

## 1978 No. 484

## WEIGHTS AND MEASURES

## The Units of Measurement Regulations 1978

<i>Made</i>	- - -	<i>22nd March 1978</i>
<i>Laid before Parliament</i>		<i>4th April 1978</i>
<i>Coming into Operation</i>		<i>27th April 1978</i>

The Secretary of State, being a Minister designated (a) for the purposes of section 2(2) of the European Communities Act 1972(b) in relation to units of measurement to be used for economic, health, safety or administrative purposes, in exercise of powers conferred by that section, hereby makes the following Regulations:—

1. These Regulations may be cited as the Units of Measurement Regulations 1978 and shall come into operation on 27th April 1978.

2.—(1) In these Regulations—

“the Act of 1963” means the Weights and Measures Act 1963(c), as amended by the Weights and Measures &c. Act 1976(d);

“the Act of 1967” means the Weights and Measures Act (Northern Ireland) 1967(e), as so amended;

“agricultural materials” means any of the materials mentioned in paragraph 1 of Part III of Schedule 7 to the Act of 1963, or in paragraph 1 of Part III of Schedule 5 to the Act of 1967 as the case may require;

“ballast” means any of the materials mentioned in paragraph 1 of Schedule 5 to the Act of 1963, or in paragraph 1 of Schedule 3 to the Act of 1967 as the case may require;

“specified circumstances” means the circumstances specified in Article 2 of Council Directive No. 71/354/EEC(f) as limited by the provisions of Article 3 of that Directive;

“use for trade” has the same meaning as it has in section 9 of the Act of 1963 or in section 3 of the Act of 1967 as the case may require;

“weighing or measuring equipment” has the same meaning as it has in section 58(1) of the Act of 1963 or in section 41(1) of the Act of 1967 as the case may require.

(2) The Interpretation Act 1889(g) shall apply for the interpretation of these Regulations as it applies for the interpretation of an Act of Parliament.

3. Subject to Regulations 4 to 7 below, units of measurement and their symbols specified in Schedule 1 hereto cease to be authorised for use in the specified circumstances.

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(a) S.I. 1976/897.      (b) 1972 c. 68.      (c) 1963 c. 31.      (d) 1976 c. 77.  
(e) 1967 c. 6 (N.I.).      (f) OJ No. L243, 29.10.1971, p. 29.      (g) 1889 c. 63.

4.—(1) Products, equipment and instruments (other than weighing or measuring equipment (including weights)), using units specified in Schedule 1 hereto, may continue to be used on and after the date of operation of these Regulations if they were placed on the market before that date.

(2) Weighing equipment (including weights) which weighs wholly or partly in drams may continue to be used for trade on and after that date if it was first passed as fit for use for trade and stamped in accordance with the Act of 1963 or, as the case may be, the Act of 1967, before that date.

(3) Nothing in paragraph (2) above shall be taken as authorising the continued use for trade of the dram except insofar as the weight of goods in drams or partly in drams is treated as having been made known to a prospective buyer by virtue of section 33(2)(a) and (4) of the Act of 1963 or, as the case may be, section 26(2)(a) and (4) of the Act of 1967.

5. Products and equipment necessary to complete or replace components or parts of products, equipment and instruments the continued use of which is authorised by paragraph (1) or paragraph (2) of Regulation 4 above, may be manufactured, placed on the market and used on and after the date of operation of these Regulations, but this Regulation shall not permit the replacement of weights, whether or not the weights form part of other weighing equipment.

6.—(1) Nothing in these Regulations shall prohibit the use for trade before 1st January 1979 of the cubic yard (or its symbol), or of a measure of  $\frac{1}{4}$  cubic yard or any multiple thereof, for the purposes of transactions in ballast or agricultural materials, if in the case of such a measure it was first passed as fit for use for trade and stamped in accordance with the Act of 1963 or the Act of 1967, as the case may be, before the date of operation of these Regulations.

