only*
20 kg	1 g
10kg	500 mg
5kg	200 mg
2kg	120 mg
1 kg	80 mg
500 g	50 mg
200 g	30 mg
100 g	25 mg
50g	15 mg
18 g & 20 g	10 mg

Denomination	*Allowance of error in excess or in deficiency*
9 g & 10 g	7 mg
5 g	5 mg
2g	3 mg
1 g	2 mg
500 mg	2 mg
200 mg	1 mg
100 mg	0,6 mg
50 mg	0,5 mg
20 mg	0,3 mg
10 mg	0,2 mg
5 mg	0,2 mg
2mg	0,2 mg
1 mg	0,1 mg

(b) Metric carat masspieces

Denomination	*Allowance of error in excess only*
10 000 CM	100 mg
5 000 CM	50 mg
2 000 CM	20 mg
1 000 CM	15 mg
500 CM	10 mg
200 CM	7 mg
100 CM	5 mg

Denomination	*Allowance of error in excess or in deficiency*
50 CM	4 mg
20 CM	2 mg
10 CM	2 mg
5 CM	1 mg
2 CM	1 mg
1 CM	0,5 mg
0,5 CM	0,5 mg
0,2 CM.	0,2 mg
0,1 CM	0,2 mg
0,05 CM	0,2 mg
0,02 CM	0,2 mg
0,01 CM	0,2 mg
0,005 CM	0,1 mg

TABLE X

Measures of length

(a) Metal measures

Length tested	Allowance of error	
	Long or in excess	Short or in deficiency
	mm	mm
200 m	37,5	37,5
100 m	25	25
50 m	15	15
30 m	10	10
20 m	7,5	7,5
10 m	5	5
5 m	3	3
3 m	2	2
2m	1,5	1,5
1,5 m	1,25	1
1 m	1	0,5
500 mm	0,6	0,3
300 mm	0,4	0,2
200 mm	0,3	0,15
100 mm	0,2	0,1
10 mm	0,1	0,05

(b) Measures of length other than metal - Double the allowances in (a) above.

TABLE XI

Measures of volume other than graduated glass measures for pharmaceutical dispensing and comparable measurement.

(a) Conical metal measures

Denomination	*Allowance of error in excess only*
100 *l* and over	0,1%
50 *l*	65 ml
25 *l*	60 ml
20 *l*	50 ml
10 *l*	40 ml
5 *l*	25 ml
2 *l*	12 ml
1 *l*	8 ml
750 ml	6 ml
500 ml	5 ml
375 ml	4 ml
200 ml	2,5 ml
100 ml	1,5 ml
50 ml	1 ml
25 ml	0,6 ml
20 ml	0,5 ml
10 ml	0,25 ml
5ml	0,15 ml
2ml	0,1 ml
1ml	0,05 ml

(b) Measures of volume other than conical metal measures, except graduated glass measures for pharmaceutical dispensing and comparable measurement:

Double the allowances in (a) above, according to denomination of measure or value of graduation tested.

TABLE XII

Graduated glass measures for pharmaceutical dispensing and comparable measurement.

(a) Inverted conical or beaker measures:

Approximate internal diameter of measure at graduation tested	*Allowance of error in excess or in deficiency*
150 mm	9 ml
140 mm	8 ml
130 mm	7 ml
120 mm	6 ml
110 mm	5 ml
100 mm	4 ml
90 mm	3 ml
80 mm	2,5 ml
70 mm	2 ml
60 mm	1,5 ml

50 mm	1 ml
40 mm	0,65 ml
30 mm	0,35 ml
20 mm	0,15 ml
10 mm	0,05 ml

(b) Measuring flasks:

One-half of the allowances in (a) above, according to the internal diameter of neck.

(c) Cylindrical measures:

Value of graduation tested or value of quantity between graduations tested	*Allowance of error in excess or in deficiency*
Over 1 *l*	5 ml per *l*
Over 500 ml and up to 1 000 ml	5 ml
Over 200 ml and up to 500 ml	3 ml
Over 100 ml and up to 200 ml	1,5 ml
Over 50 ml and up to 100 ml	1 ml
Over 20 ml and up to 50 ml	0,6 ml
Over 10 ml and up to 20 ml	0,3 ml
Over 5 ml and up to 10 ml	0,2 ml
Over 2 ml and up to 5 ml	0,15 ml
Over 1 ml and up to 2 ml	0,1 ml
1 ml	0,05 ml
0,5 ml	0,03 ml
0,2 ml	0,02 ml

(d) Burettes and pipettes:

One-half of the allowances in (c) above.

PART III

MEASURING INSTRUMENTS, VESSELS OR CONTAINERS EXEMPTED FROM CERTIFICATION OR RE-CERTIFICATION UNDER SECTION 23(1) OF THE ACT

Interpretation

1. In this Part of the regulations "the Act" shall mean the Trade Metrology Act, 1973 (Act 77 of 1973), and unless the context otherwise indicates, any expression to which a meaning has been assigned in that Act shall have the meaning thus assigned to it. Further, unless contrary to the context -

"correct", with reference to a quantity of goods in prepacked form, means correct within the limits of error by measure of mass, volume, length, area, cubic content or by number specified in Part I of the regulations.

