



Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings¹

This standard is issued under the fixed designation D2513; 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 material dimensions and tolerances, hydrostatic burst strength, chemical resistance, and rapid crack resistance of polyethylene pipe, tubing, and fittings for use in fuel gas pipelines for direct burial and reliner applications. The pipe and fittings covered by this specification are intended for use in the transmission and distribution of natural gas. Requirements for the qualifying of polyethylene systems for use with liquefied petroleum gas are also covered.

1.1.1 This specification does not cover threaded pipe. Design considerations are discussed in [Appendix X1](#). In-plant quality control is specified in Section 9 for pipe and Section 10 for fittings.

1.1.2 Requirements for polyethylene piping for pressure or non-pressure oil and gas producing applications to convey fluids such as oil, dry or wet gas, multiphase fluids, and non-potable oilfield water are addressed in Specification [F2619/F2619M](#).

1.2 The text of this specification references notes, footnotes, and appendixes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

1.3 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.

1.4 The following is an index of the annexes and appendix in this specification:

Appendixes	Subject
Appendix X1	Design Consideration
Appendix X2	Quality Program

1.5 The following precautionary caveat pertains only to the test method portion of this specification. *This standard does not purport to address all safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to*

establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

2.1.1 *Terminology for:*

[F412 Terminology Relating to Plastic Piping Systems](#)

2.1.2 *Test Methods for:*

[D638 Test Method for Tensile Properties of Plastics](#)

[D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials](#)

[D1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer](#)

[D1505 Test Method for Density of Plastics by the Density-Gradient Technique](#)

[D1598 Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure](#)

[D1599 Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings](#)

[D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings](#)

[D2290 Test Method for Apparent Hoop Tensile Strength of Plastic or Reinforced Plastic Pipe](#)

[D2837 Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products](#)

[D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials](#)

[F1473 Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins](#)

2.1.3 *Practices for:*

¹ This specification is under the jurisdiction of ASTM Committee [F17](#) on Plastic Piping Systems and is the direct responsibility of Subcommittee [F17.60](#) on Gas.

Current edition approved July 1, 2024. Published September 2024. Originally approved in 1966. Last previous edition approved in 2020 as D2513 – 20. DOI: 10.1520/D2513-24.

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

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