(2) The Act of 1963 shall have effect as if—

(a) up to and including 31st December 1978, in Part VI of Schedule 1A (as inserted by Schedule 1 to the Weights and Measures &c. Act 1976) and in Part VI of Schedule 3 (as substituted by Schedule 2 to that Act) there were added the following paragraph:—

“3. No person shall use the cubic yard for trade except for the purpose of transactions in ballast and agricultural materials.”; and

(b) on and after 1st January 1979—

(i) in Part III of Schedule 1 the definition of “cubic yard”, and in Part III of Schedule 1A the reference to “cubic yard”, were omitted,

(ii) in Part III of Schedule 1, for the definition of “cubic foot” there were substituted the following:—

“cubic foot =  $\frac{1}{27}$  of a volume equal to that of a cube each edge of which measures one yard.”,

(iii) in Part VA of Schedule 1 (as inserted by section 1(2) of the said Act of 1976), after the entry relating to “*Measurement of Area*” (as inserted by Schedule 2 to this Order), there were inserted the following:—

*“Measurement of volume*

Cubic yard = a volume equal to that of a cube each edge of which measures one yard,” and

(iv) in Part III of Schedule 3, paragraph 1 were omitted.

(3) The Act of 1967 shall have effect as if—

(a) up to and including 31st December 1978, in Part VI of Schedule 1A (as inserted by Schedule 1 to the said Act of 1976) and in Part VI of Schedule 1 (as substituted by Schedule 2 to that Act) there were added the following paragraph:—

“3. No person shall use the cubic yard for trade except for the purpose of transactions in ballast and agricultural material.”; and

(b) on and after 1st January 1979, in Part III of Schedule 1A the reference to “cubic yard”, and paragraph 1 of Part III of Schedule 1, were omitted.

7. Nothing in these Regulations shall prohibit the use of the thermochemical calorie or its symbol in relation to foodstuffs for particular nutritional uses as provided for in Council Directive No. 77/94/EEC(a).

8. Without prejudice to Regulation 4 above, every pattern of weighing equipment—

(a) the certificate of approval in respect of which has been issued or is deemed to have been granted under section 12 of the Act of 1963 or, as the case may be, section 6 of the Act of 1967, and is in force immediately before the date of operation of these Regulations; and

(b) which provides for weighing to be made wholly or partly in drams, (including a pattern modified in accordance with an authorisation for the time being in force under the said section 12 or the said section 6) shall be deemed to be modified to the extent necessary to require equipment of that pattern to weigh in fractions of an ounce in substitution for drams and fractions of a dram.

9. The enactments and instruments specified in Schedule 2 hereto shall be amended as provided in that Schedule.

10. Where a contract entered into before the date of operation of these Regulations falls to be performed or to be performed partly on or after that date, and the contract refers to a unit of measurement named in the first column of paragraph 1 or 3 of Schedule 1 hereto, that reference shall on and after the said date be deemed to be a reference to the value set out in the second column of that part of that Schedule in relation to that unit; and accordingly any calculation that has under the contract to be made by reference to that unit shall instead be made by reference to that value.

*John Fraser,  
Minister of State,*

22nd March 1978.

Department of Prices and Consumer Protection.

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(a) OJ No. L26, 31.1.1977, p. 55.

(Regulation 3)

## SCHEDULE 1

UNITS OF MEASUREMENT WHICH CEASE TO BE AUTHORISED IN THE  
SPECIFIED CIRCUMSTANCES

## 1 SPECIAL UNITS

Quantities, names of units, symbols and values:

## (1) Volume (forestry and timber industry)

Festmeter	1 Fm = 1 m <sup>3</sup>
Raummeter	1 Rm = 1 m <sup>3</sup>

## (2) Force

kilogram force	} = 9.806 65 N
kilopond	

## (3) Pressure

torr	1 torr = $\frac{101\ 325}{760}$ Pa
technical atmosphere	1 at = 98 066.5 Pa
metre of water	1 mH <sub>2</sub> O = 9806.65 Pa
(conventionally: 1 mH <sub>2</sub> O)	
millimetre of mercury <sup>(1)</sup>	1 mmHg = 133.322 Pa
(conventionally: 1 mmHg)	

## (4) Power

Pferdestarke	} = 735.498 75 W
paardekracht	
cheval vapeur	
cavallo vapore	

## (5) Quantity of heat

calorie 15°C	1 cal <sub>15</sub> = 4.1855 J
thermie	1 th = 4.1855 × 10 <sup>6</sup> J
frigorie	1 fg = 4.1855 × 10 <sup>3</sup> J
calorie IT	1 cal <sub>IT</sub> = 4.1868 J
thermo-chemical calorie	1 cal <sub>th</sub> = 4.184 J

## (6) Luminance

stilb	1 sb = 10 <sup>3</sup> cd · m <sup>-2</sup>
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<sup>(1)</sup> Except where this unit is used for measuring blood pressure.

## 2 SPECIAL CASE OF TEMPERATURE

The name "degree kelvin" and the symbol "°K".

## 3 IMPERIAL UNITS

Quantities, names of units, symbols and approximate values.