Automatic measuring instruments

2. (1) Subject to the provisions of regulation 3 of this Part, any measuring instrument which is designed in such a manner that, after having been put into operation, it will determine and discharge by further automatic action a single predetermined quantity or repeated like

predetermined quantities of goods for sale by mass, length, area or volume or by number in prepacked form, including an automatic check scale used in conjunction therewith, may be used without the user or supplier being compelled to comply with the provisions of section 23(1) of the Act.

Conditions, restrictions and requirements

(2) In the case of a measuring instrument falling within the meaning of subregulation (1) -

(a) both the supplier and the user shall satisfy themselves that such instrument is suitable for the purpose for which it is used or intended to be used and is capable of correct determination of quantity;

(b) the owner or the user shall maintain and operate such measuring instrument at all times in such a manner that it determines and discharges the correct quantity of goods to be sold in units in prepacked form subject to the provisions of regulation 5 (1)(a), (b) and (c) or 5(7) of Part I of the regulations, whichever is applicable;

(c) the user of such measuring instrument shall take such steps as will enable him adequately to detect any incorrect quantities of goods which may have been determined by the instrument.

(3) If the director is satisfied that any measuring instrument which falls within the meaning of subregulation (1) and which is being used is either not suitable for or capable of determining and discharging correct quantities or is not being so maintained or operated that it determines and discharges correct quantities of goods for sale in prepacked form, he may declare such measuring instrument as unfit for further use by informing the user thereof in writing to that effect, whereupon the user shall forthwith either dismantle and remove the instrument in question from his packing premises or immediately take such other steps as will satisfy the director in connection with the continued use of such instrument:

Provided that this provision shall not apply to an instrument used by a wholesale packer for the purpose of predetermining the quantity of goods measured thereby to an approximate mass, length, area or volume which is thereafter adjusted for correctness by means of a certified measuring instrument by an operator.

Automatic measuring instruments not exempted under regulation 2

3. Notwithstanding the provisions of regulation 2 of this Part, the following automatic measuring instruments shall be subject to the requirements of section 23(1) of the Act in so far as they apply irrespective of whether those instruments are of a design which complies with the description set out in regulation 2(1):

(a) An automatic measuring instrument used by or supplied to a retail dealer for the purpose of determining the mass, volume, length or area of a quantity of goods taken from bulk and measured at the time of sale in the presence of the purchaser or his agent;

(b) an automatic mass measuring instrument used or supplied for the purpose of determining a quantity of goods sold in prepacked form and having a declared mass of more than 100 kg;

(c) an automatic mass or volume measuring instrument used or supplied for the purpose of determining the quantity of a liquid sold in prepacked form and having a declared volume of more than 250 *l*;

(d) an automatic vending machine used or supplied for use which itself determines the quantity of goods sold by measure of mass, length, area or volume, unless such quantity of goods is exempted by any regulation of Part I of the regulations from sale by any such physical quantity.

General exemptions

4. Subject to any condition prescribed in this regulation, the following measuring instruments may be used for any appropriate prescribed purpose without the user or supplier i being compelled to comply with the provisions of section 23(1) of the Act:

(a) Any measuring instrument, vessel or container used for determining the quantity of -

(i) ingredients in a mixture of concrete;

(ii) crushed stone by volume, including when coated with cement, tar or bitumen;

(iii) ready-mixed concrete, ready-mixed cement mortar, ballast or building sand;

(b) any storage tank gauged or calibrated for the purpose of determining excise duty by measurement and calculation or by direct reading of quantity;

(c) any massmeter supplied for hire or reward for the sole purpose of determining the mass of babies;

(d) any massmeter used for the grading of eggs in the shell sold or purchased by number and according to grade;

(e) any meter, including any water meter, used in a water supply system -

(i) for measuring the volume of water other than water used for domestic purposes; or

(ii) having a nominal inlet and outlet bore in excess of 25 mm, for measuring the volume of water, whether or not for domestic purposes;

(f) any meter used for measuring the volume of gas other than a meter for measuring combustible gas supplied to a domestic user who pays according to a tariff based on money value per measured unit of Volume for the gas Consumed by him;

(g) any measuring instrument used for the grading of grain sold or purchased according to grade and mass;

(h) any massmeter used on a farm by a farmer for the prepacking of products for which regulations have been promulgated in terms of section 89 of the Marketing Act, 1968 (Act 59 of 1968);

(i) any measuring instrument used in land and similar surveying;

(j) any taximeter;

(k) any measuring instrument calibrated or indicating in any measuring unit other than a unit of mass, length, area or volume;

(1) any measuring instrument for counting by number except an instrument for counting by a gravimetric process;

(m) any tank for use by a milk producer and provided with a graduated dipstick.

[In terms of section 21(2) of the Act any certified measure of length made of a material specified in regulation 62(3) of Part II of the regulations and any certified measure of volume made of clear glass need not be recertified, unless the inspector has reasonable grounds for believing that such measure of length or of volume has altered materially since it was certified or unless the certifying stamp has been defaced or has become illegible.]

