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de l'accréditation, de la sécurité et qualité
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ILNAS-EN 12861:2018

Copper and copper alloys - Scrap

Cuivre et alliages de cuivre - Scrappes

Kupfer und Kupferlegierungen - Schrotte

05/2018



National Foreword

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EUROPEAN STANDARD ^{ILNAS-EN 12861:2018} **EN 12861**
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English Version

Copper and copper alloys - Scrap

Cuivre et alliages de cuivre - Scrappes

Kupfer und Kupferlegierungen - Schrotte

This European Standard was approved by CEN on 22 January 2018.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 12861:2018) 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of an identical text or by endorsement, at the latest by November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

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 12861:1999.

Within its programme of work, Technical Committee CEN/TC 133 “Copper and copper alloys” prepare the following revision of the standard:

EN 12861:1999, *Copper and copper alloys — Scrap*

In comparison with EN 12861:1999, the following significant technical changes were made:

- a) replacement of secondary raw materials by metallic raw materials;
- b) modification of material numbers for S-Cu-1, S-Cu-2, S-Cu-3, S-Cu-4, S-Cu-5, S-Cu-10A, S-CuZn-1A, S-CuZn-1B, S-CuZn-1C, S-CuZn-2 and S-CuZn-3;
- c) modification of subclauses B.4 “Type S-CuZn-4” (Cu max. 65 % Copper-zinc alloy) and B.5 “Type S-CuZn-5” (Cu max. 65 % Copper-zinc alloy turnings);
- d) introduction of the new subclauses B.8 “Type S-CuZn-8” (Silicon bearing copper-zinc alloys) and B.9 “Type S-CuZn-9” (Silicon bearing copper-zinc alloys turnings);
- e) renumbering of annexes.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for characteristics, condition, moisture, composition, metal content, metal yield and test procedures of metallic raw materials for direct melting (melting grades) in the form of copper and copper alloy scrap.

All provisions of this European Standard apply regardless of the legal status of the scrap. The respective legal requirements should be met.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 12451, *Copper and copper alloys - Seamless, round tubes for heat exchangers*

EN ISO 80000-1:2013, *Quantities and units - Part 1: General (ISO 80000-1:2009 + Cor 1:2011)*

3 Terms and definitions

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

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

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

3.1

scrap for direct melting

metallic raw material with levels of impurity elements which would not prohibit its use for direct melting, with or without preliminary mechanical treatment

Note 1 to entry: Examples for preliminary mechanical treatment are baling, fragmenting and crushing.

Note 2 to entry: According to the Directive 2008/98/EC of the European Parliament and of the Council on waste and to Commission Regulation (EU) No 715/2013 establishing criteria determining when copper scrap ceases to be waste, metallic raw materials may be considered as “waste” or as “by-products”, or may have “end-of-waste status”. Depending on its legal status metallic raw material may either be regulated by the European waste legislation or by the European chemicals legislation, notably Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

3.1.1

production scrap

clean metallic raw material arising from production processes (e.g. offcuts from casting, rolling, extrusion, forging) or from further processing

Note 1 to entry: E.g. stamping grids.

3.1.2

old scrap

metallic raw material other than material specified as “production scrap”

Note 1 to entry: See 3.1.1.

3.2

free from (substance)

maximum quantity of substances adhering to the scrap:

- 0,005 % (mass fraction) for metallic impurities;
- 0,2 % (mass fraction) for moisture;
- 0,05 % (mass fraction) for other non-metallic impurities

3.3

excluded (substance)

maximum quantity of substances adhering to the scrap:

- 0,000 1 % (mass fraction) for metallic impurities;
- 0,001 % (mass fraction) for non-metallic impurities

3.4

clean material

state of the material free from foreign substances

Note 1 to entry: E.g. paper, dirt, liquid residues, grease, plastics (see 3.2 for definition “free from” and 3.6 for definition “foreign substances”).

3.5

bright material

material which neither intentionally nor unintentionally had been subject to any process that resulted in a coating

Note 1 to entry: See 3.7 (e.g. oxidation or other surface changes due to environmental interactions and/or changes due to their usage).

3.6

foreign substances

material, other than specified in this standard, whether metallic or non-metallic including free iron

Note 1 to entry: See 3.8.

3.7

coated, plated or enamelled material

material with any kind of coating or plating, independent of the process of coating or plating

Note 1 to entry: E.g. paint, varnish, print, plastics or metals (e.g. aluminium, lead, chromium, nickel, tin).

3.8

free iron

ferrous materials (e.g. steels) either magnetic or non-magnetic

3.9

moisture

any liquid (single- or multi-phase) that adheres to the scrap when it reaches the point of delivery due to fabrication, usage or pick-up during storage