

American Water Works Association

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(Revision of ANSI/AWWA C902-78)

Withdrawn 4/97



AWWA STANDARD
FOR
**POLYBUTYLENE (PB) PRESSURE PIPE AND
TUBING, 1/2 IN. THROUGH 3 IN.,
FOR WATER**



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AMERICAN WATER WORKS ASSOCIATION

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Foreword

This foreword is for information only and is not a part of AWWA C902.

I. History of Standard. This is the first revision of AWWA C902. In 1966, AWWA appointed Committee 8350-D to study and report on the adaptability of plastic pipe for use in the water supply industry. The committee presented its report on June 6, 1967, at the AWWA Annual Conference. The report recommended that a task group be appointed to prepare standards for the use of plastic materials. The AWWA Standards Committee on Thermoplastic Pressure Pipe was established in 1968.

II. Major Revisions. The Thermoplastic Pressure Pipe Committee undertook a review of C902, which, after several ballots, was completed in late 1987. A number of editorial and technical changes were made. The most significant of these changes are as follows:

1. Deletion of specific references to fittings.
2. Elimination of pressure classes below 125 psi.
3. The use of a safety factor of 2 has been changed to use of a design factor of 0.5. This change does not materially affect the result of calculations for hydrostatic design stress or pressure class.
4. Addition of minimum elongation requirements (Sec. 2.2.6).
5. Deletion of pressure sizes below 125 psi in Table 1.
6. Addition of permeation statement (Sec. 2.2.7).
7. Editorial changes to Sec. A.3.1 and Sec. A.3.2.2.
8. Addition of more specific wording on installation in Sec. A.6.3, Sec. A.6.4, Sec. A.6.5, and Table A.5.

III. Information Regarding Use of This Standard. This standard covers polybutylene (PB) pressure pipe and tubing for use primarily as service lines in the construction of underground water distribution systems.

Pipe and tubing. This standard covers standard dimension ratios (SDR and SIDR) pipe and tubing made from PB 2110 materials; 1/2-in. through 3-in. pipe in pressure classes ranging from 125 psi to 250 psi that conform to the outside-diameter dimensions (OD base) of steel pipe, or that conform to specific inside-diameter dimensions (ID base); and 1/2-in. through 2-in. tubing in pressure classes ranging from 125 psi to 250 psi that conform to the outside-diameter dimensions of copper tubing. This standard may be used to the extent applicable for pipe and tubing that conform to dimension ratios other than those listed in Tables 1, 2, and 3, but the use of pipe or tubing with a wall thickness less than 0.062 in. is not recommended.

Fittings. The use of fittings that are not covered by a recognized standard is subject to the judgment and discretion of the purchaser. Each such fitting should be qualified before use by investigation and by tests, when necessary, to determine that the fitting is suitable and safe for the intended service and that it meets all applicable requirements of AWWA C902.

IV. Information to Be Supplied by the Purchaser. When buying products covered by this standard, the purchaser must provide specific information in supplemental specifications regarding the following:

1. Standard used—that is, AWWA C902, Standard for Polybutylene (PB) Pressure Pipe and Tubing, 1/2 In. Through 3 In., for Water.

2. For pipe, the size, dimension ratio, and whether OD base or ID base. For tubing, the size and dimension ratio.
3. Total linear feet for each different item to be furnished.
4. Standard to be used for fittings, if any.
5. Affidavit of compliance, if required (Sec. 1.4).
6. Form (straight or coiled) and length of individual pieces (Sec. 2.2.5).
7. Special marking, if required (Sec. 2.3.3).
8. Special preparation for shipment (Sec. 2.4).
9. Special quality-control tests (Sec. 3.1).
10. Whether quality-control test records are to be submitted (Sec. 3.3).
11. Plant inspection, if required (Sec. 4.1).



AWWA STANDARD FOR POLYBUTYLENE (PB) PRESSURE PIPE AND TUBING, 1/2 IN. THROUGH 3 IN., FOR WATER

SECTION 1: GENERAL

Sec. 1.1 Scope

This standard covers 1/2-in. through 3-in. dimension ratio, polybutylene (PB) pressure pipe and tubing primarily for use as underground water service lines. Pipe and tubing covered by this standard is made from type II, grade 1, class B or class C, PB 2110 material that is further defined by its hydrostatic design basis in Sec. 2.1.1. This standard covers pipe conforming to inside-diameter base dimensions (Table 1) and pipe and tubing conforming to outside-diameter base dimensions (Tables 2 and 3). This standard does not cover pipe or tubing with a wall thickness less than 0.062 in. or of a pressure class less than 125 psi. Design requirements and criteria are provided in Appendix A.

Sec. 1.2 Definitions

1.2.1 *Purchaser*: The party entering into a contract to buy products that comply with this standard.

1.2.2 *Inspector*: The authorized representative of the purchaser, who is entrusted with the inspection of products and production records and the observance of production operations and quality-control tests to ensure that products comply with the requirements of the purchaser and this standard.

1.2.3 *Manufacturer*: The person or firm that manufactures the products covered by this standard and furnishes them to the purchaser directly or through a supplier.