[bracketed text in *Government Gazette*]

DATE OF COMMENCEMENT

5. Part III of the regulations promulgated by Government Notice R.4007 of 31 December 1969, as amended by Government Notice R.2294 of 15 December 1972 is repealed as from the date of publication hereof, when these regulations shall come into force.

PART IV

REGULATIONS PERTAINING TO:

1. REGISTERED MECHANICS

2. CONTRACT INSTRUMENTS

Interpretation

1. In this Part of the regulations "the Act" shall mean the Trade Metrology Act, 1973 (Act 77 of 1973), and unless the context otherwise indicates, any expression to which a meaning has been assigned in that Act, shall have the meaning thus assigned to it. Further, unless contrary to the context -

(i) "certifying stamp" means a die impression which contains the characters "RSA" and a figure or a group of figures which signify the year of certification, or alternatively contains the characters "RSA" and two separate figures or two groups of separate figures which respectively signify the identification number of an inspector and the year of certification and which is stamped on a measuring instrument in the place described in regulation 23 of Part II of the regulations;

(ii) "deface" in relation to a certifying stamp, means to mark in accordance with regulation 24 of Part II of the regulations;

(iii) "prescribed purpose" means a purpose specified in regulation 2 of Part II of the regulations.

REGISTRATION OF MECHANICS

Application for registration

2. (1) Every person who applies to the director to be registered as a mechanic in terms of section 35(1) of the Act in respect of a particular measuring instrument or any measuring instrument of a particular class or make or all measuring instruments shall -

(a) make application for such registration by submitting in triplicate a completed form prescribed in Part I of Annexure I to this Part to -

The Director of Trade Metrology, P.O. Box 431, Pretoria, 0001;

(b) supply to the director upon request such additional information as may be required by him;

(c) subject to any exemption provided in this Part of the regulations, present himself at the time and place to be indicated to him by the director, in order to undergo an oral and, if deemed necessary, also a practical test for the purpose of testing his competency and his knowledge of those portions of the Act or the regulations pertaining to the make or class of measuring instrument or to a particular measuring instrument or all measuring instruments in respect of which application has been made for registration;

(d) subject to any exemption provided in this Part of the regulations, pay a fee of ten rand (R10) to the examining officer immediately before undergoing the test.

(2) The provisions of subregulations (1)(c) and (d) of this regulation shall not apply to any person in the employ of a local authority who repairs or maintains water or gas meters:

Provided that such person submits to the director together with his application for registration a certificate issued by his employer and such certificate confirms that the competency of the applicant and his knowledge of those portions of the Act or the regulations pertaining to the make or class of water or gas meter in respect of which application for registration is being made, is adequate to qualify him for registration, unless, not with-standing this proviso, the director deems, it necessary that the provisions of subregulations (1)(c) and (d) skill be complied with.

(3) Every person who has applied to the director to be registered under section 35(1) of the Act as a mechanic in respect of any measuring instrument may, after the director has notified him of the name and address of the examining officer appointed to undertake the test, enquire from such officer on which portions of the Act or the regulations he will be tested.

DUTIES OF A REGISTERED MECHANIC

Identification stamps and sealing pliers

3. Any registered mechanic shall -

(a) furnish himself at his own expense or be furnished by his employer, as the case may be, with such identification stamps and sealing pliers as are approved by the director and supply to the director at least two die-impressed lead seals of each of the stamps or sealing pliers approved for his use before using such stamps or sealing pliers on any measuring instrument in respect of which he has been registered;

(b) deliver his certificate of registration and his identification stamp or sealing pliers to the director -

(i) immediately after he has been notified in writing by the director that his name has been removed from the register referred to in section 35(1) of the Act and that the certificate issued to him in terms of section 35(2) of the Act has been cancelled in terms of section 35(3) of the Act; or

(ii) immediately after he has permanently discontinued for any reason whatsoever to undertake the maintenance or repair of any measuring instrument 'which he was authorised to do by virtue of a certificate issued to him in terms of section 35(2) of the Act;

(c) make a report to the director about the loss through any circumstances whatsoever of any identification stamp or sealing pliers approved for his use immediately after such loss has come to his notice, whereupon he shall act in such a manner in regard to the use of identification stamps or sealing pliers as the director may direct;

(d) surrender to the director of his own accord any identification stamp or sealing pliers found by him subsequent to having made a report in terms of the preceding paragraph (c), and after the director has granted approval for the acquisition by him or the issuing to him of other identification stamps or sealing pliers;

(e) while remaining registered, notify the director of any change of business or employer's address within 30 days after such change of address.

