



Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type, for Aviation Jet Turbine Fuel Lines¹

This standard is issued under the fixed designation D5677; 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 a reinforced plastic pipe and fittings system made from epoxy resin and glass-fiber reinforcement, together with adhesive for joint assembly, intended for service up to 150°F (65.6°C) and 150-psig (1034-kPa) operating pressure and surges up to 275 psig (1896 kPa) in aviation jet turbine fuel lines installed below ground.

1.2 The dimensionless designator NPS has been substituted in this specification for such traditional terms as *nominal diameter*, *size*, and *nominal size*.

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

1.4 The following safety hazards caveat pertains only to the test method portion, Section 9, 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.*

NOTE 1—There is no known ISO equivalent to this standard.

2. Referenced Documents

2.1 ASTM Standards:²

- D381 Test Method for Gum Content in Fuels by Jet Evaporation
- D883 Terminology Relating to Plastics
- D1599 Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings
- D1600 Terminology for Abbreviated Terms Relating to Plastics

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.

- D1655 Specification for Aviation Turbine Fuels
- D2310 Classification for Machine-Made “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
- D2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D3241 Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels
- D3567 Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings
- D3951 Practice for Commercial Packaging
- D5685 Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings
- F412 Terminology Relating to Plastic Piping Systems
- F1173 Specification for Thermosetting Resin Fiberglass Pipe Systems to Be Used for Marine Applications
- 2.2 Military Specification:
 - MIL-T-5624 Turbine Fuel, Aviation, Grades JP-4, JP-5 and JP-5/JP-8 ST³
- 2.3 ANSI Standard:
 - B16.5 Steel Pipe Flanges and Flanged Fittings⁴

3. Terminology

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

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *conductive*—a pipe or fitting that meets the requirements for conductivity listed in Section 6 of Specification F1173.

3.3 Abbreviations:

3.3.1 *RTRP, n*—reinforced thermosetting resin pipe.

4. Classification

4.1 General:

³ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://dodssp.daps.dla.mil>.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

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