



Standard Classification for Machine-Made “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe¹

This standard is issued under the fixed designation D2310; 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.

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

1. Scope

1.1 This classification covers machine-made “fiberglass” (glass-fiber-reinforced thermosetting-resin) pressure pipe. Methods of classification, requirements, test methods and the method of marking are included. Both glass-fiber-reinforced thermosetting-resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are fiberglass pipes.

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

1.2 This classification is based on the method of manufacture, the type of materials used in construction, and the test performance of the product type. It is not based on dimensions or raw material specifications.

1.3 Two methods of classifying long-term strength are included: (1) based on cyclic loads for use in those liquid-handling applications where the effects of pumping by duplex or triplex pumps or other cyclic pressure loads dictate the performance requirements of the piping, and (2) based on the steady (static) loads such as would be required for gas service applications.

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

1.5 The following precautionary caveat pertains only to the test method portion, Section 7, of this classification. *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.*

NOTE 2—There is no known ISO equivalent to this standard.

¹ This classification 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. Referenced Documents

2.1 ASTM Standards:²

D883 Terminology Relating to Plastics

D1600 Terminology for Abbreviated Terms Relating to Plastics

D2992 Practice for Obtaining Hydrostatic or Pressure Design Basis for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings

D3567 Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings

F412 Terminology Relating to Plastic Piping Systems

3. Terminology

3.1 *General*—Definitions are in accordance with Terminology D883 or F412 and abbreviations are in accordance with Terminology D1600, unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *fiberglass pipe, n*—a tubular product containing glass fiber reinforcements embedded in or surrounded by cured thermosetting resin; the composite structure may contain aggregate, granular, or platelet fillers, thixotropic agents, pigments, or dyes; thermoplastic or thermosetting liners or coatings may be included.

3.2.2 *reinforced thermosetting resin pipe (RTRP), n*—a fiberglass pipe without aggregate.

3.2.3 *reinforced polymer mortar pipe (RPMP), n*—a fiberglass pipe with aggregate.

3.2.4 *centrifugal casting, n*—a manufacturing process used to produce tubular goods by applying resin and reinforcement to the inside of a mold that is rotated and heated, subsequently polymerizing the resin system. The outside diameter of the finished pipe is fixed by the inside diameter of the mold tube. The inside diameter of the pipe is determined by the amount of material introduced into the mold.

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.

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