Duties concerning instruments

4. (1) A registered mechanic who repairs or has repaired a contract measuring instrument shall -

(a) obliterate a certifying stamp which has been defaced under section 25 of the Act, or the defacing mark before issuing a certificate referred to in section 36(5) of the Act;

(b) notify the inspector in charge of the regional office of metrology in that area which the director has determined to be a region and within which area the contract measuring instrument in question was or is to be used for a prescribed purpose or kept for such use, of any completed repairs to a contract measuring instrument which before repair bore no certifying stamp or which bore a certifying stamp which had been defaced under section 25 of the Act, by furnishing such inspector immediately upon the issuing of a certificate as described in Annexure III of this Part and as required under section 36(5) of the Act, with a true copy thereof;

(c) before issuing a certificate referred to in section 36(5) of the Act in respect of a contract measuring instrument which has been maintained or repaired by him -

(i) affix lead seals or lead or sealing wax plugs bearing the die impression of his authorised identification sealing pliers or stamp, as the case may require, to such instrument in such a manner as will prevent any unauthorised person access to any vital adjusting part which is required to be sealed; or

(ii) affix at least one lead seal bearing the die impression of his authorised identification stamp or sealing pliers to a suitable part of every such instrument on which no special provision for sealing exists;

(d) obliterate an undefaced certifying stamp on that part of a contract measuring instrument which contained the certifying stamp if such part was replaced during maintenance or repair and thereafter act in accordance with the provisions of paragraph (1)(b) of this regulation;

(e) obliterate the identification marks on all die impressed seals found on any contract measuring instrument before undertaking any maintenance or repair thereon, whether such marks are official or those of another registered mechanic;

(f) obtain for his own use and use any equipment, masspieces or measures necessary for the purpose of carrying out the proper and necessary testing of a contract measuring instrument in accordance with the requirements of the regulations and carry out such tests after maintenance or repair;

(g) not use for the testing of a contract measuring instrument before or after maintenance or repair any masspiece or measure which has not been certified and which does not have a value within the limits of error specified for an inspection standard as prescribed in Part V of these regulations;

(h) not use his authorised identification stamp or sealing pliers for any purpose or in a manner other than that for which it has been authorised or convey the impression to any person that he has used or that he may use his authorised identification stamp or sealing pliers in any capacity other than that of a registered mechanic.

(2) The provisions of paragraphs (1)(c)(i) and (1)(e) to (h) of this regulation shall also apply in the case of a measuring instrument which is not a contract measuring instrument when being repaired and certified in terms of section 34(1) of the Act.

Concessions

5. (1) Any person whose name has been removed from the register of registered mechanics kept by the director, for any other cause than that he has been found guilty of a contravention of or of failure to comply with any provision of the Act or of the regulations which it was his duty to have complied with in his capacity as a registered mechanic may, after applying for re-registration within a reasonable period of the cancellation of his previous registration, be exempted from complying with the provisions of regulation 2(1)(c) and (d) of this Part if the director so decides.

(2) The director may, upon application by a registered mechanic, extend a certificate issued under section 35(2) of the Act by adding other measuring instruments not previously specified therein without applying the provisions of regulation 2(1)(c) and (d) of this Part.

Disposal of identification stamps or sealing pliers surrendered to the director

6. (1) Where the owner of an identification stamp or sealing pliers which has been surrendered to the director by a registered mechanic in accordance with the provisions of regulation 3(b) or (d) of this Part, is an employer of registered mechanics, the director may return such stamp or sealing pliers to such owner for re-issue to another registered mechanic if an application is made for such re-issue or the director may return such stamp or sealing pliers to the

owner thereof after any identification impression thereon has either been removed therefrom or effectively obliterated, as circumstances may demand. (2) Where any identification stamp or sealing pliers which has been surrendered to the director in accordance with the provisions of regulation 3(b) or (d) of this Part by a registered mechanic, is the property of such mechanic, the director shall return it to such mechanic only after he has been newly registered or after any identification impression thereon has either been removed therefrom or effectively obliterated, as circumstances demand.

CONTRACT INSTRUMENTS

Certificates issued under section 36(1)(a) of the Act

7. (1) Any person who applies to the director for the issue to him of a certificate in accordance with section 36(i)(a) of the Act in respect of any contract measuring instrument used for a prescribed purpose by such person and which is maintained or repaired by a registered mechanic employed by such person, shall -

(a) make application for such certificate by submitting in triplicate a completed form as prescribed in Part I of Annexure II to this Part to -

The Director of Trade Metrology, P.O. Box 431, Pretoria, 0001;

(b) supply to the director upon request such additional information as may be requested by him.

(2) Any such person to whom the issue of a certificate has been refused or to whom a restricted certificate has been issued shall have complied with any requirement laid down by the director which could not previously be met and which was the cause of the refusal of a certificate or of the issue of a restricted certificate before the director may, on a new application by such person, issue a certificate or remove restriction, as the case may be.

[The word "a" appears to have been omitted before the word "restriction" in the closing phrase above.]

Duties of a person to whom a certificate has been issued Under section 36(1)(a) of the Act

8. A person to whom a certificate has been issued under section 36(1)(a) of the Act shall -

(a) in the case of a person other than a local authority, notify the inspector designated in the certificate, in writing, within 30 days after the issue of such certificate or after a change in the circumstances affecting its issue of the following particulars relating to every contract measuring instrument in respect of which the certificate has been issued:

(i) The make, class and measuring capacity;

(ii) the place where it is used for a prescribed purpose;

(iii) any change in the particulars which have been furnished under subparagraph (i) or (ii) above;

(b) in the case of a local authority, notify the inspector designated in the certificate, in writing, within 30 days after the issue of such certificate, and thereafter when requested by the director, of the number of gas or water meters in its use which are not exempted in terms of regulation 4(e) and (f) of Part III of the regulations;

