COUNCIL DIRECTIVE

of 27 July 1976

amending Directive 71/354/EEC on the approximation of the laws of the Member States relating to units of measurement

(76/770/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof,

Having regard to the Act of Accession, and in particular Article 29 thereof,

Having regard to Council Directive 71/354/EEC of 18 October 1971 on the approximation of the laws of the Member States relating to units of measurement [1], as amended by the Act of Accession, and in particular Article 1 (4) thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament [2],

Having regard to the opinion of the Economic and Social Committee [3],

Whereas, pursuant to the Act of Accession, the classification in Annex I to Directive 71/354/EEC of the units of measurement listed in Annex II to that Directive is to be decided on by 31 August 1976 at the latest;

Whereas, in Directive 71/354/EEC, provision is made for the review before 31 December 1977 of the situation as regards the units and names of units listed in Chapter II of Annex I to that Directive;

Whereas the 15th General Conference of Weights and Measures (CGPM), convened on 27 May 1975 in Paris by the International Committee of Weights and Measures (CIPM), adopted new international resolutions concerning the international system of units,

HAS ADOPTED THIS DIRECTIVE:

Article 1

Article 1 of Directive 71/354/EEC is replaced by the following:

'*Article 1*

1. Member States shall make the provisions of Chapter A of the Annex mandatory by 21 April 1978 at the latest.

2. Member States shall, with effect from 31 December 1977 at the latest, cease to authorize the use of the units of measurement listed in Chapter B of the Annex.

3. Member States shall, with effect from 31 December 1979 at the latest, cease to authorize the use of the units of measurement listed in Chapter C of the Annex.

4. The units of measurement, names and symbols listed in Chapter D of the Annex shall be reviewed before 31 December 1979.

5. The use of the units of measurement temporarily retained in accordance with the provisions of Chapters B, C and D of the Annex may not be made mandatory by Member States where they have not been authorized since 21 April 1973.'

Article 2

The following Article is added to Directive 71/354/EEC:

'*Article 2a*

Member States may authorize the use of products, equipment and instruments using units which are not authorized under this Directive, which were already on the market prior to the dates laid down in this Directive and the manu-

(1) OJ No L 243, 29. 10. 1971, p. 29.
(2) OJ No C 125, 8. 6. 1976, p. 9.
(3) OJ No C 131, 12. 6. 1976, p. 55.

facture, placing on the market and use of products and equipment necessary to complete or replace components or parts of such products, equipment and instruments.'

Article 3

Annexes I and II to Directive 71/354/EEC are replaced by the Annex hereto.

Article 4

1. Member States shall bring into force the laws, regulations and administrative provisions necessary in order to comply with this Directive by 31 December 1977 at the latest and shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

Article 5

This Directive is addressed to the Member States.

Done at Brussels, 27 July 1976.

For the Council

The President

M. van der STOEL

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CHAPTER A

UNITS OF MEASUREMENT THE USE OF WHICH MUST BE MADE MANDATORY AS FROM 21 APRIL 1978 AT THE LATEST

1. SI UNITS AND THEIR DECIMAL MULTIPLES AND SUBMULTIPLES

1.1. SI base units

Quantity	Unit	
	Name	Symbol
Length	metre	m
Mass	kilogramme	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Amount of substance	mole	mol
Luminous intensity	candela	cd

Definitions of SI base units:

Unit of length

The metre is the length equal to 1 650 763·73 wavelengths in vacuum of the radiation corresponding to the transition between the levels $2p_{10}$ and $5d_5$ of the krypton 86 atom.

(Eleventh CGPM (1960), resolution 6).

Unit of mass

The kilogramme is the unit of mass; it is equal to the mass of the international prototype of the kilogramme.

(Third CGPM (1901), page 70 of the conference report).

Unit of time

The second is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom.

(Thirteenth CGPM (1967), resolution 1).

Unit of electric current

The ampere is that constant current which if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section and placed one metre apart in a vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length.

(CIPM (1946), resolution 2, approved by the ninth CGPM (1948)).

Unit of thermodynamic temperature

The kelvin, unit of thermodynamic temperature, is the fraction 1/273·16 of the thermodynamic temperature of the triple point of water.

(Thirteenth CGPM (1967), resolution 4).

Unit of amount of substance

The mole is the amount of substance of a system which contains as many elementary entities as there are atoms in 0·012 kg of carbon 12.

When the mole is used the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.

(Fourteenth CGPM (1971), resolution 3).

Unit of luminous intensity

The candela is the luminous intensity, in the perpendicular direction, of a surface of 1/600 000 m^2 of a black body at the temperature of freezing platinum under a pressure of 101 325 newtons/m^2.

(Thirteenth CGPM (1967), resolution 5).

1.1.1. **Special name and symbol of the SI unit of temperature for expressing Celsius temperature**

Quantity	Unit	
	Name	Symbol
Celsius temperature	degree Celsius	°C

Celsius temperature t is defined as the difference $t = T - T_0$ between the two thermodynamic temperatures T and T_0 where $T_0 = 273{\cdot}15$ kelvins. An interval of or difference in temperature may be expressed either in kelvins or in degrees Celsius. The unit of 'degree Celsius' is equal to the unit 'kelvin'.

1.2. **Other SI units**

1.2.1. **Supplementary SI units**

Quantity	Unit	
	Name	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

(Eleventh CGPM, 1960, resolution 12).

Definitions of supplementary SI units:

Plane angle unit

The radian is the plane angle between two radii which, on the circumference of a circle, cut an arc equal in length to the radius.

(ISO recommendation R 31, Part I, second edition, December 1965).