



Standards For Plastics Piping

TR – 5

STANDARDS FOR PLASTICS PIPING

Foreword

This technical report has been prepared to provide producers, users, engineers, code officials, installers and others interested in plastics piping with an up-to-date list of standards covering high quality plastic piping components. Standards for the purpose of this report include component specifications, methods of test and recommended practices for pipe, tubes, conduits, fittings and related products made of plastics. Although the Plastics Pipe Institute is concerned only with thermoplastics, standards for thermoset plastics are also included.

The only piping products and regulations listed in this publication are those of national standing. State, regional and local plumbing and other piping codes—many of which are adoptions in total, or in part, of national model codes—are not covered.

It should be noted that most of these product standards (specifications) include product quality control requirement values that usually cannot be used for engineering design criteria. Such criteria are covered in recommended practices, codes, model codes, installation procedures, separate reports and the appendices of some of these product standards. Those standards that contain information on engineering design criteria and/or the closely related installation procedures are herein identified.

Before selecting the type of plastic and the related standards for an application, the design criteria, limitations, and installation techniques must be considered to achieve satisfactory service. Also, any applicable codes must be considered. Information on these aspects may be obtained from the pertinent codes; the standards listed herein, the publications or staff of the Plastics Pipe Institute and of other organizations (identified in this report), or from the manufacturers of plastic pipe components and plastic materials.

As the plastics industry has grown, other trade organizations have been formed. Their scopes are listed at the end of this report to enable you to direct your inquiries to the appropriate organization.

The Plastics Pipe Institute, Inc., as a service to the industry has prepared this report. The information in this report is offered in good faith and believed to be accurate at the time of its preparation, but is offered without any warranty, express or implied. PPI does not endorse the proprietary products or processes of any manufacturer and assumes no responsibility for compliance with applicable laws and regulations.

This Technical Report is a living document and is updated on a regular basis. If standards need to be added, please forward the standard title to PPI.

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STANDARDS FOR PLASTICS PIPING

Introduction

This publication contains listings of standards for various types of plastics piping as promulgated by numerous standards-making organizations, such as the American Society for Testing and Materials (ASTM), the American Association of State Highway and Transportation Officials (AASHTO), various U.S. Government agencies and so on.

For the convenience of the reader, this publication has been arranged into three sections. Section I and II are devoted to ASTM standards, which are published in Volume 08.04 of the Annual Book of ASTM Standards.

Section I categorizes the ASTM standards into one of eight listings:

- Plastic Pipe Specifications
- Plastic Fittings Specifications
- Plastic Pipe Joints and Joining Materials
- Systems Specifications (both pipe and fittings)
- Methods of Test
- Recommended Practices
- Terminology
- Plastic Pipe and Fittings Materials

Section II categorizes the ASTM Standards into listings such as:

- Piping by Type of Material (PE, PVC, etc.)
- Piping Systems by Type of Application (DWV, gas, sewer, water, etc.)
- Pipe Installation and Components (fittings, joints, seals, solvent cement and primers, underground installation)
- General Test Methods

Section III contains listings of standards promulgated by organizations other than ASTM (with their addresses) as well as sources of further information.

- American Association of State Highway and Transportation Officials (AASHTO)
- American National Standards Institute (ANSI)
- American Petroleum Institute (API)
- American Society of Agricultural Engineers (ASAE)
- American Water Works Association (AWWA)
- Canadian Government Standards Board (CGSB)
- Canadian Standards Association (CSA)
- U.S. Department of Agriculture – Natural Resources Conservation Service (NRCS)
- U.S. Department of Transportation

U.S. Department of Housing & Urban Development (HUD)
International Association of Plumbing & Mechanical Officials (IAPMO)
International Standards Organization (ISO)
National Electrical Manufacturer's Association (NEMA)
National Fire Protection Association (NFPA)
NSF International
Underwriters Laboratories (UL)
UniBell PVC Pipe Association (UniBell)
International Code Council (ICC)
National Association of Plumbing-Heating-Cooling Contractors (PHCC)
Plastic Pipe and Fittings Association (PPFA)
The Vinyl Institute (VI)