## (1) Length

chain	1 chain = 20.12 m
furlong	1 fur = 201.2 m
nautical mile (UK)	1 nautical mile = 1853 m

## (2) Area

rood	1 rood = 1012 m <sup>2</sup>
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## (3) Volume

cubic yard	1 cu yd = 0.7646 m <sup>3</sup>
bushel	1 bu = 36.37 × 10 <sup>-3</sup> m <sup>3</sup>

## (4) Mass

dram	1 dr = 1.772 × 10 <sup>-3</sup> kg
cental	1 ctl = 45.36 kg

## SCHEDULE 1 (continued)

## 3. IMPERIAL UNITS (continued)

(5) Pressure inch of water	1 in H <sub>2</sub> O = 249.089 Pa
(6) Force ton-force	1 tonf = 9.964 × 10 <sup>3</sup> N
(7) Illuminance foot candle	1 ft candle = 10.76 lx
(8) Speed knot (UK)	1 knot = 0.51477 m · s <sup>-1</sup>

(Regulation 9)

## SCHEDULE 2

## ENACTMENTS AND INSTRUMENTS AMENDED

## PART I

Amendments to take effect on 27th April 1978

ENACTMENT AND INSTRUMENT	AMENDMENT
Weights and Measures Act 1963 as amended by the Weights and Measures &c. Act 1976.	In Schedule 1, in Part I delete "Furlong = 220 yards," and "Chain = 22 yards."; in Part II delete "Rood = 1210 square yards."; in Part V delete "Cental = 100 pounds." and "Dram = 1/16 ounce."; in Part VA add at the beginning <i>Measurement of Length</i> Furlong = 220 yards Chain = 22 yards <i>Measurement of Area</i> Rood = 1210 square yards and in the entry relating to " <i>Measurement of mass or weight</i> " add at the beginning "Cental = 100 pounds Dram = 1/16 ounce".
Weights and Measures Act 1963 as amended by the Weights and Measures Act (Amendment of Schedules 5 and 7) Order 1970 (a).	In Schedule 1A, in Part I, delete "Furlong" and "Chain"; in Part II, delete "Rood"; in Part V, delete "Cental" and "Dram".
The Weights and Measures Regulations 1963 (b), as amended by the Weights and Measures (Amendment) Regulations 1972 (c).	In Schedule 3, in Part V, for "8 drams", "4 drams", "2 drams", "1 dram" and "½ dram" substitute "½ ounce", "¼ ounce", "⅛ ounce", "1/16 ounce" and "1/32 ounce". In Schedule 4, in Part XII, for "2½ drams", whenever it occurs, substitute "5/32 ounce", for "3 drams" substitute "3/16 ounce", for "4 drams" substitute "¼ ounce" and for "4½ drams" substitute "9/32 ounce".
	In Schedule 7, in Part II, paragraph 2, delete "a multiple of 0.25 cubic yard or".
	In Regulation 58(2), delete "cti". In Regulation 88, in part (a) of the table for "8 dr", "4 dr" and "2 dr" substitute "½ oz", "¼ oz" and "⅛ oz". In Schedule 2, for Parts II, III, IV and V substitute the Annex to this Part of this Schedule.

(a) S.I. 1970/1708.

(b) S.I. 1963/1710.

(c) S.I. 1972/767.

SCHEDULE 2 (*continued*)PART I (*continued*)

ENACTMENT AND INSTRUMENT	AMENDMENT
The Working Standards and Testing Equipment (Testing and Adjustment) Regulations 1970 (a).	In Table 2 of the Schedule, for "8 drams" substitute " $\frac{1}{2}$ ounce".
The Weights and Measures (Local Standards: Limits of Error) Regulations 1970 (b).	In the Schedule, in the Table relating to Weights, for "8 drams" substitute " $\frac{1}{2}$ ounce".
The Weights and Measures (Marking of Goods and Abbreviations of Units) Regulations 1975 (c).	In Schedule 1, delete "cubic yard      cu yd" and "dram      dr". In Schedule 2, delete "cubic yard" and "dram".
Weights and Measures Act (Northern Ireland) 1967 as amended by the Weights and Measures &c. Act 1976.	In Schedule 1A, in Part I, delete "Furlong" and "Chain"; in Part II, delete "Rood"; in Part V, delete "Cental" and "Dram". In Schedule 1, in Part V, for "8 drams", "4 drams", "2 drams", "1 dram" and " $\frac{1}{2}$ dram" substitute " $\frac{1}{2}$ ounce", " $\frac{1}{4}$ ounce", " $\frac{1}{8}$ ounce" "1/16 ounce" and "1/32 ounce".

