

Copper and copper alloys - Wire for general purposes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Copper and copper alloys - Wire for general purposes

Cuivre et alliages de cuivre - Fils pour usages généraux

Kupfer und Kupferlegierungen - Drähte zur
allgemeinen Verwendung

This European Standard was approved by CEN on 9 April 2016.

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Contents

Page

European foreword.....	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Designation.....	8
4.1 Material.....	8
4.1.1 General.....	8
4.1.2 Symbol.....	8
4.1.3 Number	8
4.2 Material condition	8
4.3 Product.....	8
5 Ordering information	10
6 Requirements	13
6.1 Composition	13
6.2 Mechanical properties.....	13
6.3 Grain size.....	13
6.4 Dimensions and tolerances	13
6.4.1 Diameter or width across-flats.....	13
6.4.2 Shape tolerances for round wire	13
6.4.3 Corner and edge geometry (wire with square and rectangular cross-section only)	13
6.5 Joins.....	14
6.6 Surface quality.....	14
7 Sampling.....	14
7.1 General.....	14
7.2 Analysis.....	14
7.3 Tensile, hardness and grain size tests	15
8 Test methods	15
8.1 Analysis.....	15
8.2 Tensile test	15
8.3 Hardness test	15
8.4 Estimation of average grain size.....	16
8.5 Retests.....	16
8.6 Rounding of results	16
9 Declaration of conformity and inspection documentation.....	16
9.1 Declaration of conformity	16
9.2 Inspection documentation.....	17
10 Marking, packaging, labelling.....	17
Annex A (informative) Position of wire cross-section within a coil, reel, spool or drum	40
Bibliography.....	42

Figures

Figure 1 — Calculation of corner radii	14
Figure A.1 — Illustration of position of wire cross-section within the coil (bunched wound or stagger/traverse wound)	40
Figure A.2 — Illustration of position of wire cross-section within the reel/spool/drum (stagger/traverse wound)	40
Figure A.3 — Illustration of position of wire cross-section within the coil (bunched wound or stagger/traverse wound)	41
Figure A.4 — Illustration of position of wire cross-section within the reel/spool/drum (stagger/traverse wound)	41

Tables

Table 1 — Composition of low alloyed copper alloys	18
Table 2 — Composition of copper-nickel-zinc alloys	21
Table 3 — Composition of copper-tin alloys	21
Table 4 — Composition of copper-zinc alloys	22
Table 5 — Composition of copper-zinc-lead alloys	23
Table 6 — Composition of complex copper-zinc alloys	24
Table 7 — Mechanical properties of wire of low alloyed copper alloys	24
Table 8 — Mechanical properties of wire of copper-nickel-zinc alloys	27
Table 9 — Mechanical properties of wire of copper-tin alloys	29
Table 10 — Mechanical properties of wire of copper-zinc alloys	31
Table 11 — Mechanical properties of wire of copper-zinc-lead alloys	35
Table 12 — Mechanical properties of wire of complex copper-zinc alloys	36
Table 13 — Grain size designations	37
Table 14 — Tolerances on diameter of round wire	37
Table 15 — Tolerances on width across-flats of square or regular polygonal wire	38
Table 16 — Tolerances on width and thickness of rectangular wire	38
Table 17 — Corner radii for square or rectangular wire	39
Table 18 — Sampling rate	39

European foreword

This document (EN 12166:2016) 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 January 2017, and conflicting national standards shall be withdrawn at the latest by January 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 12166:2011.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 4 “Extruded and drawn products, forgings and scrap” to revise the following standard:

— EN 12166:2011, *Copper and copper alloys — Wire for general purposes*.

This document is one of a series of European Standards for the copper and copper alloy products rod, wire, profile and forgings. Other products are specified as follows:

- EN 12163, *Copper and copper alloys — Rod for general purposes*;
- EN 12164, *Copper and copper alloys — Rod for free machining purposes*;
- EN 12165, *Copper and copper alloys — Wrought and unwrought forging stock*;
- EN 12167, *Copper and copper alloys — Profiles and bars for general purposes*;
- EN 12168, *Copper and copper alloys — Hollow rod for free machining purposes*;
- EN 13601, *Copper and copper alloys — Copper rod, bar and wire for general electrical purposes*;
- EN 13602, *Copper and copper alloys — Drawn, round copper wire for the manufacture of electrical conductors*;
- EN 13605, *Copper and copper alloys — Copper profiles and profiled wire for electrical purposes*.

In comparison with EN 12166:2011, the following significant technical changes were made:

- a) introduction of an optional procedure how to refer to restrictions to the chemical composition imposed by the 4 MS Common Composition List for materials used for products accepted for contact with drinking water;
- b) provisions for surface quality added.

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Introduction

The European Committee for Standardization (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning the alloy CuZn21Si3P (CW724R) given in 6.1.

CEN takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has ensured the CEN that he is willing to negotiate licenses either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with CEN. Information may be obtained from:

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Due to developing legislation, the composition of a material may be restricted to the composition specified in this European Standard with respect to individual uses (e.g. for the use in contact with drinking water in some Member States of the European Union). These individual restrictions are not part of this European Standard. Nevertheless, for materials for which traditional and major uses are affected, these restrictions are indicated. The absence of an indication, however, does not imply that the material can be used in any application without any legal restriction.

1 Scope

This European Standard specifies the composition, property requirements and dimensional tolerances for copper alloy wire, finally produced by drawing, rolling or extruding, intended for general purposes, spring and fastener manufacturing applications.

The sampling procedures and the methods of test for verification of conformity to the requirements of this European Standard are also specified.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1173, *Copper and copper alloys - Material condition designation*

EN 1412, *Copper and copper alloys - European numbering system*

EN 1655, *Copper and copper alloys - Declarations of conformity*

EN 10204, *Metallic products - Types of inspection documents*

EN ISO 2624, *Copper and copper alloys - Estimation of average grain size (ISO 2624)*

EN ISO 6507-1, *Metallic materials - Vickers hardness test - Part 1: Test method (ISO 6507-1)*

EN ISO 6892-1, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1)*

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

3 Terms and definitions

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

3.1

wire

wound product of uniform cross-section along its whole length

Note 1 to entry: Rectangles may have round or sharp corners.

3.2

deviation from circular form

difference between the maximum and the minimum diameters measured at any one cross-section of a round product

[SOURCE: EN 12163:2016, 3.2]