



Designation: D 3517 – 03

An American National Standard

Standard Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe¹

This standard is issued under the fixed designation D 3517; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This specification covers machine-made fiberglass pipe, 8 in. (200 mm) through 144 in. (3700 mm), intended for use in water conveyance systems which operate at internal gage pressures of 250 psi (1.72 MPa) or less. Both glass-fiber-reinforced thermosetting-resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are fiberglass pipes. The standard is suited primarily for pipes to be installed in buried applications, although it may be used to the extent applicable for other installations such as, but not limited to, jacking, tunnel lining and sliplining rehabilitation of existing pipelines.

NOTE 1—For the purposes of this standard, polymer does not include natural polymers.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are provided for information purposes only.

NOTE 2—There is no similar or equivalent ISO standard.

1.3 The following safety hazards caveat pertains only to the test methods portion, Section 8, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- C 33 Specification for Concrete Aggregates²
- D 638 Test Method for Tensile Properties of Plastics³
- D 695 Test Method for Compressive Properties of Rigid Plastics³
- D 790 Test Methods for Flexural Properties of Unreinforced

and Reinforced Plastics and Electrical Insulating Materials³

D 883 Terminology Relating to Plastics³

D 1600 Terminology for Abbreviated Terms Relating to Plastics³

D 2290 Test Method for Apparent Tensile Strength of Ring or Tubular Plastics and Reinforced Plastics by Split Disk Method⁴

D 2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading⁴

D 2584 Test Method for Ignition Loss of Cured Reinforced Resins⁵

D 2992 Practice for Obtaining Hydrostatic or Pressure Design Basis for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings⁴

D 3567 Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings⁴

D 3892 Practice for Packaging/Packing of Plastics⁶

D 4161 Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals⁴

F 412 Terminology Relating to Plastic Piping Systems⁴

F 477 Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe⁴

2.2 ISO Standard:

ISO 1172 Textile Glass Reinforced Plastics—Determination of Loss on Ignition⁷

2.3 NSF Standard:

Standard No. 14 for Plastic Piping Components and Related Materials⁸

3. Terminology

3.1 Definitions:

¹ This specification is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.23 on Reinforced Plastic Piping Systems and Chemical Equipment.

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² Annual Book of ASTM Standards, Vol 04.02.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 08.04.

⁵ Annual Book of ASTM Standards, Vol 08.02.

⁶ Annual Book of ASTM Standards, Vol 08.03.

⁷ Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.

⁸ Available from the National Sanitation Foundation, P.O. Box 1468, Ann Arbor, MI 48106.

*A Summary of Changes section appears at the end of this standard.