



Designation: D 5421 – 93

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Contact Molded “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Flanges¹

This standard is issued under the fixed designation D 5421; 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 circular contact-molded fiberglass reinforced-thermosetting-resin flanges for use in pipe systems and tank nozzles. Included are requirements for materials, workmanship, performance, and dimensions.

1.2 Flanges (see Fig. 1) may be produced as integral flanges, Type A, or flange on pipe, Type B.

1.3 This specification is based on flange performance and does not cover design.

1.4 These flanges are designed for use with pipe and tanks that are manufactured to Specifications D 2996, D 2997, D 3262, D 3299, D 3517, D 3754, D 3982, and D 4097.

1.5 Selection of gaskets is not covered in this specification, refer to the manufacturer’s recommendation.

NOTE 1—ISO Equivalent—There is no similar or equivalent ISO standard.

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

1.7 The following precautionary caveat pertains only to the test methods portion, Section 9, of this specification: *This standard does not purport to address the safety problems, 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:

C 582 Specification for Contact-Molded Reinforced Thermosetting Plastic (RTP) Laminates for Corrosion Resistant Equipment²

D 883 Terminology Relating to Plastics³

D 1599 Test Method for Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing, and Fittings²

D 1600 Terminology Relating to Abbreviated Terms Relating to Plastics³

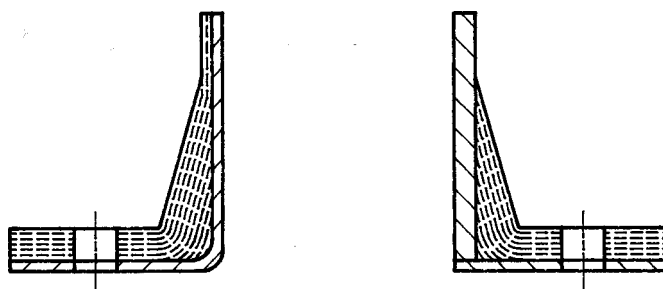


FIG. 1 Flange Types

D 2563 Practice for Classifying Visual Defects in Glass-Reinforced Plastic Laminate Parts⁴

D 2996 Specification for Filament Wound “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin Pipe)²

D 2997 Specification for Centrifugally Cast “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin Pipe)²

D 3262 Specification for Reinforced Plastic Mortar Sewer Pipe²

D 3299 Specification for Filament Wound Glass-Fiber-Reinforced Thermoset Resin Chemical-Resistant Tanks²

D 3517 Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting Resin) Pressure Pipe²

D 3754 Specification for Fiberglass Sewer and Industrial Pressure Pipe²

D 3982 Specification for Custom Contact-PressureMolded-Glass-Fiber-Reinforced Thermosetting Resin Hoods²

D 4097 Specification for Contact Molded Glass-Fiber-Reinforced Thermoset Resin Chemical Resistant Tanks²

F 412 Terminology Relating to Plastic Piping Systems²

F 436 Specification for Hardened Steel Washers⁵

2.2 ANSI Standards:

B 16.1 Cast Iron Pipe Flanges and Flanged Fittings⁶

B 16.5 Pipe Flanges and Flanged Fittings⁶

B 27.2 Type “A” Narrow Washers⁶

3. Terminology

3.1 Definitions:

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.23 on Reinforced Plastic Piping Systems and Chemical Equipment.

Current edition approved June 15, 1993. Published August 1993.

² Annual Book of ASTM Standards, Vol 08.04.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 08.02.

⁵ Annual Book of ASTM Standards, Vol 15.08.

⁶ Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, NY, NY 10036.