

About CPVC

Chlorinated Poly (Vinyl Chloride) (CPVC) is a thermoplastic pipe and fitting material made with CPVC compounds meeting the requirements of ASTM Class 23447 as defined in ASTM Specification D1784. CPVC applications are for potable water distribution, corrosive fluid handling in industry, and fire suppression systems.

CPVC Products CPVC piping systems are:

- Environmentally friendly
- Provide long service life
- Easy to install and handle
- Corrosion resistant
- Cost effective
- Widely accepted by codes

Industrial CPVC pipe is manufactured by extrusion in sizes from ¼" to 12" diameter to Sch 40, Sch 80, and SDR (Standard Dimension Ratio) dimensions.

CPVC pipe for plumbing systems is manufactured by extrusion in sizes ¼" through 2" copper tube size (CTS) dimensions. The CTS plumbing products are made to copper tube outside diameter dimensions, in accordance with ASTM D2846 specifications, and have an SDR 11 wall thickness. The pressure ratings of the CTS SDR 11 systems are 400 psi (pounds per square inch) at 73 F and 100 psi at 180°F. CPVC plumbing pipe is sold in both straight lengths and (in small diameters) coils.

CPVC Piping Systems Uses & Applications

CPVC piping which is suitable for hot and cold water distribution has a 400 psi pressure rating at room temperature, and a 100 psi pressure rating at 180°F.

CPVC materials are resistant to many everyday household chemicals.

Since CPVC materials do not support combustion, they cannot burn without an external fuel source. This property makes CPVC pipe an attractive alternative to steel and copper pipe for fire sprinkler applications. CPVC fire sprinkler piping systems are approved for light hazard applications and for use in single and multifamily dwellings. Installation shall be in accordance with the NFPA Section 13, 13D, and 13R.

CPVC Code Status

CPVC piping for potable hot and cold water distribution systems is recognized in all model plumbing codes.

Also, CPVC plumbing pipe is safe for installation in return air plenums; however, the installation must be approved by the local jurisdiction. Even though CPVC is considered a combustible material it will not burn without a significant external flame source. Once the flame source is removed CPVC will not sustain combustion. Testing indicates that water filled CPVC in diameters 3" or less will pass the 25/50 flame smoke developed requirements for non-metallic material in return air plenums.

CPVC fire sprinkler pipe tested and listed in accordance with UL 1887, "Fire Test of Plastic Sprinkler Pipe for Flame and Smoke Characteristics," meets the requirements of NFPA 90A for installation in return air plenums.

CPVC Availability

CPVC pipe and fittings are produced by many manufacturers, and are available in Schedule 40 and Schedule 80 dimensions, as well as CPVC tubing which is suitable for potable hot and cold water distribution. The tubing is based on copper tube sizes (OD) and IPS pipe (OD), with SDR 11 wall thicknesses.