## PART II

*Amendments to take effect on 1st January 1979*

The Weights and Measures Act 1963 as amended by the Weights and Measures (Amendment of Schedule 5 and 7) Order 1970.	In Schedule 5 in paragraph 2, delete "0.5 cubic yard or".									
The Weights and Measures (Testing and Adjustment Fees) Regulations 1976 (d).	In the Schedule, in the list at the beginning thereof delete "cu yd - cubic yard", in part C delete paragraph (2), and for paragraph (3) substitute <table> <tr> <td>"(2)</td> <td>Measures other than brim measures,</td> <td></td> </tr> <tr> <td></td> <td>exceeding 8m<sup>3</sup></td> <td>£12.00</td> </tr> <tr> <td></td> <td>Other</td> <td>£ 9.00".</td> </tr> </table>	"(2)	Measures other than brim measures,			exceeding 8m <sup>3</sup>	£12.00		Other	£ 9.00".
"(2)	Measures other than brim measures,									
	exceeding 8m <sup>3</sup>	£12.00								
	Other	£ 9.00".								

(a) S.I. 1970/1714.

(b) S.I. 1970/1710.

(c) S.I. 1975/1319.

(d) S.I. 1976/1807.

## ANNEX TO PART I OF SCHEDULE 2 ABOVE

(Amendments to Schedule 2 to the Weights and Measures Regulations 1963)

## "PART II

## BEAM SCALES AND BALANCES

## 1. Beam scales marked "Class B".

Capacity of instrument.	Weight to be added to test sensitiveness when fully loaded.		Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
1 ounce	1/5 grain	3/5 grain	1/5 grain	2/5 grain
8 ounces	1 "	3 grains	1 "	2 grains
1 pound	1 "	3 "	1 "	2 "
2 pounds	1 1/2 grains	4 1/2 "	2 grains	4 "
4 "	3 "	9 "	4 "	8 "
7 "	4 "	12 "	6 "	12 "
10 "	6 "	18 "	9 "	18 "
14 "	8 "	24 "	12 "	24 "
28 "	15 "	45 "	22 "	44 "
56 "	25 "	75 "	40 "	80 "
112 "	3/32 ounce	9/32 ounce	5/32 ounce	5/16 ounce
224 "	5/32 "	15/32 "	7/32 "	7/16 "
Above 2 hundredweight	Add 1/32 ounce for each hundred-weight of capacity.	Add 3/32 ounce for each hundred-weight of capacity.	Add 1/16 ounce for each hundred-weight of capacity.	Add 1/8 ounce for each hundred-weight of capacity.

## 2. Beam scales marked "Class C".

Capacity of instrument.	Weight to be added to test sensitiveness when fully loaded.		Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
1 ounce	3/5 grain	1 1/5 grains	3/5 grain	1 1/5 grains
8 ounces	3 grains	6 "	3 grains	6 "
1 pound	3 "	6 "	3 "	6 "
2 pounds	4 1/2 "	9 "	6 "	12 "
4 "	9 "	18 "	12 "	24 "
7 "	12 "	24 "	18 "	36 "
10 "	18 "	36 "	27 "	54 "
14 "	24 "	48 "	36 "	72 "
28 "	45 "	90 "	66 "	132 "
56 "	75 "	150 "	120 "	240 "
112 "	9/32 ounce	9/16 ounce	15/32 ounce	15/16 ounce
224 "	15/32 "	15/16 "	21/32 "	1 5/16 ounces
Above 2 hundredweight	Add 3/32 ounce for each hundred-weight of capacity.	Add 3/16 ounce for each hundred-weight of capacity.	Add 3/16 ounce for each hundred-weight of capacity.	Add 3/8 ounce for each hundred-weight of capacity.

