



Designation: D 4184 – 82

Standard Specification for REINFORCED THERMOSETTING RESIN (RTRP) SEWER PIPE¹

This standard is issued under the fixed designation D 4184; 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 machine-made reinforced thermosetting resin pipe intended for use in gravity flow systems for conveying sanitary sewage, storm water, and many industrial wastes.

1.2 The values given in parentheses are provided for information purposes only.

2. Applicable Documents

2.1 ASTM Standards:

D638 Test Method for Tensile Properties of Plastics²

D695 Test Method for Compressive Properties of Rigid Plastics²

D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

D883 Definitions of Terms Relating to Plastics^{2,3}

D1600 Abbreviations of Terms Relating to Plastics^{2,3}

D2412 Test Method for External Loading Properties of Plastic Pipe by Parallel-Plate Loading³

D3567 Method for Determining Dimensions of Reinforced Thermosetting Resin Pipe (RTRP) and Fittings³

D3681 Test Method for Chemical Resistance of Reinforced Thermosetting Resin Pipe in a Deflected Condition³

F 412 Definitions of Terms Relating to Plastic Piping Systems³

F 477 Specifications for Elastomeric Seals (Gaskets) for Joining Plastic Pipe³

3. Terminology

3.1 *General*—Definitions are in accordance with Definitions D 883 or F 412, and abbrevi-

ations with Abbreviations D 1600, unless otherwise indicated.

3.2 Descriptions of Terms Specific to this Standard:

3.2.1 *reinforced thermosetting resin pipe*—a tubular product containing fibrous reinforcement embedded in, or surrounded by, cured thermosetting resin. The composite structure may contain granular or platelet fillers, thixotropes, pigments, or dyes. Thermoplastic or thermosetting liners or coatings may be included. The abbreviation for reinforced thermosetting resin pipe is RTRP.

3.2.2 *qualification test*—one or more tests used to prove the design of a product. Not a routine quality control test.

3.2.3 *liner*—a resin layer, with or without filler or reinforcement, or both, forming the interior surface of the pipe.

3.2.4 *coating*—a resin layer, with or without filler or reinforcement, or both, applied to the exterior surface of the pipe structural wall.

4. Classification

4.1 *General*—This specification covers reinforced thermosetting resin (RTRP) sewer pipe defined by raw materials in the structural wall and liner (type), and coating material (grade). The following types and grades of reinforced thermosetting resin sewer pipe are covered.

4.1.1 Types:

4.1.1.1 *Type 1*—Glass-fiber reinforced thermosetting polyester resin pipe with chemical-

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D 20.23 on Reinforced Plastic Piping Systems and Chemical Equipment.

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² Annual Book of ASTM Standards, Vol 08.01.

³ Annual Book of ASTM Standards, Vol 08.04.