

P2904.9 Plastic pipe joints. Joints in plastic piping shall be made with approved fittings by solvent cementing, heat fusion, corrosion-resistant metal clamps with insert fittings or compression connections. Flared joints for polyethylene pipe are permitted in accordance with Section P2904.3.

P2904.9.1 Solvent cementing. Solvent-cemented joints shall comply with Sections P2904.9.1.1 through P2904.9.1.3.

P2904.9.1.1 ABS plastic pipe. Solvent cement for ABS plastic pipe conforming to ASTM D 2235 shall be applied to all joint surfaces.

P2904.9.1.2 CPVC plastic pipe. Solvent cement for CPVC plastic pipe conforming to ASTM F 493 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and in accordance with ASTM D 2846 or ASTM F 493. Solvent-cement joints shall be permitted above or below ground.

P2904.9.1.3 PVC plastic pipe. A primer complying with ASTM F 656 shall be applied to all PVC solvent cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

P2904.9.1.4 Cross-linked polyethylene plastic (PEX). Joints between cross-linked polyethylene plastic tubing or fittings shall comply with Section P2904.9.1.4.1 or Section P2904.9.1.4.2.

P2904.9.1.4.1 Flared joints. Flared pipe ends shall be made by a tool designed for that operation.

P2904.9.1.4.2 Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions. Fittings for cross-linked polyeth-

ylene (PEX) plastic tubing as described in ASTM F 1807, ASTM F 1960 and ASTM F 2080 shall be installed in accordance with the manufacturer's instructions.

P2904.10 Stainless steel. Joints between stainless steel pipe and fittings shall comply with Sections P2904.10.1 and P2904.10.2.

P2904.10.1 Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

P2904.10.2 Welded joints. All joint surfaces shall be cleaned. The joint shall be welded autogenously or with an approved filler metal in accordance with ASTM A312.

P2904.11 Threaded pipe joints. Threaded joints shall conform to American National Taper Pipe Thread specifications. Pipe ends shall be deburred and chips removed. Pipe joint compound shall be used only on male threads.

P2904.12 Soldered joints. Soldered joints in tubing shall be made with fittings approved for water piping and shall conform to ASTM B 828. Surfaces to be soldered shall be cleaned bright. The joints shall be properly fluxed and made with approved solder. Solders and fluxes used in potable water-supply systems shall have a maximum of 0.2 percent lead. Fluxes shall conform to ASTM B 813.

P2904.13 Flared joints. Flared joints in water tubing shall be made with approved fittings. The tubing shall be reamed and then expanded with a flaring tool.

P2904.14 Underground joints. Joints in polybutylene (PB) plastic pipe or tubing underground or under a concrete floor slab shall be installed using heat fusion, in accordance with the manufacturer's installation instructions. Joints in copper pipe

**TABLE P2904.5
WATER DISTRIBUTION PIPE**

MATERIAL	STANDARD
Brass pipe	ASTM B 43
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447
Cross-linked polyethylene (PEX) plastic tubing	ASTM F 877; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F 1281; CSACAN/CSA-B137.10
Galvanized steel pipe	ASTM A 53
Polybutylene (PB) plastic pipe and tubing	ASTM D 3309; CSA CAN3-B137.8
Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe	ASTM F 1282
Stainless steel (Type 304/304L) pipe	ASTM A312; ASTM A778
Stainless steel (Type 316/316L) pipe	ASTM A312; ASTM A778