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BS 7291-2:2010



BSI Standards Publication

Thermoplastics pipe and fitting systems for hot and cold water for domestic purposes and heating installations in buildings

Part 2: Specification for polybutylene (PB) pipe and associated fittings

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Publishing information

This part of BS 7291 is published by BSI and came into effect on 30 April 2010. It was prepared by Subcommittee PRI/88/2/P3, *Plastics piping for hot and cold water*, under the authority of Technical Committee PRI/88, *Plastics piping systems*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

BS 7291-2:2010 supersedes BS 7291-2:2006, which is withdrawn.

Information about this document

PB polymer is widely known as Polybutylene. It is also referred to as Polybutene, Polybut-1-ene and Polybutene-1 (PB-1).

Attention is drawn to BS 7291-3, which specifies corresponding requirements for cross-linked polyethylene (PE-X) pipes and associated fittings.

Attention is also drawn to BS 5955-8, which specifies requirements and gives guidance on the correct application and installation of thermoplastics pipes and fittings for the conveyance of domestic hot and cold water.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Where optional recommendations are included, they are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Product certification/inspection/testing. Users of this British Standard are advised to consider the desirability of third party certification/inspection/testing of product conformity with this British Standard. Appropriate conformity attestation arrangements are described in BS EN ISO/IEC 17025. Users seeking assistance in identifying appropriate conformity assessment bodies or schemes may ask BSI to forward their enquiries to the relevant association.

Assessed capability. Users of this British Standard are advised to consider the desirability of quality system assessment and registration against the appropriate standard in the BS EN ISO 9000 series by an accredited third-party certification body.

Contractual and legal considerations

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

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

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The Health and Safety at Work, etc Act 1974 [1]

The Water Supply (Water Fittings) Regulations 1999 [2]

Annex A, Annex B and Annex C are normative. Annex D is informative.

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This part of BS 7291 specifies general requirements and methods of test for polybutylene (PB) pipe and fitting systems intended for use within buildings for the conveyance of cold water, including drinking water, and heated water for use in domestic hot and cold water distribution and heating installations. These requirements supplement the general requirements in BS 7291-1, which are also applicable.

NOTE 1 Before reading this part, it is essential to read BS 7291-1.

NOTE 2 Methods of test are given in Annex A, Annex B and Annex C. Annex D gives guidance on factory control procedures.

This standard specifies general requirements for materials to be used for, or in the form, of PB monolayer, multilayer or barrier pipes, and associated fittings and components. Particular requirements are also specified for PB pipe alone or jointed with push-fit, fusion or compression fittings conforming to BS 7291 or other British Standards intended for use with pipes conforming to this part.

This part of BS 7291 provides for pipes dimensioned to suit two established metric series: BS ISO 4065 for thermoplastics pipes generally and BS EN 1057, for compatibility with copper pipework systems widely used for these applications.

This British Standard is applicable only to Class "S" pipes and fittings.

It does not specify dimensional requirements for fittings because the performance requirements specified for fittings, when tested individually or in assemblies with pipe, are intended to ensure that the dimensions of the fittings are satisfactory for jointing purposes and pressure containment.

NOTE 3 Pipes and fittings of non-barrier PB are to some extent permeable to oxygen; hence, if they are used for the primary circuit(s) of a heating system, it might be beneficial to add a corrosion inhibitor to the fluids circulating therein. In such a case the manufacturer(s) of the pipe and/or fitting should, upon request, provide advice in accordance with BS 5955-8. This advice should include selection of a compatible corrosion inhibitor and/or methods for reducing the permeability.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 5214-2, *Specification for testing machines for rubbers and plastics – Part 2: Constant rate of force application machines*

BS 7291-1:2010, *Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings – Part 1: General requirements*

BS EN 681-1:1996, *Elastomeric seals – Material requirements for pipe joint seals used in water and drainage applications – Part 1: Vulcanized rubber*

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

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