

**2009 No. 3046**

**WEIGHTS AND MEASURES**

**The Units of Measurement Regulations 2009**

*Made* - - - - *16th November 2009*

*Laid before Parliament* *19th November 2009*

*Coming into force* - - *1st January 2010*

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 the powers conferred by that subsection, makes the following Regulations:

**Citation and commencement**

1. These Regulations may be cited as the Units of Measurement Regulations 2009 and come into force on 1st January 2010.

**Interpretation**

2. In these Regulations, “the 1986 Regulations” means the Units of Measurement Regulations 1986(c).

**Removal of time limit on use of supplementary indications**

3.—(1) In section 8(5A) of the Weights and Measures Act 1985(d) (which allows the use for trade of supplementary indications up to and including 31 December 2009), omit “up to and including 31 December 2009,”.

(2) In regulation 7 of the 1986 Regulations (which relates to supplementary indications), omit “up to and including 31 December 2009”.

**Further amendments of the 1986 Regulations**

4.—(1) The 1986 Regulations are further amended as follows.

(2) In Schedule 1—

(a) in paragraph 1—

(i) at the end of the entry beginning “The kelvin” insert “This definition refers to water having the isotopic composition defined by the following amount-of-substance

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(a) S.I.1976/897, to which there are amendments not relevant to these Regulations.

(b) 1972 c.68; section 2(2) was amended by the Legislative and Regulatory Reform Act 2006 c.51, section 27(1).

(c) S.I. 1986/1082; relevant amending instruments are S.I. 1994/2867 and 2001/55.

(d) 1985 c.72; subsections (5) and (5A) were substituted for subsection (5) as originally enacted by S.I. 1994/2867 and subsection (5A) was subsequently amended by S.I. 2001/55.

ratios: 0.00015576 mole of  $^2\text{H}$  per mole of  $^1\text{H}$ , 0.0003799 mole of  $^{17}\text{O}$  per mole of  $^{16}\text{O}$  and 0.0020052 mole of  $^{18}\text{O}$  per mole of  $^{16}\text{O}$ .”; and

(ii) in the italic heading “Special name and symbol of the SI unit of temperature for expressing Celsius temperature”, for “SI unit” substitute “SI derived unit”;

(b) in paragraph 2—

(i) for the italic heading “Other SI units” substitute “SI derived units”;

(ii) omit sub-paragraph (1);

(iii) for sub-paragraph (2) substitute—

“(2) General rule for SI derived units

Units derived coherently from SI base units are given as algebraic expressions in the form of products of powers of the SI base units with a numerical factor equal to 1.”;and

(iv) for sub-paragraph (3) substitute the table and the notes set out in the Schedule.

### **Consequential amendments of the Units of Measurement Regulations 2001**

**5.**—(1) The Units of Measurement Regulations 2001(a) are amended as follows.

(2) In regulation 2 omit—

“—

“the Act” means the Weights and Measures Act 1985, and”.

(3) Omit regulations 3 and 4(2).

16th November 2009

*Drayson*  
Minister of State for Science and Innovation,  
Department for Business, Innovation and Skills

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(a) S.I. 2001/55.

## SCHEDULE

### Substituted paragraph 2(3) for Schedule 1 to the Units of Measurement Regulations 1986

“(3) SI derived units with special names and symbols

<i>Quantity</i>	<i>Unit Name</i>	<i>Unit Symbol</i>	<i>Expression in terms of other SI units</i>	<i>Expression in terms of SI base units</i>
Plane angle	radian	rad		$m.m^{-1}$
Solid angle	steradian	sr		$m^2.m^{-2}$
Frequency	Hertz	Hz		$s^{-1}$
Force	newton	N		$m.kg.s^{-2}$
Pressure, stress	pascal	Pa	$N.m^{-2}$	$m^{-1}.kg.s^{-2}$
Energy, work, quantity of heat	Joule	J	$N.m$	$m^2.kg.s^{-2}$
Power*, radiant flux	Watt	W	$J.s^{-1}$	$m^2.kg.s^{-3}$
Electric charge, quantity of electricity	coulomb	C		$s.A$
Electric potential, potential difference, electromotive force	Volt	V	$W.A^{-1}$	$m^2.kg.s^{-3}.A^{-1}$
Electric resistance	Ohm	$\Omega$	$V.A^{-1}$	$m^2.kg.s^{-3}.A^{-2}$
Conductance	siemens	S	$A.V^{-1}$	$m^{-2}.kg^{-1}.s^3.A^2$
Capacitance	Farad	F	$C.V^{-1}$	$m^{-2}.kg^{-1}.s^4.A^2$
Magnetic flux	weber	Wb	$V.s$	$m^2.kg.s^{-2}.A^{-1}$
Magnetic flux density	Tesla	T	$Wb.m^{-2}$	$kg.s^{-2}.A^{-1}$
Inductance	Henry	H	$Wb.A^{-1}$	$m^2.kg.s^{-2}.A^{-2}$
Luminous flux	lumen	lm	$cd.sr$	cd
Illuminance	Lux	lx	$lm.m^{-2}$	$m^{-2}.cd$
Activity (of a radionuclide)	becquerel	Bq		$s^{-1}$
Absorbed dose, specific energy imparted, kerma, absorbed dose index	Gray	Gy	$J.kg^{-1}$	$m^2.s^{-2}$
Dose equivalent, dose equivalent index	sievert	Sv	$J.kg^{-1}$	$m^2.s^{-2}$
Catalytic activity	Katal	kat		$mol.s^{-1}$

### *Notes*

Units derived from SI base units may be expressed in terms of the units listed in this Schedule.

In particular, SI derived units may be expressed by the special names and symbols given in the above table; for example, the SI unit of dynamic viscosity may be expressed as  $\text{m}^{-1} \cdot \text{kg} \cdot \text{s}^{-1}$  or  $\text{N} \cdot \text{s} \cdot \text{m}^{-2}$  or Pa.s.

\*Special names for the unit of power: the name volt-ampere (symbol “VA”) when it is used to express the apparent power of alternating electric current, and var (symbol “var”) when it is used to express reactive electric power.”

## EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations implement in part the amendments made by Directive 2009/3/EC of the European Parliament and the Council (OJ L114, 7.5.2009, p 10) to Council Directive 80/181/EEC (OJ L39, 15.2.1980, p 40) which relates to the use of units of measurement.

Regulation 3 removes the time limit (specified in the Weights and Measures Act 1985 and the Units of Measurement Regulations 1986 (“the 1986 Regulations”)) on the use of supplementary indications of quantity expressed in imperial units of measurement (31 December 2009). The use of such supplementary indications is, therefore, permitted indefinitely. Regulation 5 makes consequential amendments to the Units of Measurement Regulations 2001, which inserted the time limit in question.

Regulation 4 makes a number of amendments to the 1986 Regulations, in order to implement technical measures adopted by the General Conference on Weights and Measures. For example, a new unit of measurement, the “katal” is included within the International System of Units as the unit of measurement of catalytic activity, so as to ensure a uniform indication of units of measurement in the fields of medicine and biochemistry.

A full impact assessment has not been produced for this instrument as no impact on the private or voluntary sectors is foreseen.

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STATUTORY INSTRUMENTS

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