



NSAI
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Irish Standard
I.S. EN 1254-6:2012

Copper and copper alloys - Plumbing fittings - Part 6: Fittings with push-fit ends

I.S. EN 1254-6:2012

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Contents	Page
Foreword.....	5
Introduction	6
1 Scope	7
2 Normative references	8
3 Terms and definitions	9
4 Requirements	10
4.1 General.....	10
4.2 Materials	10
4.2.1 General.....	10
4.2.2 Reaction to fire.....	11
4.2.3 Resistance to high temperature (for heating networks).....	11
4.3 Dimensions and tolerances	12
4.3.1 Minimum bore area	12
4.3.2 Minimum bore area through fittings with an integral or separate internal support	12
4.3.3 Tolerance for the alignment of the fitting ends	14
4.4 Design and manufacture	14
4.4.1 Tube and pipe abutment	14
4.4.2 Surface condition.....	14
4.4.3 Plated or coated surfaces	14
5 Testing, assessment and sampling methods	14
5.1 Type testing.....	14
5.1.1 General.....	14
5.1.2 Preparation of fittings for testing.....	15
5.1.3 Test temperature.....	15
5.1.4 Leaktightness under internal hydrostatic pressure.....	15
5.1.5 Resistance to pull-out	16
5.1.6 Temperature cycling.....	16
5.1.7 Pressure cycling test.....	17
5.1.8 Vacuum test.....	18
5.1.9 Vibration test (metallic tube only).....	18
5.1.10 Leaktightness under internal hydrostatic pressure while subjected to bending (metallic tube only).....	18
5.1.11 Static bending test (plastics pipe only).....	19
5.1.12 Disconnection and re-use (for fittings capable of being disconnected).....	19
5.1.13 Rotation test.....	20
5.1.14 Resistance to stress corrosion	20
5.2 Factory production control system	20
5.2.1 General.....	20
5.2.2 Integrity of fittings bodies with as-cast microstructure or fabricated by welding or brazing	21
5.2.3 Resistance to dezincification	21
6 Evaluation of conformity.....	21
6.1 General.....	21
6.2 Type testing.....	21
6.2.1 General.....	21
6.2.2 Requirements and characteristics	22
6.2.3 Use of historical data	22
6.2.4 Further type testing	22
6.3 Sampling, testing and conformity criteria.....	22
6.3.1 Sampling.....	22
6.3.2 Testing and conformity criteria	22
6.4 Factory production control (FPC)	22
6.4.1 General.....	22
6.4.2 Personnel.....	23

6.4.3	Equipment	23
6.4.4	Raw materials and components	23
6.4.5	In-process control	23
6.4.6	Traceability and marking	23
6.4.7	Non-conforming products	23
6.4.8	Corrective action	24
6.4.9	Handling, storage, packaging	24
7	Classification and designation	24
8	Marking	24
8.1	General	24
8.2	Dezincification resistant copper-zinc alloys.....	25
9	Documentation	25
9.1	Declaration of conformity	25
9.2	User instructions	25
Annex A	(normative) Method for testing leaktightness of joints under internal hydrostatic pressure.....	26
A.1	Introduction.....	26
A.2	Principle.....	26
A.3	Apparatus	26
A.4	Test piece	26
A.5	Procedure	27
Annex B	(normative) Method for testing resistance to pull-out of joints with metallic tube	28
B.1	Introduction.....	28
B.2	Principle.....	28
B.3	Apparatus	28
B.4	Test assembly	28
B.5	Procedure	28
Annex C	(normative) Test method for resistance of joints with metallic tube to temperature cycling	30
C.1	Introduction.....	30
C.2	Principle.....	30
C.3	Apparatus	30
C.4	Test assembly.....	30
C.5	Procedure	31
Annex D	(normative) Method for testing the resistance of joints with metallic tube to pressure cycling	32
D.1	Introduction.....	32
D.2	Principle.....	32
D.3	Apparatus	32
D.4	Test pieces	33
D.5	Procedure	33
Annex E	(normative) Test method for leaktightness of joints with metallic tube under vacuum	34
E.1	Introduction.....	34
E.2	Principle.....	34
E.3	Apparatus	34
E.4	Test piece	35
E.5	Procedure	35
Annex F	(normative) Test method for the resistance of joints with metallic tube to vibration	36
F.1	Introduction.....	36
F.2	Principle.....	36
F.3	Apparatus	36
F.4	Test assembly.....	36
F.5	Procedure	37