(c) supply the information specified in paragraph (a) of this regulation in such form or manner as may be indicated to him by the inspector designated in the certificate;

(d) without undue delay notify the director, in writing, of the name of each registered mechanic employed by him since the issue of the certificate and of the name of each registered mechanic who leaves his employment;

(e) supply the required number of forms set out in Annexure III to this Part to any registered mechanic employed by him;

(f) make available to a registered mechanic employed by him upon the request of such mechanic such equipment and testing facilities as will enable the mechanic properly to maintain, repair and test the contract measuring instruments in question; and

(g) make any contract measuring instrument for the maintenance and repair of which a registered mechanic in his employ is responsible, available to such mechanic when such mechanic considers it necessary and withdraw such instrument from use for a prescribed purpose while it is then being maintained, repaired or tested.

Certificates issued under section 36(2)(a) of the Act

9. A person who applies to the director for the issue to him of a certificate under section 36(2)(a) of the Act in respect of any contract measuring instrument which is being maintained and to which all repairs are being done by a registered mechanic in the employ of such person, or by such person in the case where he himself is a registered mechanic, shall supply to the director such information as may be requested by him.

Duties of contractors to whom a certificate has been issued under section 36(2)(a) of the Act

10. A contractor to whom a certificate has been issued under section 36(2)(a) of the Act shall -

(a) notify the inspector in control of the regional office of metrology in that area which the director has determined to be a region and within which area a contract measuring instrument, in respect of which such a contractor has a written agreement for maintenance or repair, is being used for a prescribed purpose or is being kept for such use, of the following particulars relating to each such instrument, in writing, within 30 days of the date of such an agreement or of the date of change in the circumstances affecting the issue of the certificate:

(i) The name and address of the owner;

(ii) the place where each instrument included in the written agreement is being used for a prescribed purpose;

(iii) the make, class and measuring capacity;

(iv) any change in the particulars which have been furnished under subparagraph (i), (ii) or (iii) above;

(b) supply the information specified in paragraph (a) of this regulation in such form or manner as may be indicated to him by the inspector concerned;

(c) without undue delay notify the director, in writing, of the name of each registered mechanic employed by him for the purpose of undertaking any maintenance or repair of any contract measuring instrument and of the name of each registered mechanic who ceases to be employed for such purpose or leaves his employment;

(d) supply the required number of forms set out in Annexure III to this Part to any registered mechanic employed by him or, in the case where he, after registration under section 36(2)(a) of the Act, carries out the maintenance or repair himself, furnish himself with the required number of such forms;

(e) make available to a registered mechanic employed by him upon the request of such mechanic such equipment and testing facilities as will enable the mechanic properly to maintain, repair and test the contract measuring instrument in question or in the case where he after registration under sections 35(1) and 36(2)(a) of the Act carries out the maintenance, repair or testing himself, furnish himself with such equipment and testing facilities as will enable him properly to maintain, repair and test the contract measuring instrument in question.

Certificates issued under section 36(3)(a) of the Act

11. Any person who applies to the director for the issue to him of a certificate in accordance with section 36(3)(a) of the Act in respect of a contract measuring instrument which is being maintained and to which all repairs are being done by a registered mechanic and which is used for a prescribed purpose by a person other than the applicant, shall supply to the director such information as may be requested by him.

Duties of a person to whom a certificate has been issued under section 36(3)(a) of the Act

12. A person to whom a certificate has been issued under section 36(3)(a) of the Act shall -

(a) notify the inspector in control of the regional office of metrology in that area which the director has determined to be a region, and within which area a contract measuring instrument supplied by such person is being used for a prescribed purpose of the following particulars relating to each such instrument, in writing, within 30 days of the date of making such instrument available to a user or of the date of change in the circumstances affecting the issue of the certificate:

(i) The name and address of the user;

(ii) the place where each instrument is being used for a prescribed purpose;

(iii) the make, class and measuring capacity;

(iv) any change in the particulars which have been furnished under paragraph (i), (ii) or (iii) above;

(b) supply the information specified in paragraph (a) of this regulation in such form or manner as may be indicated to him by the inspector concerned;

(c) without undue delay notify the director, in writing, or cause the director to be so notified, of the name of each registered mechanic employed or appointed by him for the purpose of undertaking any maintenance or repair of any contract measuring instrument and of the name of each registered mechanic who leaves his employment or who ceases to be employed or appointed for such purpose;

(d) supply the required number of forms set out in Annexure III to this Part to any registered mechanic employed by him or, in the case of a registered mechanic appointed by him, arrange for the supply of the required number of such forms for his use or, in the case where he after registration under sections 35(1) and 36(3)(a) of the Act carries out maintenance or repair himself, furnish himself with the required number of forms;

(e) make available to a registered mechanic employed by him upon the request of such mechanic such equipment and testing facilities as will enable the mechanic properly to maintain, repair and test the contract measuring instrument in question or, in the case of a registered mechanic appointed by him, arrange and ensure that such equipment and testing facilities are made available to such mechanic upon his request as will enable him properly to maintain, repair and test the contract measuring instrument in question or, in the case where he after registration under sections 35(1) and 36(3)(a) of the Act carries out the maintenance, repair or testing himself, furnish himself with such equipment and testing facilities as will enable him properly to maintain, repair and test any such instrument in question.

