BS EN 13599:2014

BSI Standards Publication

Copper and copper alloys — Copper plate, sheet and strip for electrical purposes

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National foreword

This British Standard is the UK implementation of EN 13599:2014. It supersedes BS EN 13599:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee NFE/34/1, Wrought and unwrought copper and copper alloys.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2014.

Amendments issued since publication

Date	Text affected

EUROPEAN STANDARD

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EN 13599

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Supersedes EN 13599:2002

English Version

Copper and copper alloys - Copper plate, sheet and strip for electrical purposes

Cuivre et alliages de cuivre - Plaques, tôles et bandes en cuivre pour usages électriques

Kupfer und Kupferlegierungen - Platten, Bleche und Bänder aus Kupfer für die Anwendung in der Elektrotechnik

This European Standard was approved by CEN on 3 November 2013.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 13599:2014) 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 July 2014, and conflicting national standards shall be withdrawn at the latest by July 2014.

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

This document supersedes EN 13599:2002.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 2 “Rolled flat products” to revise the following standard:

EN 13599:2002, *Copper and copper alloys — Copper plate, sheet and strip for electrical purposes*

The products specified in this European Standard are those which are especially suitable for electrical purposes, i.e. with specified electrical properties. Copper plate, sheet and strip for general purposes are specified in EN 1652.

This is one of a series of European Standards for copper products for electrical purposes. Other copper products are specified as follows:

EN 13600, *Copper and copper alloys — Seamless copper tubes for electrical 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 13604, *Copper and copper alloys — Products of high conductivity copper for electronic tubes, semiconductor devices and vacuum applications*

EN 13605, *Copper and copper alloys — Copper profiles and profiled wire for electrical purposes*

In comparison with EN 13599:2002, the following significant changes were made:

a) Table 2, Cu-FRHC, other elements – content has been modified and a new footnote “d” has been added;

b) the normative references have been updated.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the composition, property requirements including electrical properties, and tolerances on dimensions and form for copper plate, sheet and strip for electrical purposes with thicknesses from 0,05 mm up to and including 25 mm and widths from 10 mm up to and including 1 250 mm.

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

EN 1976, *Copper and copper alloys - Cast unwrought copper products*

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

EN ISO 2626, *Copper - Hydrogen embrittlement test (ISO 2626)*

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)*

EN ISO 7438, *Metallic materials - Bend test (ISO 7438)*

ISO 1811-2, *Copper and copper alloys — Selection and preparation of samples for chemical analysis — Part 2: Sampling of wrought products and castings*

3 Terms and definitions

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

3.1
plate
flat rolled product of rectangular cross-section with uniform thickness greater than 10 mm

3.2
sheet
flat rolled product of rectangular cross-section with uniform thickness from 0,2 mm up to and including 10 mm, supplied in straight lengths, usually with sheared or sawn edges

Note 1 to entry: The thickness does not exceed one tenth of the width.

3.3
strip
flat rolled product of rectangular cross-section with uniform thickness from 0,05 mm up to and including 5,0 mm manufactured in coil and supplied in as sheared coils, traverse wound coils or cut to length, usually with slit edges

Note 1 to entry: The thickness does not exceed one tenth of the width.