SECTION I

ASTM American Society for Testing and Materials
 100 Barr Harbor Drive
 West Conshohocken, PA 19428
 (610) 832-9500
 Internet: www.astm.org

Plastic Pipe Specifications

- D1527 Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
- D1785 Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedule 40, 80, and 120
- D2104 Polyethylene (PE) Plastic Pipe, Schedule 40
- D2239 Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter
- D2241 Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
- D2282 Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
- D2310 Machine-Made "Fiberglass" (Glass-fiber-reinforced Thermosetting-resin) Pipe
- D2447 Polyethylene (PE) Plastic Pipe, Schedules 40 and 80 Based on Outside Diameter
- D2466 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- D2513 Thermoplastic Gas Pressure Pipe, Tubing and Fittings
- D2737 Polyethylene (PE) Plastic Tubing
- D2996 Filament-Wound "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
- D2997 Centrifugally Cast "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
- D3035 Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- D3262 "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
- D3517 "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe
- F187 Specification for Folded/Formed Poly (Vinyl Chloride) Pipe Type A for Existing Sewer and Conduit Rehabilitation
- F405 Corrugated Polyethylene (PE) Pipe and Fittings
- F441 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- F442 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
- F714 Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- F810 Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields

F876	Crosslinked Polyethylene (PEX) Tubing
F891	Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core
F894	Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe
F949	Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
F1281	Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
F1282	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
F1335	Pressure-Rated Composite Pipe and Fittings for Elevated Temperature Service
F1483	Oriented Poly (Vinyl) Chloride PVCO, Pressure Pipe
F1488	Coextruded Composite Pipe
F1499	Coextruded Composite Drain, Waste and Vent Pipe (DWV)
F1533	Specification for Deformed Polyethylene (PE) Liner
F2160	Specification for Solid Wall High Density Polyethylene (HDPE) Conduit Based on Controlled Outside Diameter (OD)
F2262	Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Tubing OD Controlled SDR9

Plastic Fittings Specifications

D2464	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings Schedule 80
D2466	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
D2467	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D2609	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
D2683	Socket-Type Polyethylene (PE) Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
D3261	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
D3311	Drain, Waste and Vent (DWV) Plastic Fittings Patterns
D3840	Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Fittings for Non-Pressure Applications
D5685	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings
F409	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
F437	Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F438	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
F439	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F1055	Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
F1336	Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings

- F1380 Metal Insert Fittings for Polybutylene (PB) Tubing
- F1733 Butt Heat Fusion Polyamide (PA) Plastic Fittings for Polyamide (PA) Plastic Pipe and Tubing
- F1807 Standard Specification for Metal Insert Fittings utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing
- F1924 Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing
- F1970 Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems
- F1974 Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe
- F2080 Specification for Cold-Expansion Fittings With Metal Compression-Sleeves for Cross-Linked Polyethylene (PEX) Pipe
- F2135 Specification for Molded Drain, Waste, and Vent (DWV) Short-Pattern Plastic Fittings
- F2159 Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing
- F2434 Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing
- F2735 Specification for Plastic Insert Fittings For SDR9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing

Plastic Pipe Joints and Joining Materials

- D2235 Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
- D2564 Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
- D3138 Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Non-Pressure Piping Components
- D3139 Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
- D3212 Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- D4161 "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
- D2672 Joints for IPS PVC Pipe Using Solvent Cement
- D3122 Solvent Cement for Styrene-Rubber (SR) Plastic Pipe and Fittings
- F477 Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- F493 Solvent Cement for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
- F656 Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings

- F913 Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- F1056 Socket Fusion Tools for Use in Socket Fusion Joining Polyethylene Pipe or Tubing and Fittings

Systems Specifications (Both Pipe and Fittings)