Duties of a person who uses a contract measuring instrument

13. Any person who uses for a prescribed purpose any contract measuring instrument falling within the meaning of section 36(2) and (3) of the Act, shall -

(a) without undue delay, make such instrument available upon request to a registered mechanic responsible for the maintenance or repair thereof for the purpose that such mechanic may test, maintain or repair the instrument in question;

(b) withdraw such instrument from use for any prescribed purpose until the registered mechanic who has undertaken any maintenance, repair or testing thereof has furnished such person or a responsible person in his employ with a certificate referred to in section 36(5) of the Act;

(c) permit the registered mechanic to use any available facilities on the premises which he may find necessary to use or permit the registered mechanic to carry out such other reasonable act on the premises as is required to be carried out by the mechanic in connection with the proper maintenance, repair or testing of the contract measuring instrument in question;

(d) refrain from hindering or obstructing a registered mechanic in the exercise of his work on or responsibilities in connection with the proper maintenance, repair and testing of a contract measuring instrument.

DATE OF COMMENCEMENT

14. Part IV of the regulations promulgated by Government Notice R. 4007 of 31 December 1969 is repealed as from the date of publication hereof, when these regulations shall come into force.

ANNEXURE I

APPLICATION FOR THE REGISTRATION OF A MECHANIC IN TERMS OF SECTION 35(1) OF ACT 77 OF 1973

(THIS FORM MUST BE RENDERED IN TRIPLICATE)

PART I

A. Personal particulars of applicant:

1. Surname .....

2. Identity number .....

3. Forenames .....

4. Residential address .....
.....

5. Business address .....
.....

B. Particulars of measuring instruments in respect of which application is made:
.....
.....

C. Particulars of the applicant's training and/or qualifications:
.....
.....
.....

D. Employment particulars of the applicant:

(The applicant must complete only the paragraph which applies to his particular case.)

1. Where the applicant is employed by the user of the instrument referred to in section 36(1)(a) of the Act:

   (a) Name and address of employer .....
   .....

   (b) Address of the place where the applicant will act as a registered mechanic ....
   .....
   .....

2. Where the applicant is employed by a maintenance or repair contractor designated in section 36(2)(a) of the Act:

   (a) Name and address of employer .....
   .....

(b) Address of the place where the applicant will act as a registered mechanic ....
.....
.....
.....

3. Where the applicant is himself a maintenance or repair contractor designated in section 36(2)(a) of the Act:

The area which is intended to be covered in respect of written agreements for maintenance or repair
.....
.....

4. Where the applicant is employed or appointed by the owner or is the owner of instruments referred to in section 36(3)(a) of the Act:

(a) Name and address of employer .....
.....

(b) The area which will be covered in respect of maintenance or repair of instruments on loan or hire.....

E. Particulars on any previous registrations of the applicant:

(The applicant must mention the registration certificate numbers in question and indicate, opposite each number, the employment particulars which applied to it - see, e.g., under "D" above.)
.....
.....
.....

I, the undersigned, do hereby certify that the abovementioned particulars are to the best of my knowledge true and correct.

Date ....
Signature of applicant

PART II
(For official use only)

CERTIFICATE OF EXEMPTION NO .....

[Issued in terms of section 35(2) of Act 77 of 1973]

I, the undersigned, do hereby certify that the abovementioned applicant has been registered as a mechanic in respect of the following measuring instruments -

.....
.....

Date stamp .....
Director of Trade Metrology

ANNEXURE II

APPLICATION FOR EXEMPTION UNDER SECTION 36(1)(a)
OF ACT 77 OF 1973
(This form must be rendered in triplicate)

PART I

1. Name and business address of applicant .....
.....
2. Names of the registered mechanics employed .....
.....
3. Type(s) of instrument(s) in respect of which application is made as well as the address(es) where such instrument(s) is/are being used for a prescribed purpose.....
.....
.....

Date ....
Signature of applicant

PART II
(For official use only)

CERTIFICATE OF EXEMPTION NO .....

[Issued under section 36(1)(a) of Act 77 of 1973]

I, the undersigned, certify that the applicant and the registered mechanic/s named above, are hereby authorised to act in accordance with the provisions of section 36(i)(a) of Act 77 of 1973, as amended, in so far as the provision of Part IV of the regulations under that Act permit, and subject to any provisions of those regulations.

INSPECTOR TO BE NOTIFIED

Date stamp .....
Director of Trade Metrology

ANNEXURE III

CERTIFICATE

Issued under section 36(5) of Act 77 of 1973 to
.....
I, the undersigned, do hereby certify that the measuring instrument(s) specified below has/have been repaired by me on the date shown below and that the instrument(s) is/are correct and certifiable.

Date ....
Registered mechanic

Identification of sealing pliers .....

Name and address of registered mechanic/employer .....
.....

Particulars -
.....
.....
.....

