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# Push-Fit Fittings

# Section I

## 1.0 General

### 1.1 Application

The purpose of this standard is to establish minimum performance requirements for push-fit fittings and push-fit connections that are integrated into plumbing devices (herein referred to as the “fitting”). The fittings described in this standard are intended for use in hot and cold potable water distribution and hydronic heating systems in residential and commercial applications.

### 1.2 Scope

#### 1.2.1 Description

This standard applies to push-fit fittings that can be used with one or more of the following materials:

1) PEX tubing complying with ASTM F 876 or CSA B137.5.
2) Copper tubing hard drawn Type K, L and M and annealed Type M not to exceed ⅜” nominal, complying with ASTM B 88.
3) CPVC tubing complying with ASTM D 2846 or CSA B137.6.
4) PE-RT tubing complying with ASTM F 2769.

#### 1.2.2 Size

These fittings shall have a nominal size not to exceed 2” CTS.

#### 1.2.3 Minimum Pressure and Temperature Ratings

These fittings shall be designed for continuous water service up to and including 100.0 psi (689.5 kPa) at 180.0 °F (82.2 °C). Push-fit fittings are not intended to be used in temperature/pressure relief valve drain lines unless they are tested and rated for excessive conditions of 210.0 °F (98.9 °C) and 150.0 psi (1034.2 kPa) per ASME A112.4.1 or ASTM F 877.

### 1.3 Reference Standards

Reference to industry standards shall mean to the latest edition of these standards:

- ASME A112.4.1 – 2009, *Water Heater Relief Valve Drain Tubes*
- ASME B1.20.1 – 1983(R2001), *Pipe Threads, General Purpose, Inch*
- ASME B1.20.3 – 1976(R2006), *Dryseal Pipe Threads, Inch*
- ASME B16.18 – 2001(R2005), *Cast Copper Alloy Solder Joint Pressure Fittings*
- ASME B16.22 – 2001(R2005), *Wrought Copper and Copper Alloy Solder Joint Pressure Fittings*
- ASTM A 240 – *Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications*
- ASTM B 88 – 2009, *Standard Specification for Seamless Copper Water Tube*
- ASTM B 858 – 2006, *Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys*

- ASTM D 1599 – 1999(R2005), *Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing and Fittings*
- ASTM D 2846 – 2009b, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems*
- ASTM D 6284 – 2009, *Standard Test Method for Rubber Property – Effect of Aqueous Solutions with Available Chlorine and Chloramine*
- ASTM F 876 – 2010, *Standard Specification for Crosslinked Polyethylene (PEX) Tubing*
- ASTM F 877 – 2007, *Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems*
- ASTM F 1498 – 2008, *Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings*
- ASTM F 2769 – 2010, *Standard Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems*
- CSA B137.5 – 2009, *Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications*
- CSA B137.6 – 2009, *Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems*
- CSA C22.2 Number 0.15 – 2001(R2006), *Adhesive Labels*
- ISO 6509 – 1981, *Corrosion of metals and alloys - Determination of dezincification resistance of brass*
- ISO 6957 – 1988, *Copper alloys - Ammonia test for stress corrosion resistance*
- NSF/ANSI 61 – 2010a, *Drinking Water System Components – Health Effects*
- UL 969 – 1995, *Marking and Labeling Systems*