



Standard Specification for Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields¹

This standard is issued under the fixed designation F 810; 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 workmanship, flattening, dimensions, tolerances, stiffness, perforations, environmental stress cracking, bonding, and impact resistance for smoothwall perforated and nonperforated polyethylene (PE) pipe, including coextruded pipe. Methods of marking are also included.

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

1.3 The text of this specification references notes and footnotes that provide explanatory material. These notes and footnotes, excluding those in tables and figures, shall not be considered as requirements of this specification.

1.4 The following precautionary caveat pertains only to the test method portion, Section 7, of this specification: *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of whoever uses this standard to consult and 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 and Electrical Insulating Materials for Testing²
- D 1600 Terminology for Abbreviated Terms Relating to Plastics²
- D 1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics³
- D 2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings⁴
- D 2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading⁴

¹ This specification is under the jurisdiction of ASTM Committee F-17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.65 on Land Drainage.

Current edition approved Apr. 10, 1999. Published August 1999. Originally published as F 810 – 83. Last previous edition F 810 – 93.

² Annual Book of ASTM Standards, Vol 08.01.

³ Annual Book of ASTM Standards, Vol 08.02.

⁴ Annual Book of ASTM Standards, Vol 08.04.

D 2444 Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)⁴

D 2729 Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings⁴

D 2751 Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings⁴

D 2852 Specification for Styrene-Rubber (SR) Plastic Drain Pipe and Fittings⁴

D 3033 Specification for Type PSP Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings⁴

D 3034 Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings⁴

D 3350 Specification for Polyethylene Plastics Pipe and Fittings³

F 412 Terminology Relating to Plastic Piping Systems⁴

F 481 Practice for Installation of Thermoplastic Pipe and Corrugated Tubing in Septic Tank Leach Fields⁴

2.2 Federal Standard:

Fed. Std. No. 123 Marking for Shipments (Civil Agencies)⁵

2.3 Military Standard:

MIL-STD-129 Marking for Shipment and Storage⁵

3. Terminology

3.1 **Definitions**—Definitions are in accordance with Terminology F 412 and abbreviations are in accordance with Terminology D 1600, unless otherwise specified. The abbreviation for polyethylene is PE.

4. Significance and Use

4.1 The requirements of this specification are intended to provide smoothwall pipe suitable for soil drainage and waste disposal system absorption fields.

NOTE 1—Industrial waste disposal lines should be installed only with the specific approval of the cognizant code authority since chemicals not commonly found in drains and sewers and temperatures in excess of 140°F (60°C) may be encountered.

NOTE 2—The recommended uses of PE smoothwall pipe covered by this specification do not require watertight pressure rated joints. ABS,

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.