PART V

VERIFICATION OF REGIONAL AND INSPECTION STANDARDS AND INSTRUMENTS USED WITH STANDARDS

1. (1) The following limits of error are permissible in massmeters which are used with standards when such massmeters are tested in accordance with the manner of testing as prescribed by any applicable regulation in Part II of the regulations:

(a) Beam scales -

Capacity	*Limits of error*
50 kg	1,5 g
20 kg	900 mg
10 kg	500 mg
5kg	300 mg
2kg	200 mg
1kg	100 mg
500 g	50 mg
200 g	35 mg
100 g	20 mg
50 g	10 mg
20 g and under	5 mg

(b) Precision balances -

one-fifth of the limits of error prescribed for beam scales.

(c) Other massmeters -

one-half of the applicable limits of error prescribed in Part II of the regulations.

(2) All massmeters specified in subregulation (1) of this regulation shall be checked for accuracy at least every six months and for this purpose the limits of error prescribed by that subregulation may be increased by 50 per cent before arrangement shall be made for the repair and adjustment of such massmeters.

Standards for verifying traders' massmeters

(3) In the case of an inspection standard used for the testing of massmeters, used for a prescribed purpose, the value of such inspection standard of any denomination specified below shall, within the limits of error shown against such denomination, agree with the value of any regional standard of the same denomination when it is verified and certified.

Denomination	*Error permitted in excess. Half permitted in deficiency*
5 000 kg	200 g
2000 kg	100 g
1000kg	50 g
500 kg	30 g
200 kg	15 g
100 kg	10 g
50 kg	5 g
20kg	2 g
10 kg	1 g
5 kg	600 mg
2 kg	300 mg
1 kg	130 mg
500 g	65 mg
200 g	35 mg
100 g	20 mg
50 g	10 mg
20 g	5 mg
10 g	3 mg
5 g	3 mg
2 g	2 mg
1 g	1,5 mg

Limits of error in regional and inspection standards

(4) Except as is provided in subregulation (3), the value of a regional standard or of an inspection standard of any denomination specified in the Tables below shall, within the limits of error shown against such denomination, respectively agree with the value of any departmental or regional standard of the same denomination when it is verified and certified:

Provided that, in the case of the verification of any masspiece referred to in this subregulation, the error found on verification shall be stated in the certificate of verification, to a degree of accuracy specified in the table, any error on the superior standard having been taken into consideration.

TABLE I

MEASURES OF LENGTH

Denomination	*Error permitted in excess or in deficiency*
30 m and above	3,5 mm
3 m and above, but under 30 m	2,5 mm
1 m and above, but under 3 m	0,5 mm
50 mm and above, but under 1 m	0,25 mm
under 50 mm	0,05 mm

TABLE II

MEASURES OF VOLUME

Denomination	*Error permitted in excess or in deficiency*
Above 20 *l*	0,45 ml per *l*
20 *l*	9 ml
10 *l*	4,5 ml
5 *l*	2,25 ml
2 *l*	1,2 ml
1 *l*	0,6 ml
750 ml	0,5 ml
500 ml	0,4 ml
250 ml	0,35 ml
200 ml	0,3 ml
100 ml	0,2 ml
50 ml	0,15 ml
20 ml	0,1 ml
10 ml	0,08 ml
5 ml	0,06 ml
2 ml	0,04 ml
1 ml	0,04 ml

TABLE III

MASSPIECES

(a) Metric carat:

Denomination	*Error permitted in excess or in deficiency*	*Accuracy of certification*
10 000 CM	100 mg	2 mg
5 000 CM	50 mg	1 mg
2 000 CM	20 mg	0,5 mg
1 000 CM	10 mg	0,2 mg
500 CM	5 mg	0,1 mg
200 CM	2 mg	0,05 mg
100 CM	1 mg	0,02 mg
50 CM	0 5 mg	0,01 mg
20 CM	0,5 mg	0,01 mg
10 CM	0,5 mg	0,01 mg
5 CM	0,5 mg	0,01 mg
2 CM	0,5 mg	0,01 mg
1 CM	0,5 mg	0,01 mg
0,5 CM	0,5 mg	0,01 mg
0,2 CM	0,2 mg	0,01 mg
0,1 CM	0,2 mg	0,01 mg
0,05 CM	0,2 mg	0,01 mg
0,02 CM	0,2 mg	0,01 mg
0,01 CM	0,2 mg	0,01 mg
0,005 CM	0,1 mg	0,01 mg

(b) Metric:

Denomination	*Error permitted in excess or in deficiency*	*Accuracy of certification*
5 000 kg	100 g	5 g
2000 kg	50 g	2 g

1 000 kg	30 g	1 g
500 kg	16 g	1 g
200 kg	8 g	200 mg
100 kg	4 g	100 mg
50 kg	2 g	50 mg
20 kg	1 g	20 mg
10 kg	500 mg	10 mg
5 kg	200 mg	5 mg
2 kg	100 mg	2 mg
1 kg	50 mg	1 mg
500 g	20 mg	0,5 mg
200 g	10 mg	0,2 mg
100 g	5 mg	0,1 mg
50 g	2 mg	0,05 mg
20 g	1 mg	0,02 mg
10 g	0,5 mg	0,01 mg
5 g	0,5mg	0,01 mg
2g	0,5 mg	0,01 mg
1 g	0,5mg	0,01 mg
500 mg	0,5 mg	0,01 mg
200 mg	0,5 mg	0,01 mg
100 mg	0,5 mg	0,01 mg
50 mg	0,2 mg	0,01 mg
20 mg	0,2 mg	0,01 mg
10 mg	0,2 mg	0,01 mg
5 mg	0,2 mg	0,01 mg
2 mg	0,2 mg	0,01 mg
1 mg	0,1 mg	0,01 mg

DATE OF COMMENCEMENT

2. Part V of the regulations promulgated by Government Notice R. 4007 of 31 December 1969 is repealed as from the date of publication hereof, when these regulations shall come into force.

