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Quantities and units —

Part 13:
Information science and technology

Grandeurs et unités —

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This draft is submitted to a parallel vote in ISO and in IEC.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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QUANTITIES AND UNITS

Part 13: Information science and technology

FOREWORD

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IEC 80000-13 ED 2.0 has been prepared by IEC technical committee 25: Quantities and units in close cooperation with ISO/TC 12 Quantities and units. It is an International Standard.

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This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition:

addition of new prefixes for binary multiples.

The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

0.1 Tables of quantities

In most cases only one name and only one symbol for the quantity are given; where two or more names or two or more symbols are given for one quantity and no special distinction is made, they are on an equal footing. When two types of italic letters exist (for example as with *J* and *θ*; *φ* and *f*; *a* and *a*; *g* and *g*) only one of these is given. This does not mean that the other is not equally acceptable. It is recommended that such variants should not be given different meanings. A symbol within parenthesis implies that it is a reserve symbol, to be used when, in a particular context, the main symbol is in use with a different meaning.

0.2 General

The names of units for the corresponding quantities are given together with the international symbols and the definitions. These unit names are language-dependent, but the symbols are international and the same in all languages. For further information, see the SI Brochure (9th edition 2019, updated in 2022) from BIPM and ISO 80000-1.

The units are arranged in the following way:

- The coherent SI units are given first. The SI units have been adopted by the General Conference on Weights and Measures (Conférence Générale des Poids et Mesures, CGPM). The use of coherent SI units, and their decimal multiples and submultiples formed with the SI prefixes are recommended, although the decimal multiples and submultiples are not explicitly mentioned.
- Some non-SI units are then given, being those accepted by the International Committee for Weights and Measures (Comité International des Poids et Mesures, CIPM), or by the International Organization of Legal Metrology (Organisation Internationale de Métrologie Légale, OIML), or by ISO and IEC, for use with the SI. Such units are separated from the SI units in the item by use of a broken line between the SI units and the other units.

0.3 Remark on units for quantities whose dimensional exponents are all equal to zero

The coherent unit for any quantity whose dimensional exponents are equal to zero is the number one, symbol 1. When the value of such a quantity is expressed, the unit symbol 1 is generally not written out explicitly.

EXAMPLE 1

Refractive index $n = 1{,}53 \times 1 = 1{,}53$

Prefixes shall not be used to form multiples or submultiples of this unit. Instead of prefixes, powers of 10 are recommended.

EXAMPLE 2

Reynolds number $\mathrm{Re} = 1{,}32 \times 10^3$

0.4 Numerical statements in this International Standard

The sign = is used to denote "is exactly equal to", the sign ≈ is used to denote "is approximately equal to", and the sign := is used to denote "is by definition equal to".

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QUANTITIES AND UNITS

Part 13: Information science and technology

1 Scope

This part of IEC 80000 specifies names, symbols and definitions for quantities and units used in information science and technology. Where appropriate, conversion factors are also given. Prefixes for binary multiples are also given.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

The names, definitions and symbols for quantities and units of information science and technology are given in Table 1 on the following pages.

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