INTERNATIONAL STANDARD

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1 of 150 31.0.1.0992 land 1:1.0998 Quantities and units —

Part 0:

General principles

AMENDMENT 1

And a set unit Partie 0: Principes AMENDEMENT.

Citatoriem

Citato Partie 0: Principes généraux



Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote

Amendment 1 to International Standard ISO 31-0:1992 was prepared by Technical Committee ISO/TC 12, Quantities, units, symbols, conversion factors.

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Quantities and units —

Part 0:

General principles

AMENDMENT 1



3031.0:1992/Amd 1:1998 Replace subclauses 2.3.2 to 2.3.2.2 with the following text. Table 1 is unchanged.

2.3.2 SI units and their decimal multiples and sub-multiples

The name International System of Units (Système International d'Unités), with the international abbreviation SI, was adopted by the 11th General Conference on Weights and Measures (Conférence Générale des Poids et Mesures, CGPM) in 1960.

This system includes

base units

derived units

which together form the coherent system of SI units.

2.3.2.1 Base units

The seven base units are listed in table 1.

2.3.2.2 Derived units

The expressions for the coherent derived units in terms of the base units can be obtained from the dimensional products by using the following formal substitutions:

$$T \rightarrow s \qquad \qquad J \rightarrow cd$$

In particular, the dimension one corresponds to the unit one, symbol 1 (see 2.3.1).

EXAMPLES

Quantity Symbol for SI unit expressed in terms of the seven base units m/s velocity kg · m/s² force $kg \cdot m^2/s^2$ energy $kg \cdot m^2/(s^2 \cdot K)$ entropy $kg \cdot m^2/(s^3 \cdot A)$ electric potential $A^2 \cdot s^4/(kg \cdot m^3)$ permittivity $kg \cdot m^2/(s^2 \cdot A)$ magnetic flux $kg \cdot m^2/(s^2 \cdot K \cdot mol)$ molar entropy Faraday constant A · s/mol relative density

For some of the SI derived units, special names and symbols exist; those approved by the CGPM are listed in tables 2 and 3. It is often of advantage to use special names and symbols in compound expressions for units.

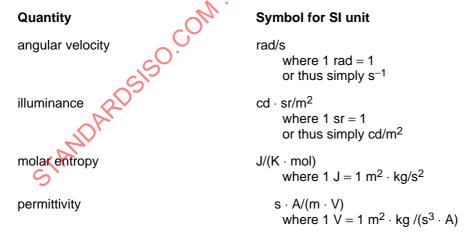
NOTE In 1960, the CGPM classified the SI units radian, rad, and steradian, sr, for plane angle and solid angle, respectively, as "supplementary units".

In 1980, the *International Committee for Weights and Measures* (Comité International des Poids et Mesures, CIPM) decided to interpret the class of supplementary units in the SI as a class of "dimensionless" derived units for which the CGPM allows the freedom of using them or not using them in expressions for SI derived units.

In 1995, the CGPM approved the CIPM interpretation from 1980 and decided to eliminate the supplementary units as a separate class in the SI.

Although, as a consequence of this interpretation, the coherent unit for plane angle and for solid angle is the number one, it is convenient to use the special names radian, rad, and steradian, sr, instead of the number one in many practical cases.

EXAMPLES



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In the title of table 2, delete the phrase "including SI supplementary units".