PART VI

SUBMISSION FOR EXAMINATION AND APPROVAL OF MEASURING INSTRUMENTS

Submission of new models in terms of section 18(1)(a) *or* (b) *of the Act*

Application form and documents

1. (1) (a) Any application in terms of section 18(1)(a) or (b) of the Act, read with regulation 43(1), 63(1) or 71(1) of Part II of the regulations for the examination of a new model of measuring instrument with a view to the approval of the model shall be submitted on a form furnished by the director on request.

(b) The application form shall be completed and forwarded to the Director of Trade Metrology, P.O. Box 431, Pretoria, 0001, accompanied by -

(i) a remittance of the appropriate examination fee, as prescribed by notice in the *Gazette,* in terms of section 18(8) of the Act;

(ii) properly executed drawings, to scale and indexed, to illustrate the mechanism of the instrument;

(iii) a separate typed index to the vital working parts of the instrument corresponding to the indexing of the drawings;

(iv) a complete yet concise description of the construction and method of operation of the instrument to be read in conjunction with the index and drawings;

(v) photographs, 160 mm x 120 mm or larger, of the assembled instrument with covers in place, to show its external appearance, and with covers removed;

(vi) an indication that a specimen of the model is available for examination and testing.

(c) The drawings referred to in paragraph (b)(ii) shall -

(i) be properly executed tracings in India ink on linen or the equivalent thereof with regard to durability and reproducibility;

(ii) be of a size not less than 800 mm x 500 mm and not greater than 1,5 m x 1 m;

(iii) consist of a general arrangement drawing of the instrument in two elevations and plan, and such other drawings of parts as may be required to illustrate any vital part not clearly illustrated in the general arrangement drawing;

(iv) in the case of electrical or electronic instruments, include schematic electrical or electronic diagrams and complete circuit diagrams;

(v) be clearly indexed in plain block type (e.g. A, B, C, D, E, . . . or 1, 2, 3, 4, 5, 6 . . .) so placed on the drawing that the lines of the drawing are not interfered with;

(vi) have the indexing placed outside of the drawing and in sequence clockwise around the drawing as far as possible, with the indicating lines ending, in arrowheads or the equivalent, at the parts referred to;

(vii) have the same index number or letter allocated to the same part in all views, and in the description.

Submission of specimen

(2) Any person who submits a specimen of a model of measuring instrument for approval in terms of section 18(1)(a) or (b) of the Act shall -

(a) deliver such specimen instrument free of charge to the office of the director or to such other place as he may direct and similarly remove such instrument when it is no longer required by the director;

(b) if so required, dismantle, reassemble and erect, and adjust such instrument;

(c) provided suitable facilities for the examination and testing of such instrument;

(d) supply any additional information and documents that the director may deem necessary for the purpose of the submission, including such number of printed copies of the drawings and copies of the photographs as the director may require.

Marking on specimen

(3) Every specimen of a model of measuring instrument submitted for approval in terms of section 18(1)(a) or (b) of the Act shall be clearly and indelibly marked with the manufacturer's name or trade mark and with the manufacturer's model or type designation of the instrument as well as any marking required under Part II of the regulations.

*Submission of certain modified models in terms of section 18(1)(*b*) of the Act*

2. Where the modification of a model of measuring instrument submitted in terms of section 18(1)(b) of the Act comprises the addition of a device which extends or modifies the scope of the instrument and which becomes an essential part of the modified instrument, the provisions of regulation 1 of this Part shall apply:

Provided that only drawings and documents relating to the modification and showing its connection with the approved model need to be furnished, but that the specimen submitted shall comprise the approved model complete with the modifying device.

Submission of installations and system of measurement

3. (1) Any application in terms of section 18(9) of the Act read with regulation 43(3), 63(3) or 71(3) of Part II of the regulations, with a view to the approval of an installation or a system of measurement which incorporates any measuring instrument of a model approved in terms of section 18(2) of the Act, together with any attachment, device or ancillary equipment not already approved, except a device referred to in regulation 2 of this Part, shall be submitted in writing to the director together with -

(a) properly executed drawings, to scale and indexed, to illustrate any attachment, device or ancillary equipment in question;

(b) drawings or diagrams to illustrate the installation or system;

(c) a complete yet concise description of the installation or system and its function;

(d) an indication of where it is intended to install the installation or system and where it will be available for examination and testing;

(e) a remittance of the appropriate examination fee as prescribed in terms of section 18(8) and (9) of the Act.

DATE OF COMMENCEMENT

4. Part VI of the regulations shall come into force as from the date of publication hereof.