



Standard Specification for Thermosetting Resin Fiberglass Pipe Systems to Be Used for Marine Applications¹

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1. Scope

1.1 This specification covers reinforced thermosetting resin pipe systems with nominal pipe sizes (NPS) 1 through 48 in. (25 through 1200 mm) which are to be used for all fluids approved by the authority having jurisdiction in marine piping systems.

1.2 Values stated in inch-pound are to be regarded as the standard. Values given in parentheses are for information only.

1.3 The dimensionless designator NPS has been substituted for traditional terms as “nominal diameter,” “size,” and “nominal size.”

1.4 The following safety hazards caveat pertains to the test methods which are included in 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 883 Terminology Relating to Plastics²
- D 1598 Test Method for Time-To-Failure of Plastic Pipe Under Constant Internal Pressure³
- D 1599 Test Method for Resistance to Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing, and Fittings³
- D 2105 Test Method for Longitudinal Tensile Properties of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube³
- D 2310 Classification for Machine-Made “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe³
- D 2584 Test Method for Ignition Loss of Cured Reinforced Resins⁴

D 2924 Test Method for External Pressure Resistance of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe³

D 2992 Practice for Obtaining Hydrostatic or Pressure Design Basis for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings³

D 3567 Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings³

D 5028 Test Method for Curing Properties of Pultrusion Resins by Thermal Analysis⁵

D 5686 Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type Epoxy Resin, for Condensate Return Lines³

E 1529 Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies⁶

F 412 Terminology Relating to Plastic Piping Systems³

2.2 Other Documents:

- ANSI B16.1 Cast Iron Pipe Flanges and Flanged Fittings⁷
- ANSI B16.5 Pipe Flanges and Flanged Fittings⁷
- IMO Resolution A.753(18) Guidelines for the Application of Plastic Pipes on Ships⁸
- NSF-61⁹
- Code of Federal Regulations 21CFR175.105, 21CFR177.2280, 21CFR177.2410, and 21CFR177.2420⁸
- Code of Federal Regulations Title 46, Part 56, for Piping Systems, and Subpart 56.60-25 for Nonmetallic Materials⁸
- IMO Resolution A.653(16) Recommendation on Improved Fire Test Procedures for Surface Flammability of Bulkhead, Ceiling, and Deck Finish Materials⁸

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² Annual Book of ASTM Standards, Vol 08.01.

³ Annual Book of ASTM Standards, Vol 08.04.

⁴ Annual Book of ASTM Standards, Vol 08.02.

⁵ Annual Book of ASTM Standards, Vol 08.03.

⁶ Annual Book of ASTM Standards, Vol 04.07.

⁷ Available from American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036.

⁸ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, Attn: NPODS.

⁹ Available from the National Sanitation Foundation, P.O. Box 130140, 789 N. Dixboro Rd., Ann Arbor, MI 48113-0140.