- D2513 Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings
- D2517 Standard Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings
- D2661 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- D2665 Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings
- D2680 Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping
- D2729 Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
- D2751 Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings
- D2846 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
- D2852 Standard Specification for Styrene-Rubber (SR) Plastic Drain Pipe and Fittings
- D2949 3.25-In. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- D3034 Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
- D3754 "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer and Industrial Pressure Pipe
- F194 Specification for Metallic Mechanical Fittings for Use on Outside Diameter Controlled Thermoplastic Gas Distribution Pipe and Tubing
- F480 Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), SCH 40 and SCH 80
- F512 Specification for Smooth-Wall Poly Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation
- F667 Standard Specification for Large Diameter Corrugated Polyethylene Pipe and Fittings
- F679 Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings
- F714 Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- F771 Polyethylene (PE) Thermoplastic High-Pressure Irrigation Pipeline Systems
- F794 Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
- F877 Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems
- F1412 Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems

- F1498 Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings
- F1865 Specification for Mechanical Cold Expansion Insert Fitting With Compression Sleeve for Cross-linked Polyethylene (PEX) Tubing
- F1866 Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
- F1960 Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
- F1986 Specification for Multilayer Pipe Type 2, Compression Fittings, and Compression Joints for Hot and Cold Drinking-Water Systems
- F2164 Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
- F2206 Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE) Plastic Pipe, Fittings, Sheet Stock, Plate Stock, or Block Stock
- F2307 Specification for Series 10 Poly(Vinyl Chloride) (PVC) Closed Profile Gravity Pipe and Fittings Based on Controlled Inside Diameter
- F2389 Specification for Pressure-rated Polypropylene (PP) Piping Systems
- F2390 Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent (DWV) Pipe and Fittings Having Post-Industrial Recycle Content
- F2618 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems

Methods of Test

- D256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- D618 Practice for Conditioning Plastics for Testing
- D638 Test Method for Tensile Properties of Plastics
- D882 Test Method for Tensile Properties of Thin Plastic Sheeting
- D883 Terminology Relating to Plastics
- D1043 Test Method for Stiffness Properties of Plastics as a Function of Temperature by Means of a Torsion Test
- D1045 Test Methods for Sampling and Testing Plasticizers Used in Plastics
- D1525 Standard Test Method for Vicat Softening Temperature of Plastics
- D1598 Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
- D1599 Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings
- D1603 Test Method for Carbon Black Content in Olefin Plastics
- D1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics
- D2105 Longitudinal Tensile Properties of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube
- D2122 Determining Dimensions of Thermoplastic Pipe and Fittings
- D2143 Cyclic Pressure Strength of Reinforced, Thermosetting Plastic Pipe
- D2152 Adequacy of Fusion of Extruded Poly (Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion

- D2222 Test Method for Methanol Extract of Vinyl Chloride Resins
- D2290 Apparent Hoop Tensile Strength of Plastic or Reinforced Plastic Pipe by Split Disk Method
- D2412 Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D2444 Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
- D2837 Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials, or Pressure Design Basis for Thermoplastic Pipe Products
- D2924 External Pressure Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
- D2925 Beam Deflection of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe Under Full Bore Flow
- D2990 Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
- D2992 Obtaining Hydrostatic or Pressure Design Basis for "Fiberglass"(Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings
- D3681 Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition
- F243 Test Method for Determining Thermoplastic Pipe Wall Stiffness
- F610 Evaluating the Quality of Molded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique
- F948 Tim-to-Failure of Plastic Piping Systems and Components under Constant Internal Pressure with Flow
- F1057 Estimating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique
- F1365 Water Infiltration Resistance of Plastic Underground Conduit Joints Which Use Flexible Elastomeric Seals
- F1417 Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air
- F1429 Assembly Force of Plastic Underground Conduit Joints that use Flexible Elastomeric Seals Located in the Bell
- F1473 Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins
- F1588 Constant Tensile Load Joint Test (CTLJT)
- F2018 Test Method for Time-to-Failure of Plastics Using Plane Strain Tensile Specimens
- F2023 Test Method for Evaluating the Oxidative Resistance of Crosslinked Polyethylene (PEX) Tubing and Systems to Hot Chlorinated Water
- F2136 Test Method for Notched, Constant Ligament-Stress (NCLS) Test to Determine Slow-Crack-Growth Resistance of HDPE Resins or HDPE Corrugated Pipe
- F2231 Test Method for Charpy Impact Test on Thin Specimens of Polyethylene Used in Pressurized Pipes
- F2261 Test Method for Pressure Rating Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 and 80 Socket-Type.

