



SLOVENSKI STANDARD

SIST EN 1254-3:2000

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Baker in bakrove zlitine - Fitingi - 3. del: Fitingi z nakrčenima priključkoma za spajanje s plastičnimi cevmi

Copper and copper alloys - Plumbing fittings - Part 3: Fittings with compression ends for use with plastics pipes

Kupfer und Kupferlegierungen - Fittings - Teil 3: Klemmverbindungen für Kunststoffrohre

Cuivre et alliages de cuivre - Raccords - Partie 3: Raccords à compression pour tuyaux en plastique

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EUROPEAN STANDARD

EN 1254-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1998

ICS 23.040.40

Descriptors: plastic tubes, copper, copper alloys, pipe fittings, joining, dimensions, dimensional tolerances, design, manufacturing, tests, designation, marking

English version

Copper and copper alloys - Plumbing fittings - Part 3: Fittings with compression ends for use with plastics pipes

Cuivre et alliages de cuivre - Raccords - Partie 3: Raccords à compression pour tuyaux en plastique

Kupfer und Kupferlegierungen - Fittings - Teil 3: Klemmverbindungen für Kunststoffrohre

This European Standard was approved by CEN on 24 November 1997.

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.

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

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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.

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 1998, and conflicting national standards shall be withdrawn at the latest by July 1998.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 8 "Copper and copper alloy fittings" to prepare the following standard:

EN 1254-3 Copper and copper alloys - Plumbing fittings - Part 3: Fittings with compression ends for use with plastics pipes

This standard is one of five parts for copper and copper alloy fittings for joining copper tubes or plastics pipes. The other four parts of the standard are:

EN 1254-1 Copper and copper alloys - Plumbing fittings - Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes

EN 1254-2 Copper and copper alloys - Plumbing fittings - Part 2: Fittings with compression ends for use with copper tubes

EN 1254-4 Copper and copper alloys - Plumbing fittings - Part 4: Fittings combining other end connections with capillary or compression ends

EN 1254-5 Copper and copper alloys - Plumbing fittings - Part 5: Fittings with short ends for capillary brazing to copper tubes

It is recommended that fittings manufactured to this standard are certified as conforming to the requirements of this standard, based on third party testing and continuing surveillance which should be coupled with an assessment of a supplier's quality system against the appropriate standard i.e. EN ISO 9001 or EN ISO 9002.

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this standard:

- 1) this standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA;
- 2) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

The attention of the user of this standard is drawn to the fact that national or local regulations or practices might restrict the choice of dimensions and threads in the application of products conforming to this standard.

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.

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1 Scope

This European Standard specifies materials, assembly dimensions and tolerances and test requirements for fittings of copper and copper alloys with or without plating or coating. This part of EN 1254 specifies connection end dimensions of compression ends for the purpose of joining plastics pipes for use in cold or combined hot and cold water systems or non-fuel gas systems. Fittings may comprise a combination of any of the end types specified in EN 1254-1 to EN 1254-5 or other standards.

The standard establishes a designation system for the fittings.

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.

- SIST EN 1254-3:2000
<http://standards.iteh.ai/catalog/standards/sis/b7111-1254-3-1998>
18578ce745fb/sist-en-1254-3-2000
- EN 712 Thermoplastics piping systems - End-load bearing mechanical joints between pressure pipes and fittings - Test method for resistance to pull-out under constant longitudinal force
- EN 713 Plastics piping systems - Mechanical joints between fittings and polyolefin pressure pipes - Test method for leaktightness under internal pressure of assemblies subjected to bending
- EN 715 Thermoplastics piping systems - End-load bearing joints between small diameter pressure pipes and fittings - Test method for leaktightness under internal water pressure, including end thrust
- EN 911 Plastics piping systems - Elastomeric sealing ring type joints and mechanical joints for thermoplastics pressure piping - Test method for leaktightness under external hydrostatic pressure