Annex G (normative) Test method for leaktightness of joints with metallic tube under internal hydrostatic pressure while subjected to bending	38
G.1 Introduction	38
G.2 Principle	38
G.3 Apparatus	38
G.4 Test piece	38
G.5 Procedure	39
Annex H (normative) Test method for disconnection and re-use	40
H.1 Introduction	40
H.2 Principle	40
H.3 Apparatus	40
H.4 Test assembly	40
H.5 Procedure	40
Annex I (normative) Fitting rotation test	41
I.1 Introduction	41
I.2 Principle	41
I.3 Apparatus	41
I.4 Test assembly	41
I.5 Procedure	42
Annex J (normative) Determination of resistance to stress corrosion	43
J.1 Introduction	43
J.2 Test piece	43
J.3 Procedure	43
J.4 Test report	43
Annex K (normative) Pressure test for fittings bodies with as-cast microstructure or fabricated by welding or brazing	44
K.1 Introduction	44
K.2 Principle	44
K.3 Apparatus	44
K.4 Test piece	44
K.5 Procedure	45
Annex L (normative) Determination of mean depth of dezincification	46
L.1 Introduction	46
L.2 Procedure	46
L.3 Expression of results	46
Bibliography	48

Foreword

This document (EN 1254-6:2012) 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 April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 8 "Fittings" to prepare the following standard:

EN 1254-6, *Copper and copper alloys — Plumbing fittings — Part 6: Fittings with push-fit ends.*

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

- *Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes*
- *Part 2: Fittings with compression ends for use with copper tubes*
- *Part 3: Fittings with compression ends for use with plastics pipes*
- *Part 4: Fittings with threaded end connections*
- *Part 5: Fittings with short ends for capillary brazing to copper tubes*
- *Part 6: Fittings with push-fit ends*
- *Part 7: Fittings with press ends for metallic tubes*
- *Part 8: Fittings with press ends for use with plastics and multilayer pipes*

Part 7 will be the subject of future work.

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.

Introduction

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

This European Standard provides the basis for the assessment of a manufacturer's production process for products manufactured in accordance with this European Standard.

1 Scope

This European Standard specifies materials and test requirements for fittings of copper and copper alloys.

This part of EN 1254 specifies push-fit end connections with or without plating or coating in the size range 6 mm to 54 mm for the purpose of joining tubes of copper, plated copper, multilayer pipes and plastics pipes, intended for use in hot and cold water systems according to EN 806, which are designed for service lifetime up to fifty years, as well as heating and cooling systems.

Permissible operating temperatures and maximum operating pressures are also established.

Fittings may comprise a combination of end types, specified in this European Standard, EN 1254, or other standards, providing they are suitable for the fluid being conveyed.

The standard establishes a designation system for the fittings.

This European Standard is applicable to push-fit fittings for joining one or more of the following tubes or pipes:

- Copper tubes to EN 1057;
- PE-X pipes to EN ISO 15875-2;
- PB pipes to EN ISO 15876-2;
- PP pipes to EN ISO 15874-2;
- PE-RT pipes to EN ISO 22391-2;
- Multilayer pipes to EN ISO 21003-2.

Fittings may be suitable for joining other tubes and pipes provided the push-fit joint with the specified tube or pipe meets the requirements of this standard.

Operating temperatures and pressures

For joints with copper tubes

It is essential that operating temperatures and maximum operating pressures for assembled joints do not exceed the values in Table 1.

**Table 1 — Operating temperatures and pressures
for fittings assembled to tubes**

Operating temperature	Maximum operating pressure (MOP) for nominal diameters from 6 mm up to and including 54 mm
°C	bar
30	16
95	6

Intermediate pressure ratings are determined by linear interpolation.
 Certain designs of push-fit fittings are suitable for use at temperature/pressure ratings outside those given in this table. For such applications, the advice of the manufacturer should be sought.
 To allow for system malfunctions, it is essential that fittings be capable of temporary excursions up to a temperature of 110 °C at a pressure of 6 bar.

For joints with multilayer and plastics pipes

The operating temperatures and maximum operating pressures for the assembled joints should be determined in accordance with multilayer or plastics pipe material properties, details of which are specified in the relevant multilayer and plastics piping system standards.

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 681-1:1996, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanised rubber*

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 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

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

EN 1655, *Copper and copper alloys — Declarations of conformity*

EN 1982, *Copper and copper alloys — Ingots and castings*

EN 12164, *Copper and copper alloys — Rod for free machining purposes*

EN 12165, *Copper and copper alloys — Wrought and unwrought forging stock*

EN 12293, *Plastics piping systems — Thermoplastics pipes and fittings for hot and cold water — Test method for the resistance of mounted assemblies to temperature cycling*

EN 12294, *Plastics piping systems — Systems for hot and cold water — Test method for leaktightness under vacuum*

EN 12295, *Plastics piping systems — Thermoplastics pipes and associated fittings for hot and cold water — Test method for resistance of joints to pressure cycling*

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

EN ISO 6509:1995, *Corrosion of metals and alloys — Determination of dezincification resistance of brass (ISO 6509:1981)*

EN ISO 15874-2¹⁾, *Plastic piping systems for hot and cold water installations — Polypropylene (PP) — Part 2: Pipes (ISO 15874-2)*

EN ISO 15874-5¹⁾, *Plastic piping systems for hot and cold water installations — Polypropylene (PP) — Part 5: Fitness for purpose of the system (ISO 15874-5)*

¹⁾ Currently under revision.

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