2 Normative references

The following documents contain requirements that, by reference in this text, constitute requirements of this Standard. At the time of publication, the indicated editions were valid. All of the documents are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below. It is the responsibility of the user of this Standard to determine the acceptance of the referenced standards to the application and requirements of the local jurisdictions.

2.1 Normative references for plastic pipe and related components

ASME A112.4.14-2004. Manually Operated, Quarter-Turn Shutoff Valves for Use in Plumbing Systems


ASME A112.18.1-2005/CSA B125.1-05. Plumbing Supply Fittings

ASME A112.18.6-2003. Flexible Water Connectors

ASSE No. 1050-2002. Performance Requirements for Stack Air Admittance Valves for Sanitary Drainage Systems

ASSE No. 1051-2002. Performance Requirements for Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems


ASTM D 1785-04a06. Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120


ASTM D 2239-03. Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter


ASTM D 2447-03. Standard Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter


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3 American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990

4 American Society of Sanitary Engineering (ASSE) for Plumbing and Sanitary Research, 901 Canterbury Road, Suite A, Westlake, OH 44145-7201

5 American Society for Testing Materials (ASTM) 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959


ASTM D 2683-04. Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing

ASTM D 2729-03. Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

ASTM D 2737-03. Standard Specification for Polyethylene (PE) Plastic Tubing


ASTM D 3034-0604a. Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

ASTM D 3035-063a. Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter


ASTM D 3517-06a. Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe

ASTM D 4066-01a. Standard Classification System for Nylon Injection and Extrusion Materials (PA)


ASTM F 480-06b. Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR) SCH 40 and SCH 80


ASTM F 794-03. Standard Specification for Poly(Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter


ASTM F 949-03. Standard Specification for Poly(Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings


ASTM F 1282-06. Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe


ASTM F 1483-05. Standard Specification for Oriented Poly(Vinyl Chloride), PVCO, Pressure Pipe

ASTM F 1488-03. Standard Specification for Coextruded Composite Pipe

ASTM F 1498-00(e1). Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe Fittings


ASTM F 1807-07. Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing


ASTM F 2306-05. *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* 3


AWWA C900-97. *Polyvinyl Chloride (PVC) Pressure Pipe, and Fabricated Fittings, 4 in Through 12 in (100 mm Through 300 mm), for Water Distribution* 5

AWWA C901-02. *Polyethylene (PE) Pressure Pipe and Tubing, ½ in (13 mm) Through 3 in (76 mm), for Water Service* 6

AWWA C904-06. *Cross-Linked Polyethylene (PEX) Pressure Pipe, 1/2 in. (12mm) Through 3 in. (76 mm), for Water Service* 6

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6 American Water Works Association (AWWA), 6666 West Quincy Avenue, Denver, CO 80235
AWWA C905-97. Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 in Through 48 in (350 mm Through 1,200 mm)\(^6\)

AWWA C906-99. Polyethylene (PE) Pressure Pipe and Fittings, 4 in (100 mm) Through 63 in (1,575 mm), for Water Distribution and Transmission\(^6\)

AWWA C907-04. Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings for Water – 4 in Through 12 in (100 mm Through 300 mm)\(^6\)

AWWA C909-02. Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 IN through 12 IN. (100 MM through 600 MM ), for Water Distribution\(^6\)

AWWA C950-074. Fiberglass Pressure Pipe\(^6\)

CSA B125-01. Plumbing Fittings\(^7\)

CSA B137.1-052. Polyethylene Pipe, Tubing, and Fittings for Cold Water Pressure Services\(^7\)

CSA B137.3-052. Rigid Polyvinyl Chloride (PVC) Pipe for Pressure Applications\(^7\)

CSA B137.4-052. Polyethylene Piping Systems for Gas Services\(^7\)

CSA B137.5-052. Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications\(^7\)

CSA B137.6-052. CPVC Pipe, Tubing, and Fittings for Hot and Cold Water Distribution Systems\(^7\)

CSA B137.8-052. Polybutylene (PB) Piping for Pressure Applications\(^7\)

CSA B137.9-052. Polyethylene/Aluminum/Polyethylene Composite Pressure Pipe Systems\(^7\)

CSA B137.10-052. Cross-linked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe Systems\(^7\)

CSA B137.11-052. Polypropylene (PP-R) Pipe and Fittings for Pressure Applications\(^7\)

CSA B181.1-062. ABS Drain, Waste, and Vent Pipe and Pipe Fittings\(^7\)

CSA B181.2-062. PVC Drain, Waste, and Vent Pipe and Pipe Fittings\(^7\)

CSA B181.3-062. Polyolefin Laboratory Drainage Systems\(^7\)

CSA B181.5-062. Coextruded ABS/PVC Drain waste and Vent Pipe\(^7\)

CSA B182.1-062. Plastic Drain and Sewer Pipe and Pipe Fittings\(^7\)

CSA B182.2-062. PVC Sewer Pipe and Fittings (PSM Type)\(^7\)

DIN 8077-99. Polypropylene Pipes – PP-H 100, PP-B 80, PP-R 80 – Dimensions\(^8\)

DIN 8078-96. Polypropylene (PP) Pipes – PP-H (Type 1), PP-B (Type 2), PP-R (Type 3) – General Quality Requirements and Testing\(^8\)

\(^6\) Canadian Standards Association (CSA), 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3

\(^7\) Deutsches Institut für Normung e. V. (DIN), Burggrafen-strasse 6, D-10787 Berlin, Germany
DIN 16962-80. Parts 1 through 13, Pipe Joints and Elements for Polypropylene (PP) Pressure Pipelines, Types 1 and 2; Bends of Segmental Construction for Butt-welding, Dimensions

PPI TR-2-2006B. PVC Range Composition Listing of Qualified Ingredients

2.2 Normative references for compounds and other materials


ASTM D 3915-04(a)2004). Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Pressure Applications


ASTM D 4181-00. Standard Classification for Acetal (POM) Molding and Extrusion Materials

ASTM D 4396-06a1. Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications

2.3 Other normative references


ASTM F 1216-06a5. Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM F 2023-05. Test Method for Evaluating the Oxidative Resistance of Crosslinked Polyethylene (PEX Tubing and Systems to Hot Chlorinated Water

ASTM D 2837-04e1. Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products

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9 Plastics Pipe Institute, 1825 Connecticut Ave., NW Suite 680, Washington, DC, 20009

ASTM D 2992-94. Standard Practice for Obtaining Hydrostatic or Pressure Design Basis for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings


Code of Federal Regulations, Title 21, Parts 1-99, Food and Drugs (Rev. 4/07)

Code of Federal Regulations, Title 21, Parts 100-169, Food and Drugs (Rev. 4/07)

Code of Federal Regulations, Title 21, Parts 170-199, Food and Drugs (Rev. 4/07)


ISO 12162:1995. Thermoplastics materials for pipes and fittings for pressure applications – Classification and designation – Overall service (design) coefficient

NSF/ANSI 60 –2005. Drinking Water Treatment Chemicals – Health Effects


PPI TR-3-2005. 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 Pipe

PPI TR-4-2005. 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

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11 International Organization for Standardization (ISO), 1 rue de Varembé, Case postale 56, CH-1211, Geneve 20, Switzerland
12 Plastic Pipe institute, Inc. (PPI), 1825 Connecticut Ave. NW, Suite 680, Washington, DC 20009