

BS EN 1412:2016



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Copper and copper alloys — European numbering system

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee NFE/34, Copper and copper alloys.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2016

ISBN 978 0 580 92585 6

ICS 77.120.30

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2016.

Amendments/corrigenda issued since publication

Date	Text affected
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EUROPEAN STANDARD

EN 1412

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2016

ICS 77.120.30

Supersedes EN 1412:1995

English Version

Copper and copper alloys - European numbering system

Cuivre et alliages de cuivre - Système européen de désignation numérique

Kupfer und Kupferlegierungen - Europäisches Werkstoffnummernsystem

This European Standard was approved by CEN on 30 September 2016.

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EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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European foreword

This document (EN 1412:2016) has been prepared by Technical Committee CEN/TC 133 “Copper and copper alloys”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1412:1995.

In comparison with EN 1412:1995, the following significant changes were made:

- a) allocation of ranges for the numeric part of a material number to material groups;
- b) addition of provisions how to assign the numeric part of a material number to individual materials;
- c) removal of the provisions for not standardized materials.

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Introduction

The numbering system described in this European Standard is an alternative to the material symbol designation system given in ISO 1190-1.

1 Scope

This European Standard establishes a numbering system for designation copper or copper alloys manufactured and/or used in Europe and the responsibility for the allocation and administration of numbers for individual copper materials.

The system is applicable to copper materials standardized in European Standards.

2 Terms and definitions

For the purposes of this document, the following term and definition applies.

2.1

copper material

general term for copper and copper alloys

3 Details of the system

3.1 General

The number shall be composed of alphabetic (upper case Latin letters) and numeric (Arabic) characters.

The system shall provide only one number for each material. A number assigned to an individual material shall not be assigned to another material even if the first mentioned material has been withdrawn.

3.2 Structure of numbers

3.2.1 Complete number

The number shall consist of six characters.

3.2.2 Position of characters

3.2.2.1 General

The positions of characters are as follows:



3.2.2.2 Position 1

The character for the first position shall be the letter “C” to designate copper material.

3.2.2.3 Position 2

The character for the second position shall be one of the following letters, whose significance is given as follows:

- B** materials in ingots form for remelting to produce cast products;
- C** materials in the form of cast products;
- F** filler materials for brazing and welding;
- M** master alloys;
- R** refined unwrought copper;
- S** materials in the form of scrap;

W materials in the form of wrought products.

3.2.2.4 Position 3 to 5

The character for the third, fourth and fifth positions shall be a number from the range allocated to one of the material groups given in Table 1. There is no particular significance attributed to any of these characters within one range.

The same number shall be assigned to materials with the same chemical composition (e.g. material in the form of wrought products and the same material in form of scrap). Materials with a different chemical composition shall not be assigned to the same number, unless the materials are in a direct process flow (e.g. material in ingots form for remelting to produce cast products and the corresponding material in form of cast products).

3.2.2.5 Position 6

The character for the 6th position shall be a letter designating one of the material groups given in Table 1. There is no particular significance attributed to any of these letters within one material group.

3.2.2.6 Examples

CW024A;

CB752S;

CC383H.

4 Allocation and administration of material numbers

NOTE CEN/TC 133 is responsible for the allocation and administration of material numbers.

Table 1 — Significance of positions 3 to 6

Material group	Position 3, 4 and 5 ^a (a number in the range)	Position 6 (letter designating material group)
Copper	000 to 099	A or B
Copper alloys, low alloyed (less than 5 % alloying elements)	100 to 199	C or D
Miscellaneous copper alloys (5 % or more alloying elements)	200 to 299	E or F
Copper-aluminium alloys	300 to 349	G
Copper-nickel alloys	350 to 399	H
Copper-nickel-zinc alloys	400 to 449	J
Copper-tin alloys	450 to 499	K
Copper-zinc alloys, binary	500 to 599	L or M
Copper-zinc-lead alloys	600 to 699	N or P
Copper-zinc alloys, complex	700 to 799	R or S
^a Range of 800 to 999 to be used as a reserve.		

Bibliography

- [1] ISO 1190-1, *Copper and copper alloys — Code of designation — Part 1: Designation of materials*

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BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK