SLOVENSKI STANDARD
SIST EN 12861:2000

01-november-2000

Baker in bakrove zlitine - Tehnološki kovinski odpadki

Copper and copper alloys - Scrap

Kupfer und Kupferlegierungen - Schrotte

Cuivre et alliages de cuivre - Scrappes

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: **EN 12861:1999**

SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

ICS:

77.150.30 Bakreni izdelki Copper products

SIST EN 12861:2000 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

SIST EN 12861:2000

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

SIST EN 12861:2000

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12861

July 1999

ICS 77.150.30

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 1 July 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

© 1999 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 12861:1999 E

SIST EN 12861:2000

Contents

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

SIST EN 12861:2000

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 133 "Copper and copper alloys", the secretariat of which is held by DIN.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 11 "Scrap" to prepare the following standard:

EN 12861
Copper and copper alloys – Scrap

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 2000, and conflicting national standards shall be withdrawn at the latest by January 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

SIST EN 12861:2000

1 Scope

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

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1652
Copper and copper alloys – Plate, sheet, strip and circles for general purposes

EN 1654
Copper and copper alloys – Strip for springs and connectors

EN 12167
Copper and copper alloys – Profiles and rectangular bar for general purposes

EN 12449
Copper and copper alloys – Seamless, round tubes for general purposes

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

NOTE: Informative references to documents used in the preparation of this standard, and cited at the appropriate places in the text, are listed in a bibliography, see annex A.

SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 scrap for direct melting

Metallic product with levels of impurity elements which would not prohibit its use for direct melting, with or without preliminary mechanical treatment (e.g. baling, fragmenting, crushing).

3.1.1 production scrap

Clean metallic product arising from production processes (e.g. offcuts from casting, rolling, extrusion, forging) or from further processing (e.g. stamping grids).

3.1.2 old scrap

Metallic product other than material specified as "production scrap" (see 3.1.1).

3.2 free from ..... (substance)

Maximum quantity of substances adhering to the scrap:

– 0,005 % (m/m) for metallic impurities;

– 0,2 % (m/m) for moisture;

SIST EN 12861:2000

– 0,05 % (m/m) for other non-metallic impurities.

3.3 excluded ..... (substance)

Maximum quantity of substances adhering to the scrap:

– 0,000 1 % (m/m) for metallic impurities;

– 0,001 % (m/m) for non-metallic impurities.

3.4 clean material

State of the material free from foreign substances (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 (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 (see 3.8).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

3.7 coated, plated or enamelled material

SIST EN 12861:2000

Material with any kind of coating or plating, independent of the process of coating or plating, 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.

3.10 impurities

Metallic or non-metallic elements present but which are not intentionally added to or retained by a metal.

3.11 remainder

Percentage content of the element calculated by difference from 100 % (m/m).

3.12 mass deduction

Quantity being deducted from mass in case of exceeding limits that have been stipulated in this standard.

SIST EN 12861:2000

3.13 inspection lot

Consignment or a part thereof submitted for inspection by the purchaser.

3.14 representative sample

Sample, fully representing the range of scrap in an inspection lot.

3.15 metal content

Net mass of the inspection lot after deduction of all foreign substances including moisture.

4 Designations

4.1 Material

The material is designated either by symbol or number (see annexes B to E). The material number designation is in accordance with the system given in EN 1412.

4.2 Product

The product designation provides a standardized pattern of designation from which a rapid and unequivocal description of a product is conveyed in communication. It provides mutual comprehension at the international level with regard to products which meet the requirements of the relevant European Standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

The product designation is no substitute for the full content of the standard.

SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

The product designation for products to this standard shall consist of:

- denomination (Scrap);
- number of this European Standard (EN 12861);
- material designation, either symbol or number (see tables in annexes B to E);
- diameter class, if specified (see tables in annexes B to E).

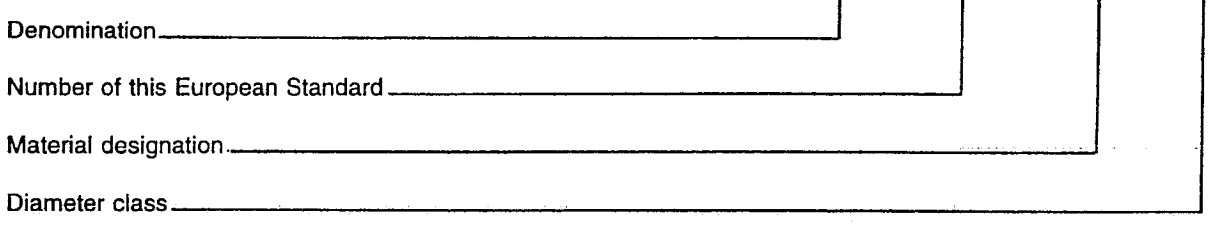
The derivation of a product designation is shown in the following example.

EXAMPLE:
Scrap conforming to this standard, in material designated either S-Cu-1 or CS026A, diameter class A, shall be designated as follows:

Scrap EN 12861 – S-Cu-1 – A

or

Scrap EN 12861 – CS026A – A



SIST EN 12861:2000

5 Ordering information

In order to facilitate the enquiry, order and confirmation of order procedures between the purchaser and the supplier, the purchaser shall state on his enquiry and order the following information:

a) quantity of material required (mass);

b) denomination (Scrap);

c) number of this European Standard (EN 12861);

d) material designation (see annexes B to E);

e) diameter class, if specified (see annexes B to E).