- EN 1254-1 Copper and copper alloys - Plumbing fittings - Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes
- EN 1254-2 Copper and copper alloys - Plumbing fittings - Part 2: Fittings with compression ends for use with copper tubes
- EN 1254-4 Copper and copper alloys - Plumbing fittings - Part 4: Fittings combining other end connections with capillary or compression ends
- EN 1254-5 Copper and copper alloys - Plumbing fittings - Part 5: Fittings with short ends for capillary brazing to copper tubes
- prEN 12201-5 Plastics piping systems for water supply - Polyethylene (PE) - Part 5: Fitness for purpose of the system
- prEN 12202-5 Plastics piping systems for hot and cold water - Polypropylene (PP) - Part 5: Fitness for purpose of the system
- prEN 12293 Plastics piping systems - Thermoplastics pipes and fittings for hot and cold water - Test method for the resistance of mounted assemblies to temperature cycling
- prEN 12294 Plastics piping systems - Systems for hot and cold water - Test method for leaktightness under vacuum
- prEN 12295 Plastics piping systems - Thermoplastics pipes and associated fittings for hot and cold water - Test method for resistance of joints to pressure cycling
- prEN 12318-5 Plastics piping systems for hot and cold water - Cross-linked polyethylene (PE-X) - Part 5: Fitness for purpose of the system
- prEN 12319-5 Plastics piping systems for hot and cold water - Polybutylene (PB) - Part 5: Fitness for purpose of the system

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- EN 12731-5 Plastics piping systems for hot and cold water - Chlorinated poly(vinyl chloride) (PVC-C) - Part 5: Fitness for purpose of the system
- EN ISO 6509 : 1995 Corrosion of metals and alloys - Determination of dezincification resistance of brass (ISO 6509: 1981)
- ISO 6957 Copper alloys - Ammonia test for stress corrosion resistance

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 D.

3 Definitions

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

3.1 plumbing fitting

Device used in a piping system for the purpose of connecting the pipes either to each other or to a component part of a system.

NOTE: See annex A for types of fitting and description of parts.

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3.2 compression end

End in which the joint is made by the compression of a ring or sleeve on the outside wall of the pipe.

3.2.1 compression end, type A

End that requires no preparation of the ends of the pipe other than that they are cut square and deburred or chamfered when specified, and in which the joint is made by the compression of a ring or sleeve onto the outside wall of the pipe with or without additional sealing elements and with or without an internal pipe support.

3.2.2 compression end, type B

End that requires forming of the pipe at its end, and in which the joint is made by compressing the formed portion of the pipe against the formed end of the fitting or a loose ring or sleeve within the fitting/pipe.

3.3 reducer (compression end with plastic pipe)

Component or components used to enable a compression end to connect pipe of a smaller nominal diameter than the nominal diameter of the fitting end.

3.4 adaptor fitting

Fitting combining more than one type of end.

NOTE: For details of the other ends, see the relevant parts of this standard or other standards.

3.5 nominal diameter

Nominal diameter of the fitting end expressed as the nominal outside diameter of the connecting pipe.

3.6 production test

Test performed by the manufacturer on materials or components at specific intervals to confirm that the process continues to be capable of producing components conforming to the requirements of the product specification.

NOTE: Such tests are not required to release batches of components but are carried out as a measure of process control.

3.7 type test

Test or series of tests directed towards approval of a design, conducted to prove that an item is capable of meeting the requirements of the product specification.

4 Requirements

4.1 General

Fittings shall conform to the requirements of 4.2 to 4.5 and shall be capable of meeting the type testing requirements of 4.6 which are those required by the relevant plastics piping systems standards and are dependant on specific applications. Reducers also shall conform to these requirements.

4.2 Materials

Fittings shall be made from copper or copper alloys selected from materials either:

- specified in European copper and copper alloy product standards; or
- registered by CEN/TC 133;

provided that the fittings manufactured from them meet the functional requirements of this standard.

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NOTE 1: Some of the standardized coppers and copper alloys commonly used for the manufacture of fittings are shown in table 1. Details of registered alloys can be obtained from the CEN/TC 133 Secretariat.

NOTE 2: Components other than bodies will possibly be made of suitable non-metallic materials. These materials should not cause degradation of the connected plastics pipe.