



BSI Standards Publication

Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)

Part 3: Fittings

National foreword

This British Standard is the UK implementation of EN ISO 15875-3:2003+A2:2021. It is identical to ISO 15875-3:2003, incorporating amendment 1:2020 and amendment 2:2021. It supersedes BS EN ISO 15875-3:2003+A1:2020, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by **A1** ~~A1~~.

The UK participation in its preparation was entrusted to Technical Committee PRI/88, Plastics piping systems.

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

As the scope of this standard does not cover crosslinked polyethylene (PE-X) piping systems for installations having service conditions in excess of those in Table 1 of BS EN ISO 15875-1:2003+A1:2007, the UK committee advises users to consult BS 7291-1:2010+A1:2023 when applying this standard.

BS 7291-1:2010+A1:2023 gives the Class “S” service conditions for sealed central heating systems and indirect hot water primary circuits in which the maximum system service temperature is 105 °C and the system malfunction temperature is 114 °C. As both of these temperatures are significantly in excess of those specified in Table 1 of BS EN ISO 15875-1:2003+A1:2007, and sealed central heating systems and indirect hot water primary circuits are therefore not covered by it, the UK committee advises that PE-X piping systems conforming to the requirements of this standard should also be subjected to the temperatures given in Table 1 of BS 7291-1:2010+A1:2023.

The UK committee also advises users that:

- a) The normal maximum operating cold water supply pressure in the UK is 12.5 bar (1 bar = 100 kPa), which some categories of piping systems in the BS EN ISO 15875 series of standards do not meet.
- b) There is a disparity between the malfunction temperature quoted in Table 1 of BS EN ISO 15875-1:2003+A1:2007 (100 °C) and the malfunction temperatures applicable to boilers conforming to the requirements of BS EN 15502-1:2021+A1:2023, BS EN 15502-2-1:2022+A1:2023 and BS EN 15502-2-2:2014 (110 °C). Consequently, piping systems used with these gas-fired central heating boilers could be subjected to temperatures in service for which they have not been tested.
- c) Piping systems conforming to the requirements of the BS EN ISO 15875 series of standards are designed for hot and cold water installations and are not suitable for waste discharge from unvented hot water systems (i.e. downstream pipe D2).
- d) Continuously operated recirculating domestic hot water systems (known as recirculating, secondary hot circulation, return or ring main systems) carry pumped hot potable water to outlets where the temperature is between 60 °C and 70 °C, and is replenished by an incoming water supply to replace the water drawn to outlets piping

systems conforming to the requirements of the BS EN ISO 15875 series of standards are not suitable for this use.

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Amendments/corrigenda issued since publication

Date	Text affected
28 February 2021	Implementation of ISO amendment 1:2020 with CEN endorsement A1:2020
31 March 2021	Implementation of CEN correction notice 10 February 2021: correction to an incorrect reference in the European foreword to amendment A1
31 January 2022	Implementation of ISO amendment 2:2021 with CEN endorsement A2:2021
31 July 2024	Correction to national foreword. ISO foreword removed

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English version

Plastics piping systems for hot and cold water installations -
Crosslinked polyethylene (PE-X) - Part 3: Fittings (ISO 15875-
3:2003)

Systèmes de canalisations en plastique pour les
installations d'eau chaude et froide - Polyéthylène réticulé
(PE-X) - Partie 3: Raccords (ISO 15875-3:2003)

Kunststoff-Rohrleitungssysteme für die Warm- und
Kaltwasserinstallation - Vernetztes Polyethylen (PE-X) -
Teil 3: Formstücke (ISO 15875-3:2003)

This European Standard was approved by CEN on 14 March 2003.

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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 Management Centre 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN ISO 15875-3:2003) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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 June 2004, and conflicting national standards shall be withdrawn at the latest by December 2005.

NOTE This draft was submitted for CEN enquiry as prEN 12318-3:1996.

This standard is part of a System Standard for plastics piping systems of a particular material for a specified application. There are a number of such System Standards.

System Standards are based on the results of the work being undertaken in ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids", which is a Technical Committee of the International Organisation for Standardization (ISO).

They are supported by separate Standards on test methods to which references are made throughout the System Standard.

The System Standards are consistent with general standards on functional requirements and recommended practices for installation.

EN ISO 15875 consists of the following Parts ¹⁾, under the general title: *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)*

- Part 1: General
- Part 2: Pipes
- Part 3: Fittings (the present standard)
- Part 5: Fitness for purpose of the system
- Part 7: Guidance for the assessment of conformity (published as CEN ISO/TS 15875-7).

This Part of EN ISO 15875 includes a Bibliography

At the date of publication of this standard, System Standards for piping systems of other plastics materials used for the same application include the following:

EN ISO 15874, *Plastics piping systems for hot and cold water installations — Polypropylene (PP)* (ISO 15874:2003)

EN ISO 15876, *Plastics piping systems for hot and cold water installations — Polybutylene (PB)* (ISO 15876:2003)

EN ISO 15877, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C)* (ISO 15877:2003)

For pipes and fittings which have conformed to the relevant national standard before 1st November 2003, as shown by the manufacturer or by a certification body, the national standard may continue to apply until 30th November 2005.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

¹⁾ This System Standard does not incorporate a Part 4 *Ancillary equipment* or a Part 6 *Guidance for installation*. For ancillary equipment separate standards can apply. Guidance on installation of plastics piping systems made from different materials intended to be used for hot and cold water installations is given by ENV 12108 ^[1].