



Designation: F1055 – 16a

Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene (PEX) Pipe and Tubing¹

This standard is issued under the fixed designation F1055; 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 electrofusion polyethylene fittings for use with outside diameter-controlled polyethylene pipe, covered by Specifications [D2513](#), [D2737](#), [D3035](#), [F714](#), [F2623](#), [F2769](#) and crosslinked polyethylene (PEX), covered by Specifications [F876](#) and [F2788/F2788M](#). Requirements for materials, workmanship, and testing performance are included. All requirements for joining PE electrofusion fittings to PE pipe shall also apply to joining PE electrofusion fittings to PEX pipe. Where applicable in this specification “pipe” shall mean “pipe” or “tubing.”

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 9, 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

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

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 Nov. 15, 2016. Published January 2017. Originally approved in 1987. Last previous edition approved in 2016 as F1055 – 16. DOI: 10.1520/F1055-16A.

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.

[D1600](#) Terminology for Abbreviated Terms Relating to Plastics

[D2513](#) Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings

[D2737](#) Specification for Polyethylene (PE) Plastic Tubing

[D3035](#) Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter

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

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

[F714](#) Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter

[F876](#) Specification for Crosslinked Polyethylene (PEX) Tubing

[F905](#) Practice for Qualification of Polyethylene Saddle-Fused Joints

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

[F2623](#) Specification for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing

[F2788/F2788M](#) Specification for Metric and Inch-sized Crosslinked Polyethylene (PEX) Pipe

[F2769](#) Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems

2.2 PPI Standards:³

[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) Rating for Thermoplastic Piping Materials or Pipe

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

³ Available from Plastics Pipe Institute (PPI), 105 Decker Court, Suite 825, Irving, TX 75062, <http://www.plasticpipe.org>.

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