- F2263 Test Method for Evaluating the Oxidative Resistance of Polyethylene (PE) Pipe to Chlorinated Water
- F2330 Test Method for Evaluating the Oxidative Resistance of Multilayer Polyolefin Tubing to Hot Chlorinated Water
- F2634 Test Method for Laboratory Testing of Polyethylene (PE) Butt Fusion Joints using Tensile-Impact Method
- F2657 Test Method for Outdoor Weathering Exposure of Crosslinked Polyethylene (PEX) Tubing

Recommended Practices

- D1972 Practice for Generic Marking of Plastic Products
- D2321 Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
- D2488 Description and Identification of Soils (Visual-Manual Procedure)
- D2657 Heat-Joining Polyolefin Pipe and Fittings
- D2774 Underground Installation of Thermoplastic Pressure Piping
- D2839 Practice for Use of a Melt Index Strand for Determining Density of Polyethylene
- D2855 Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
- D3567 Determining Dimensions of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings
- D3839 Underground Installation of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
- F402 Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings
- F449 Subsurface Installation of Corrugated Polyethylene Pipe for Agricultural Drainage or Water Table Control
- F481 Installation of Thermoplastic Pipe and Corrugated Pipe in Septic Tank Leach Fields
- F585 Insertion of Flexible Polyethylene Pipe into Existing Sewers
- F645 Selection, Design, and Installation of Thermoplastic Water-Pressure Piping Systems
- F689 Determination of the Temperature of Above-Ground Plastic Gas Pressure Pipe within Metallic Casings
- F690 Underground Installation of Thermoplastic Pressure Piping Irrigation Systems
- F905 Qualification of Polyethylene Saddle-Fused Joints
- F1025 Selection and Use of Full-Encirclement-Type Band Clamps for Reinforcement or Repair of Punctures or Holes in Polyethylene Gas Pressure Pipe
- F1041 Squeeze-Off of Polyolefin Gas Pressure Pipe and Tubing
- F1176 Design and Installation of Underground Thermoplastic Irrigation Systems With Maximum Working Pressure of 125 psi
- F1216 Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- F1290 Electrofusion Joining Polyolefin Pipe and Fittings

- F1563 Specification for Tools to Squeeze-off Polyethylene (PE) Gas Pipe or Tubing
- F1668 Construction Procedures for Buried Plastic Pipe
- F1734 Qualification of a Combination of Squeeze Tool, Pipe, and Squeeze-Off Procedures to Avoid Long-Term Damage in Polyethylene (PE) Gas Pipe
- F1743 Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
- F1804 Practice for Determining Allowable Tensile Load for Polyethylene (PE) Gas Pipe During Pull-In Installation
- F1867 Practice for Installation of Folded/Formed Poly (Vinyl Chloride) (PVC) Pipe Type A for Existing Sewer and Conduit Rehabilitation
- F2620 Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings

Terminology

- D883 Standard Terminology Relating to Plastics
- D1600 Standard Terminology for Abbreviated Terms Relating to Plastics
- D2749 Standard Symbols for Dimensions of Plastic Pipe Fittings
- F412 Standard Terminology Relating to Plastic Piping Systems

Plastic Fittings Materials

- D1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
- D2581 Polybutylene (PB) Plastics Molding and Extrusion Materials
- D3350 Polyethylene Plastics Pipe and Fittings Materials
- D3915 Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Pressure Applications
- D3965 Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings
- D4066 Nylon Injection and Extrusion Materials (PA)
- D4396 Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications
- D4976 Standard Specification for Polyethylene Plastics Molding and Extrusion Materials
- F876 Standard Specification for Crosslinked Polyethylene (PEX) Tubing

SECTION II

A. PLASTIC PIPE MATERIALS CLASSIFICATIONS

Materials

Specification for:

- D1784 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
- D2581 Standard Classification System for Polybutylene (PB) Plastics Molding and Extrusion Materials
- D3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
- D3915 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Pressure Applications
- D3965 Standard Specification for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings
- D4066 Standard Classification System for Nylon Injection and Extrusion Materials (PA)
- D4396 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications
- D4976 Standard Specification for Polyethylene Plastics Molding and Extrusion Materials

