



Standard Specification for Thermosetting Resin Fiberglass Pipe and Fittings to be Used for Marine Applications¹

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1. Scope

1.1 This specification covers machine made reinforced thermosetting epoxy resin pipe and fittings, nominal pipe size (NPS) 1 through 48 in. in diameter, to be used in marine piping systems in which resistance to corrosion, aging, and deterioration from seawater, gas, chemicals, and sea environment is required.

1.2 When invoked by military or other procurement activities, MIL-P-24608 (SH) shall apply.

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

1.4 The dimensionless designator NPS has been substituted in this standard for such traditional terms as “nominal diameter,” “size,” and “nominal size.”

1.5 The specific maximum temperature and pressure covered by this specification is 240°F (115.6°C) and 225 psi (15.5 bar).

1.6 The following safety hazards caveat pertains to the test methods portion, Section 11, 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:

- D 257 Test Methods for dc Resistance or Conductance of Insulating Materials²
- D 618 Practice for Conditioning Plastics for Testing³
- D 883 Terminology Relating to Plastics³
- D 1141 Practice for the Preparation of Substitute Ocean Water⁴
- D 1599 Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings⁵

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D 1600 Terminology for Abbreviated Terms Relating to Plastics³

D 1898 Practice for Sampling of Plastics³

D 2105 Test Method for Longitudinal Tensile Properties of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube⁵

D 2310 Classification for Machine-Made Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe⁵

D 2924 Test Method for External Pressure Resistance of Fiberglass⁵

D 2925 Test Method for Beam Deflection of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Under Full Bore Flow⁵

D 2996 Specification for Filament-Wound “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe⁵

D 2997 Specification for Centrifugally Cast “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe⁵

D 3567 Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings⁵

D 4024 Specification for Machine Made “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Flanges⁵

D 4496 Test Method for dc Resistance or Conductance of Moderately Conductive Materials⁶

E 162 Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source⁷

E 662 Test Method for Specific Optical Density of Smoke Generated by Solid Materials⁷

E 800 Guide for Measurement of Gases Present or Generated During Fires⁷

F 412 Terminology Relating to Plastic Piping Systems⁵

2.2 ANSI Standards:⁸

B16.1 Cast Iron Pipe Flanges and Flanged Fittings

B16.5 Steel Pipe Flanges, Flanges, Flanged Fittings

2.3 ISO Standards:⁸

13 Grey Iron Pipe, Special Castings and Grey Iron Parts for Pressure Main Lines

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² Annual Book of ASTM Standards, Vol 10.01.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 11.02.

⁵ Annual Book of ASTM Standards, Vol 08.04.

⁶ Annual Book of ASTM Standards, Vol 10.02.

⁷ Annual Book of ASTM Standards, Vol 04.07.

⁸ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.