



Designation: F412 – 23

Standard Terminology Relating to Plastic Piping Systems¹

This standard is issued under the fixed designation F412; 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 terminology is a compilation of definitions of technical terms used in the plastic piping industry. Terms that are generally understood or adequately defined in other readily available sources are not included.

1.2 When a term is used in an ASTM document for which Committee F17 is responsible it is included only when judged, after review, by Subcommittee F17.91 to be a generally usable term.

1.3 Definitions that are identical to those published by other ASTM committees or other standards organizations are identified with the committee number (for example, D20) or with the abbreviation of the name of the organization (for example, IUPAC International Union of Pure and Applied Chemistry).

1.4 A definition is a single sentence with additional information included in notes.

1.5 Definitions are followed by the committee responsible for the standard(s) (for example, [F17.26]) and standard numbers(s) in which they are used (for example, F714).

1.6 Abbreviated Terminology:

1.6.1 Abbreviated terminology is intended to provide uniform contractions of terms relating to plastic piping that have evolved through widespread common usage. The compilation in this standard has been prepared to avoid the occurrence of more than one abbreviated term for a given plastics piping term and to avoid multiple meanings for abbreviated terms.

1.6.2 The abbreviated terminology and descriptions in this standard are intended to be consistent with usage in plastics piping and the standards under F17 jurisdiction. Other ASTM Committees may assign a different word-phrase description to the same abbreviated terminology. In such cases, the abbreviated terms in this standard shall apply to usage in F17 standards, or if widespread misunderstanding could result from conflicting abbreviated terminology descriptions, the abbreviated terminology for the word-phrase shall not be used in F17 standards.

1.6.3 *Acronyms and Initialisms*—A word formed from the letters or parts of words of a longer word-phrase, usually from the initial letters or parts of the words. An Acronym is pronounced as a word, for example radar, for radio detection and ranging. An Initialism is pronounced as a series of letters, for example DOT for Department of Transportation.

1.6.4 The Acronym or Initialism description is the origin word-phrase for the Acronym or Initialism, not a definition.

1.7 *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

- C114 Test Methods for Chemical Analysis of Hydraulic Cement
- D256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- D638 Test Method for Tensile Properties of Plastics
- D648 Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
- D747 Test Method for Apparent Bending Modulus of Plastics by Means of a Cantilever Beam (Withdrawn 2019)³
- D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- D882 Test Method for Tensile Properties of Thin Plastic Sheet
- D883 Terminology Relating to Plastics
- D907 Terminology of Adhesives
- D1003 Test Method for Haze and Luminous Transmittance of Transparent Plastics
- D1079 Terminology Relating to Roofing and Waterproofing
- D1238 Test Method for Melt Flow Rates of Thermoplastics

¹ This terminology is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.91 on Editorial and Terminology.

Current edition approved July 1, 2023. Published July 2023. Originally approved in 1975. Last previous edition approved in 2021 as F412 – 21. DOI: 10.1520/F0412-23.

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.

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

- by Extrusion Plastometer
- D1488** Test Method for Amylaceous Matter in Adhesives
- D1505** Test Method for Density of Plastics by the Density-Gradient Technique
- D1527** Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80 (Withdrawn 2013)³
- D1600** Terminology for Abbreviated Terms Relating to Plastics
- D1785** Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- D2104** Specification for Polyethylene (PE) Plastic Pipe, Schedule 40 (Withdrawn 2010)³
- D2239** Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
- D2241** Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
- D2282** Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (Withdrawn 2006)³
- D2444** Practice for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
- D2447** Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter (Withdrawn 2010)³
- D2513** Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings
- D2661** Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- D2666** Specification for Polybutylene (PB) Plastic Tubing (Withdrawn 2003)³
- D2680** Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping
- D2683** Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
- D2737** Specification for Polyethylene (PE) Plastic Tubing
- D2751** Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings (Withdrawn 2014)³
- D2837** Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
- D2846/D2846M** Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
- D3035** Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- D3139** Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
- D3212** Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- D3261** Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
- D3309** Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems
- D3350** Specification for Polyethylene Plastics Pipe and Fittings Materials
- F3378/F3378M** Specification for Crosslinkable Polyethylene (CX-PE) Pipe
- F3507** Practice for Butt-Fusion Joining of Crosslinkable Polyethylene (CX-PE) Pipe and Tubing
- F3525/F3525M** Specification Fabricated Fittings of Crosslinkable Polyethylene (CX-PE)
- F402** Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings
- F405** Specification for Corrugated Polyethylene (PE) Pipe and Fittings (Withdrawn 2015)³
- F441/F441M** Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- F442/F442M** Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
- F449** Practice for Subsurface Installation of Corrugated Polyethylene Pipe for Agricultural Drainage or Water Table Control
- F628** Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core
- F645** Guide for Selection, Design, and Installation of Thermoplastic Water- Pressure Piping Systems
- F714** Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
- F771** Specification for Polyethylene (PE) Thermoplastic High-Pressure Irrigation Pipeline Systems (Withdrawn 2013)³
- F876** Specification for Crosslinked Polyethylene (PEX) Tubing
- F877** Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems
- F891** Specification for Coextruded Poly(Vinyl Chloride) (PVC) Plastic Pipe With a Cellular Core
- F948** Test Method for Time-to-Failure of Plastic Piping Systems and Components Under Constant Internal Pressure With Flow (Withdrawn 2018)³
- F1025** Guide for Selection and Use of Full-Encirclement-Type Band Clamps for Reinforcement or Repair of Punctures or Holes in Polyethylene Gas Pressure Pipe
- F1281** Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
- F1335** Specification for Pressure-Rated Composite Pipe and Fittings for Elevated Temperature Service (Withdrawn 2011)³
- F1417** Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air
- F1473** Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins
- F1488** Specification for Coextruded Composite Pipe
- F1499** Specification for Coextruded Composite Drain, Waste, and Vent Pipe (DWV)
- F1545** Specification for Plastic-Lined Ferrous Metal Pipe, Fittings, and Flanges