



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

This standard is issued under the fixed designation D 3754; 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 reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers machine-made fiberglass pipe, 8 in. (200 mm) through 144 in. (3700 mm), for use in pressure systems for conveying sanitary sewage, storm water, and many industrial wastes, and corrosive fluids. Both glass-fiber-reinforced thermosetting-resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are fiberglass pipes. This 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 and rehabilitation of existing pipelines. Pipe covered by this specification is intended to operate at internal gage pressures of 250 psi (1.72 MPa) or less.

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

1.2 The values given 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 precautionary caveat pertains only to the test method 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:²

C 33 Specification for Concrete Aggregates

C 581 Practice for Determining Chemical Resistance of

Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service

D 638 Test Method for Tensile Properties of Plastics

D 695 Test Method for Compressive Properties of Rigid Plastics

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

D 883 Terminology Relating to Plastics

D 1600 Terminology for Abbreviated Terms Relating to Plastics

D 2290 Test Method for Apparent Hoop Tensile Strength of Plastic or Reinforced Plastic Pipe by Split Disk Method

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

D 2584 Test Method for Ignition Loss of Cured Reinforced Resins

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

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

D 3681 Test Method for Chemical Resistance of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

D 3892 Practice for Packaging/Packing of Plastics

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

F 412 Terminology Relating to Plastic Piping Systems

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

2.2 ISO Standard:

ISO 1172 Textile Glass Reinforced Plastics—Determination of Loss on Ignition³

2.3 AWWA Standard:

AWWA C-950 Glass-Fiber Reinforced Thermosetting Resin Pressure Pipe⁴

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 For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 11 West 42nd Street, 13th Floor, New York, NY 10036.

⁴ Available from the American Water Works Association, 6666 West Quincey Ave., Denver, CO 80235.