NOTE: It is recommended that the product designation, as described in 4.2, is used for items b) to e).

In addition, the purchaser shall also state on the enquiry and order any of the following, if required:

f) form of packaging.

EXAMPLE 1:
Ordering details for 20 t scrap conforming to EN 12861, in material designated either S-Cu-1 or CS026A, diameter class A:

20 t Scrap EN 12861 – S-Cu-1 – A

or

20 t Scrap EN 12861 – CS026A – A

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474540/sist-en-12861-2000

EXAMPLE 2:
Ordering details for 15 t scrap conforming to EN 12861, in material designated either S-CuNi15 or CS350H:

15 t Scrap EN 12861 – S-CuNi15

or

15 t Scrap EN 12861 – CS350H

6 Requirements

6.1 Characteristics

The characteristics shall conform to the requirements for the appropriate material given in annexes B to E.

6.2 Condition

The condition of the scrap shall conform to the requirements for the appropriate material given in annexes B to E. Briquetted or baled material may be supplied subject to agreement between the purchaser and the supplier. Unless otherwise agreed, the maximum dimension of each piece shall not be greater than 800 mm × 500 mm × 400 mm and shall not exceed 200 kg.

6.3 Moisture

The moisture shall conform to the requirements for the appropriate material given in annexes B to E. The test(s) shall be carried out in accordance with table 1. The moisture content shall be determined upon presentation of the inspection lot to the agreed receiving point.

SIST EN 12861:2000

6.4 Composition

The compositions given in annexes B to E refer to the analytical results obtained, using "state of the art" techniques, from a representative sample taken from an inspection lot. If necessary, the representative sample shall be dried and melted before analysis.

Reference methods shall be the appropriate EN or ISO Standards agreed between the disputing parties.

It is the right of the supplier not to accept the classification of the purchaser and require an audit in arbitration with the presence of a third party accepted by both the purchaser and the supplier.

The composition shall conform to the requirements for the appropriate material given in annexes B to E.

The scrap shall be free from the following elements, provided they are not alloying elements:

– cadmium, bismuth, selenium, antimony, cobalt.

The following elements shall be excluded, provided they are not alloying elements:

– beryllium, mercury, tellurium.

6.5 Metal content/metal yield

The metal content or metal yield shall conform to the requirements for the appropriate material given in annexes B to E.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

6.6 Deliveries against contract

Unless agreed between the purchaser and the supplier, for contract quantities from 10 000 kg up to and including 300 000 kg, the difference between that and the total quantity delivered shall not exceed 1 % (m/m). If the contract quantity is smaller than 10 000 kg, the difference shall not exceed 100 kg. If the contract quantity is larger than 300 000 kg, the difference shall not exceed 3 000 kg.

6.7 Additional requirements

If not otherwise specified in annexes B to E, the following applies:

The scrap shall be free from:

– mica, asbestos, plastic, PVC, rubber, paper impregnated with oil.

The following substances shall be excluded according to definition 3.3 unless there are European or national laws which must take precedence:

– chlorine;

– materials being recognized as substances that deplete the ozone layer of the earth.

No radioactively contaminated scrap or radioactively contaminated substances adhering to the scrap or mixed with the scrap (see figure 1) shall be accepted.

SIST EN 12861:2000

7 Inspection of incoming material

7.1 General

The inspection scheme given in figure 1 shall be applied.

In the case of separately identifiable sources of scrap, it nevertheless may be delivered as a single consignment subject to agreement between the purchaser and the supplier. The scrap from each source shall be inspected separately.

The test procedures shall be carried out on representative samples. For expression of results, the rounding rules given in 7.5 shall be used.

In case of dispute with respect to sampling or testing methods or their results, arbitration shall be agreed between the purchaser and the supplier.

7.2 Time limits

All scrap is accepted with reservation on qualitative control at the purchaser's plant. Within 5 working days from receipt of the material the purchaser shall advise the supplier on the classification and moisture content of the material accepted with reservation. The 5 working days term shall be increased to 10 days if further analysis is required to ensure that the delivered type is in accordance with the one declared.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000

SIST EN 12861:2000

7.3 Test procedures

The test procedures given in table 1 shall be used as appropriate.

Table 1: Test procedures

Characteristic	Test procedure
Moisture	– Estimation – Weighing before and after removal of the moisture from a representative sample • Removal of the moisture shall be achieved by heating to a maximum temperature of 350 °C until no more weight changes are detected
Free iron	– Estimation – Presorting and weighing – Other methods subject to agreement between the purchaser and the supplier.
Composition	– Quantitative analysis methods subject to agreement between the purchaser and the supplier.
Size and diameter	– Measurement
Amount of insulation	– Estimation – Other methods subject to agreement between the purchaser and the supplier.
Metal content	– Estimation – Determination of the content of moisture and foreign substances in a representative sample using methods subject to agreement between the purchaser and the supplier.
Metal yield	– Estimation – Determination of the content of moisture and free iron in a representative sample followed by remelting and weighing of the ingot. The remelting shall be performed in a furnace, with the sample covered by suitable means, e.g. salt and the superheat limited to 100 °C.
Foreign substances	– Estimation – Dissolution of the metal in nitric acid for the determination of non-metallic substances

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 12861:2000
https://standards.iteh.ai/catalog/standards/sist/a10b54c0-ef10-41a8-be37-464dda474340/sist-en-12861-2000