



SLOVENSKI STANDARD

oSIST prEN 12451:2026

01-november-2026

Baker in bakrove zlitine - Nevarjene cevi z okroglim prerezom za toplotne izmenjevalnike

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

Kupfer und Kupferlegierungen - Nahtlose Rundrohre für Wärmeaustauscher

Cuivre et alliages de cuivre - Tubes ronds sans soudure pour échangeurs thermiques

Ta slovenski standard je istoveten z: prEN 12451

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ICS:

23.040.15	Cevi iz neželeznih kovin	Non-ferrous metal pipes
77.150.30	Bakreni izdelki	Copper products

oSIST prEN 12451:2026

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 12451

August 2026

ICS 23.040.15; 77.150.30

Will supersede EN 12451:2012

English Version

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

Cuivre et alliages de cuivre - Tubes ronds sans soudure
pour échangeurs thermiques

Kupfer und Kupferlegierungen - Nahtlose Rundrohre
für Wärmeaustauscher

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 133.

If this draft becomes a European Standard, 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.

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Ref. No. prEN 12451:2026 E

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European foreword

This document (prEN 12451:2026) has been prepared by Technical Committee CEN/TC 133 “Copper and copper alloys”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12451:2012.

This document includes the following significant technical changes with respect to EN 12451:2012:

- normative references updated;
- Directive 97/23/EC replaced by 2014/68/EU;
- EN 1655 replaced by EN ISO/IEC 17050-1:2010 and EN ISO/IEC 17050-2:2004;
- in 7.1 the sampling rate modified and the billet inward stage included for carrying out analysis;
- Table 6 “Sampling rate” deleted.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

This is one of a series of European Standards for copper and copper alloy tubes. Other products are specified as follows:

- EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*
- EN 12449, *Copper and copper alloys — Seamless, round tubes for general purposes*
- EN 12450, *Copper and copper alloys — Seamless, round copper capillary tubes*
- EN 12452, *Copper and copper alloys — Rolled, finned, seamless tubes for heat exchangers*
- EN 12735-1, *Copper and copper alloys — Seamless, round copper tubes for air conditioning and refrigeration — Part 1: Tubes for piping systems*
- EN 12735-2, *Copper and copper alloys — Seamless, round copper tubes for air conditioning and refrigeration — Part 2: Tubes for equipment*
- EN 13348, *Copper and copper alloys — Seamless, round copper tubes for medical gases or vacuum*
- EN 13349, *Copper and copper alloys — Pre-insulated copper tubes with solid covering*
- EN 13600, *Copper and copper alloys — Seamless copper tubes for electrical purposes*

1 Scope

This document specifies the composition, property requirements and tolerances on dimensions and form for seamless round drawn copper and copper alloy tubes for heat exchangers, condensers, evaporators and desalination equipment. It is applicable to copper and copper alloy tubes supplied in the size range from 6 mm up to and including 76 mm outside diameter and from 0,5 mm up to and including 3 mm wall thickness.

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

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 764-5:2014, *Pressure equipment — Part 5: Inspection documentation of metallic materials and compliance with the material specification*

EN 1971-1:2019, *Copper and copper alloys — Eddy current test for measuring defects on seamless round copper and copper alloy tubes — Part 1: Test with an encircling test coil on the outer surface*

EN 1971-2:2019, *Copper and copper alloys — Eddy current test for measuring defects on seamless round copper and copper alloy tubes — Part 2: Test with an internal probe on the inner surface*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 16090:2019, *Copper and copper alloys — Estimation of average grain size by ultrasound*

EN ISO 196:1995, *Wrought copper and copper alloys — Detection of residual stress — Mercury (I) nitrate test (ISO 196:1978)*

EN ISO 2624:1995, *Copper and copper alloys — Estimation of average grain size (ISO 2624:1990)*

EN ISO 6507-1:2023, *Metallic materials — Vickers hardness test — Part 1: Test method (ISO 6507-1:2023)*

EN ISO 6892-1:2019, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1:2019)*

EN ISO 8493:2004, *Metallic materials — Tube — Drift-expanding test (ISO 8493:1998)*

EN ISO/IEC 17050-1:2010, *Conformity assessment — Supplier's declaration of conformity — Part 1: General requirements (ISO/IEC 17050-1:2004, corrected version 2007-06-15)*

EN ISO/IEC 17050-2:2004, *Conformity assessment — Supplier's declaration of conformity — Part 2: Supporting documentation (ISO/IEC 17050-2:2004)*

ISO 6957:1988, *Copper alloys — Ammonia test for stress corrosion resistance*