



Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe¹

This standard is issued under the fixed designation F894; 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 requirements and test methods for materials, dimensions, workmanship, ring stiffness, flattening, joint systems, and a form of marking for large diameter, 10 to 132 in. (250 to 3355 mm), inside diameter based polyethylene (PE) pipe of profile wall construction and with bell and spigot, heat fusion, extrusion welded or electrofusion joints for use in gravity flow applications, such as for sewers and drains.

NOTE 1—Pipe produced to this specification should be installed in accordance with Practice D2321 and with the manufacturer's recommendations.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The following safety hazards caveat pertains only to the test method portion, Section 8, 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:²

- D618 Practice for Conditioning Plastics for Testing
- D1600 Terminology for Abbreviated Terms Relating to Plastics
- D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- D2321 Practice for Underground Installation of Thermoplastic

- tic Pipe for Sewers and Other Gravity-Flow Applications
- D2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D2837 Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
- D3212 Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials
- F412 Terminology Relating to Plastic Piping Systems
- F477 Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- F585 Guide for Insertion of Flexible Polyethylene Pipe Into Existing Sewers
- F1290 Practice for Electrofusion Joining Polyolefin Pipe and Fittings
- F2620 Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings

2.2 Federal Standard:

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)³

2.3 Military Standard:

MIL-STD-129 Marking for Shipment and Storage³

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology F412 and abbreviations are in accordance with Terminology D1600, unless otherwise specified. The abbreviation for polyethylene is PE.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *closed profile (CP)*—a profile wall pipe wall construction that presents essentially smooth internal and external surfaces.

3.2.2 *extrusion welding*—a joining technique that is accomplished by extruding a molten polyethylene bead between two prepared surface ends.

3.2.3 *gravity flow, n*—for the purposes of the specification, gravity flow means a piping system flowing less than full,

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.26 on Olefin Based Pipe.

Current edition approved Aug. 1, 2013. Published August 2013. Originally approved in 1985. Last previous edition approved in 2007 as F894 – 07. DOI: 10.1520/F0894-13.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

*A Summary of Changes section appears at the end of this standard