



Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing¹

This standard is issued under the fixed designation D3261; 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 polyethylene (PE) butt fusion fittings for use with polyethylene pipe (IPS, DIPS, and ISO) and tubing (CTS). Included are requirements for materials, workmanship, dimensions, marking, sustained pressure, and burst pressure.

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 *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

- 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
- F1473 Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins
- D1600 Terminology for Abbreviated Terms Relating to Plastics (Withdrawn 2024)³
- D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- D2513 Specification for Polyethylene (PE) Gas Pressure

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.10 on Fittings. Current edition approved Feb. 1, 2024. Published March 2024. Originally approved in 1973. Last previous edition approved in 2016 as D3261 – 16. DOI: 10.1520/D3261-24.

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 The last approved version of this historical standard is referenced on www.astm.org.

Pipe, Tubing, and Fittings

D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials

F412 Terminology Relating to Plastic Piping Systems

F2206 Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE)

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

2.4 National Sanitation Foundation Standard:

Standard No. 14 for Plastic Piping Components and Related Materials⁵

2.5 Plastic Pipe Institute⁶

PPI TR-3 Policies and Procedures for Developing Hydrostatic Design Basis (HDB), Pressure Design Basis (PDB), Strength Design Basis (SDB), and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe⁷

PPI TR-4 HDB/SDB/PDB/MRS Listed Materials, PPI Listing of Hydrostatic Design Basis (HDB), Strength Design Basis (SDB), Pressure Design Basis (PDB), and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe

2.6 ISO Standards:⁷

ISO 3607 Polyethylene (PE) pipes

3. Terminology

3.1 Definitions are in accordance with Terminology F412 and abbreviations are in accordance with Terminology D1600, unless otherwise specified.

3.2 Definitions:

3.2.1 *butt fusion fitting, n*—a fitting have one or more outlets that can be butt fusion joined to pipe, tubing, or fitting.

⁴ DLA Document Services Building 4/D 700 Robbins Avenue Philadelphia, PA 19111-5094 <http://quicksearch.dla.mil/>

⁵ Available from NSF International, P.O. Box 130140, 789 N. Dixboro Rd., Ann Arbor, MI 48113-0140, <http://www.nsf.org>.

⁶ Available from Plastics Pipe Institute (PPI), 105 Decker Court, Suite 825, Irving, TX 75062, <http://www.plasticpipe.org>.

⁷ Available from International Organization for Standardization (ISO), ISO Central Secretariat, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

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