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BSI Standards Publication

Copper and copper alloys — Plumbing fittings

Part 1: Capillary fittings for soldering or brazing to copper tubes

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National foreword

This British Standard is the UK implementation of EN 1254-1:2021. It supersedes BS EN 1254-1:1998, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee NFE/34/3, Copper and copper alloy fittings for tube and pipe.

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

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English Version

Copper and copper alloys - Plumbing fittings - Part 1: Capillary fittings for soldering or brazing to copper tubes

Cuivre et alliages de cuivre - Raccords - Partie 1 :
Raccords à braser par capillarité pour tubes en cuivre

Kupfer und Kupferlegierungen - Fittings - Teil 1:
Weich- und Hartkapillarlöt fittings für Kupferrohre

This European Standard was approved by CEN on 23 November 2020.

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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
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European foreword

This document (EN 1254-1:2021) 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of an identical text or by endorsement, at the latest by November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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 1254-1:1998.

The main changes compared to EN 1254-1:1998 are:

- separation of test methods into part 20.

This part of the standard (EN 1254-1) should be read in conjunction with EN 1254-20:2021.

EN 1254 comprises the following parts under the general title "Copper and copper alloys — Plumbing fittings":

- *Part 1: Capillary fittings for soldering or brazing to copper tubes*
- *Part 2: Compression fittings for use with copper tubes*
- *Part 3: Compression fittings for use with plastics and multilayer pipes*
- *Part 4: Threaded fittings*
- *Part 5: Capillary fittings with short ends for brazing to copper tubes*
- *Part 6: Push-fit fittings for use with metallic tubes, plastics and multilayer pipes*
- *Part 7: Press fittings for use with metallic tubes*
- *Part 8: Press fittings for use with plastics and multilayer pipes*
- *Part 20: Definitions, thread dimensions, test methods, reference data and supporting information*

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Products complying with this document may be used for several fluids including the transport of water intended for human consumption if they comply with the relevant national, regional or local regulatory provisions applicable in the place of use.

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1 Scope

This document specifies product characteristics, assessment methods, compliance criteria of the test results and a designation system for fittings with ends for capillary soldering or capillary brazing for connecting with copper tubes e.g. EN 1057, EN 13348, EN 13349, EN 12735-1, EN 12735-2 etc. For the purposes of joining copper tubes, the fitting ends have a nominal diameter from 6 mm to 108 mm. These fitting ends exist in three forms: end feed fittings, integral solder and integral brazing ring fitting ends. The fittings are designed for a service lifetime up to fifty years.

The fittings are used up to the operating temperatures and corresponding maximum operating pressures as indicated in Annex A.

This document applies to copper alloy fittings. A non-exhaustive list of these copper alloys is given in CEN/TS 13388.

The capillary fittings for soldering or brazing to copper tubes are used with solder alloys in accordance with alloys specified in EN ISO 9453 and brazing alloys in accordance with alloys specified in EN ISO 17672.

Adaptor fittings for use with copper tubes may combine capillary soldering or capillary brazing ends with fitting ends defined in the other parts of EN 1254.

Capillary fittings for soldering or brazing may also have flanged end connections according to EN 1092-3.

Capillary fittings for soldering or brazing may also have a plated or other decorative surface coating.

Fittings can be produced by machining, metal forming, casting or fabrication.

Products covered by this document are intended to be used in:

a) liquid applications:

- hot, cold or combined hot and cold water, including systems according to EN 806;
- closed heating systems according to EN 12828;
- cooling systems;
- drainage systems;
- fire protection systems including sprinkler systems according to EN 12845;
- refrigeration systems;
- supply systems for points of consumption with liquid fuels according to EN 12514.

b) gas applications:

- natural gas and liquefied petroleum gas systems with a maximum operating pressure less than or equal to 5 bar according to EN 1775;
- gas line systems with an operating pressure exceeding 0,5 bar for industrial installations and exceeding 5 bar for industrial and non-industrial installations according to EN 15001-1;
- compressed air systems;
- medical gas systems according to EN ISO 7396;
- refrigeration systems.