



Designation: F 1504 – 97^{ε1}

An American National Standard

Standard Specification for Folded Poly(Vinyl Chloride) (PVC) Pipe for Existing Sewer and Conduit Rehabilitation¹

This standard is issued under the fixed designation F 1504; 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.

^{ε1} NOTE—Sections 6.1 and 15.2.3 and Tables 3 and 4 were editorially updated in July 2002.

1. Scope

1.1 This specification covers requirements and test methods for materials, dimensions, workmanship, flattening resistance, impact resistance, pipe stiffness, extrusion quality, and a form of marking for folded (vinyl chloride) (PVC) pipe for existing sewer and conduit rehabilitation.

1.2 Pipe produced to this specification is for use in non-pressure sewer and conduit rehabilitation where the folded PVC pipe is inserted into and then expanded to conform to the wall of the original conduit forming a new structural pipe-within-a-pipe.

NOTE 1—An ASTM specification for the installation of folded PVC pipe is under preparation and will be referenced in this specification when published.

1.3 This specification includes pipe made only from materials specified in Section 6. This specification does not include pipe manufactured from reprocessed, recycled, or reclaimed PVC.

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

1.5 The following precautionary statement pertains to the test method portion only, 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 618 Practice for Conditioning Plastics for Testing²

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.67 on Trenchless Plastic Pipeline Technology.

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² Annual Book of ASTM Standards, Vol 08.01.

D 1600 Terminology for Abbreviated Terms Relating to Plastics²

D 1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds²

D 2122 Test Method of Determining Dimensions of Thermoplastic Pipe and Fittings³

D 2152 Test Method for Adequacy of Fusion of Extruded Poly(Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion³

D 2412 Test Method of Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading³

D 2444 Test Method for Determination of Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)³

F 412 Terminology Relating to Plastic Piping Systems³

F 1057 Practice for Estimating the Quality of Extruded Poly(Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique³

2.2 Federal Standard:

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)⁴

2.3 Military Standard:

MIL-STD-129 Marking for Shipment and Storage⁴

3. Terminology

3.1 *General*—Abbreviations used in this specification are in accordance with Terminology D 1600 and definitions are in accordance with Terminology F 412 unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *folded pipe*—pipe that has been manufactured in a folded shape for use in existing sewer and conduit rehabilitation. See Fig. 1.

3.2.2 *rounded pipe*—A rounded pipe is a sample for test purposes formed when the folded pipe has been inserted into a circular casing pipe and expanded with heat and pressure to fit tightly to the casing pipe taking a circular cross section, in accordance with Section 10. See Fig. 1.

³ Annual Book of ASTM Standards, Vol 08.04.

⁴ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.