## 3. Balances.

Capacity of instrument.	Weight to be added to test sensitiveness when fully loaded.		Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
1 ounce	1/20 grain	3/20 grain	1/10 grain	1/5 grain
1 pound	1/10 "	3/10 "	1/5 "	2/5 "
7 pounds	$\frac{1}{2}$ "	$1\frac{1}{2}$ grains	1 "	2 grains
56 "	$1\frac{1}{2}$ grains	$4\frac{1}{2}$ "	2 grains	4 "

PART III  
COUNTER MACHINES

Capacity of machine.	Weight to be added to test sensitiveness when fully loaded.		Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
1 pound	20 grains	60 grains	30 grains	60 grains
2 pounds	28 "	84 "	$\frac{3}{32}$ ounce	$\frac{3}{16}$ ounce
4 "	40 "	120 "	$\frac{1}{8}$ "	$\frac{1}{4}$ "
7 "	$\frac{1}{8}$ ounce	$\frac{3}{8}$ ounce	$\frac{3}{16}$ "	$\frac{3}{8}$ "
10 "	$\frac{5}{32}$ "	$\frac{15}{32}$ "	$\frac{7}{32}$ "	$\frac{7}{16}$ "
14 "	$\frac{3}{16}$ "	$\frac{9}{16}$ "	$\frac{9}{32}$ "	$\frac{9}{16}$ "
28 "	$\frac{1}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{8}$ "	$\frac{3}{4}$ "
56 "	$\frac{1}{2}$ "	$1\frac{1}{2}$ ounces	$\frac{9}{16}$ "	$1\frac{1}{8}$ ounces
1 hundred-weight	$\frac{1}{2}$ "	$1\frac{1}{2}$ "	1 "	2 "



PART IV  
SPRING BALANCES

Capacity of spring balance.	Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
1 pound	30 grains	60 grains
2 pounds	3/32 ounce	3/16 ounce
3 "	3/32 "	3/16 "
4 "	1/8 "	1/4 "
5 "	5/32 "	5/16 "
6 "	5/32 "	5/16 "
7 "	3/16 "	3/8 "
10 "	7/32 "	7/16 "
11 "	7/32 "	7/16 "
12 "	1/4 "	1/2 "
13 "	1/4 "	1/2 "
14 "	9/32 "	9/16 "
15 "	9/32 "	9/16 "
20 "	5/16 "	5/8 "
21 "	5/16 "	5/8 "
22 "	5/16 "	5/8 "
23 "	11/32 "	11/16 "
24 "	11/32 "	11/16 "
25 "	11/32 "	11/16 "
26 "	11/32 "	11/16 "
27 "	3/8 "	3/4 "
28 "	3/8 "	3/4 "
29 "	3/8 "	3/4 "
30 "	3/8 "	3/4 "
40 pounds and above	The weight corresponding to 1/4 of the interval between consecutive graduations.	The weight corresponding to 1/2 of the interval between consecutive graduations.

PART V  
STEELYARDS

Capacity of steelyard.	Weight to be added to test sensitiveness when fully loaded.		Error in excess or in deficiency when fully loaded.	
	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.	Upon passing as fit for use for trade.	In relation to the obliteration of stamps.
56 pounds	3/4 ounce	2 1/4 ounces	1 1/8 ounces	2 1/4 ounces
1 hundred-weight	1 "	3 "	2 "	4 "
3 "	2 ounces	6 "	4 "	8 "
5 "	3 "	9 "	6 "	12 "
7 "	4 "	12 "	8 "	16 "
10 "	6 "	18 "	12 "	24 "
20 "	10 "	30 "	20 "	40 "
30 "	13 "	39 "	26 "	52 "
40 "	16 "	48 "	32 "	64 "
50 "	20 "	60 "	40 "	80 "

## EXPLANATORY NOTE.

*(This Note is not part of the Regulations.)*

These Regulations implement the requirement of Council Directive No. 71/354/EEC (O.J. No. L243, 29.10.1971, p. 29) as amended by Council Directive No. 76/770/EEC (O.J. No. L262, 27.9.1976, p. 204), that certain units of measurement are no longer to be authorised for use in the circumstances specified in Article 2 of Directive No. 71/354/EEC (Reg. 3). The units which cease to be so authorised are listed in Schedule 1 to the Regulations. They include the dram, the cubic yard and the bushel.

Products, equipment and instruments (other than weighing or measuring equipment (including weights)) using the specified units may continue to be used after 27th April 1978 (the date on which the Regulations come into operation) if placed on the market before that date (Reg. 4(1)). Spare parts for such products, equipment and instructions may continue to be made (Reg. 5). Weighing equipment weighing wholly or partly in drams may continue to be used for trade after that date, if it was passed as fit for use for trade and stamped before then (Reg. 4(2)). The cubic yard can be used for trade in transactions in ballast or agricultural material until 31 December 1978 (Reg. 6). There is a saving for contracts entered into before the date of operation of the Regulation which refer to the specified units (Reg. 10).

Consequential amendments are made to certain statutory instruments in the weights and measures field which refer to the specified units (Reg. 9 and Schedule 2).

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