Type of Plastics Piping

Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings

Specifications for:

- D1527 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
- D2235 Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
- D2661 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- D2680 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping
- D2751 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings
- D3138 Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Non-Pressure Piping Components

- D3965 Standard Specification for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings
- F409 Standard Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
- F628 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core

Test Method for:

- D2444 Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)

Polyamide (PA) Plastic Pipe and Fittings

Specifications for:

- F1733 Standard Specification for Butt Heat Fusion Polyamide(PA) Plastic Fitting for Polyamide(PA) Plastic Pipe and Tubing

Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Tubing, and Fittings

Specifications for:

- D2846 Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
- F437 Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
- F438 Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
- F439 Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
- F441 Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- F442 Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
- F493 Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
- F1336 Standard Specification for Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings

Polyethylene (PE) Plastic Pipe, Tubing, and Fittings

Specifications for:

- D2104 Standard Specification for Polyethylene (PE) Plastic Pipe, Schedule 40
- D2239 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter
- D2447 Standard Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter
- D2609 Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
- D2683 Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
- D2737 Standard Specification for Polyethylene (PE) Plastic Tubing
- F2306 Standard Specification for 12 to 60 in. [300 to 1500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications
- F2619 Standard Specification for High-Density Polyethylene (PE) Line Pipe
- F2623 Standard Specification for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing
- F2769 Standard Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems

Specifications for:

- D3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- D3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
- D3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
- F405 Standard Specification for Corrugated Polyethylene (PE) Pipe and Fittings
- F667 Standard Specification for Large Diameter Corrugated Polyethylene Pipe and Fittings
- F2648 Standard Specification for 2 to 60 inch [50 to 1500 mm] Annular Corrugated Profile Wall Polyethylene (PE) Pipe and Fittings for Land Drainage Applications

Specifications for:

- F714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- F771 Standard Specification for Polyethylene (PE) Thermoplastic High-Pressure Irrigation Pipeline Systems

- F810 Standard Specification for Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields
- F876 Standard Specification for Crosslinked Polyethylene (PEX) Tubing
- F877 Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems
- F894 Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe
- F1055 Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
- F1533 Standard Specification for Deformed Polyethylene (PE) Liner
- F2788 Standard Specification for Crosslinked Polyethylene (PEX) Pipe

Practice for:

- F905 Standard Practice for Qualification of Polyethylene Saddle-Fused Joints

Poly (Vinyl Chloride) (PVC) Plastic Pipe, Tubing, and Fittings

Specifications for:

- D1785 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- D2464 Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
- D2466 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- D2467 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
- D2564 Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
- D2665 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- D2672 Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
- D2729 Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
- D2949 Standard Specification for 3.25-in. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- D3034 Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
- D3138 Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Non-Pressure Piping Components
- D3915 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Pressure Applications

- D4396 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications
- F409 Standard Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
- F512 Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation
- F656 Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
- F679 Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings
- F758 Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Plastics Underdrain Systems for Highway, Airport, and Similar Drainage
- F794 Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
- F891 Standard Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core
- F949 Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
- F1483 Standard Specification for Oriented Poly (Vinyl Chloride), PVCO, Pressure Pipe
- F1504 Standard Specification for Folded Poly (Vinyl Chloride) (PVC) Pipe for Existing Sewer and Conduit Rehabilitation
- F1697 Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Strip for Machine Spiral-Wound Liner Pipe Rehabilitation of Existing Sewers and Conduits
- F1732 Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer and Drain Pipe Containing Recycled PVC Material
- F1760 Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC)
- F1803 Standard Specification for Poly (Vinyl Chloride)(PVC) Closed Profile Gravity Pipe and Fittings Based on Controlled Inside Diameter
- F2307 Standard Specification for Series 10 Poly(Vinyl Chloride) (PVC) Closed Profile Gravity Pipe and Fittings Based on Controlled Inside Diameter
- F2390 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent (DWV) Pipe and Fittings Having Post-Industrial Recycle Content
- F2618 Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems
- F2658 Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) SDR 51 and SDR 64 Sewer Pipe and Fittings