



Plastic Pipe and Fittings Association

PUBLICATIONS | SUSTAINABILITY

CPVC Plastic Piping Systems

A Sustainable Solution

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In initial studies, the cumulative energy requirements to manufacture, transport, install, and operate CPVC piping systems are estimated to be substantially less than most non-plastic piping systems. This, coupled with the fact that CPVC can last for decades, makes CPVC an ideal choice both environmentally and economically.

Corrosion Resistant

CPVC plastic piping materials are resistant to a wide range of chemicals and exhibit strong resilience in many types of environments. Properly installed piping systems maintain their integrity throughout the life of the system, preventing environmental releases caused by leaks and line breaks. This resilience can also reduce downtime and maintenance, which improves the efficiency of the process that the CPVC system is servicing.

Lightweight

CPVC is a fraction of the weight of metal piping. This results in lower energy for freight, easier installations, and reduced need for lifting and installation equipment.

Operationally Efficient

The interior surface of CPVC is significantly smoother than commonly used metal pipes. Unlike some metal pipe surfaces, which can pit and corrode over time, CPVC maintains a smoother surface over the life of the system. This means that less energy is required to transport media through a CPVC system and often smaller diameter pipe can be used, generating environmental and economical savings.

Recyclable

CPVC is a thermoplastic. Thermoplastics are recyclable within the manufacturing process, as well as at the end of their product life. This attribute increases the efficiency of manufacturing and decreases material waste.

Longevity

CPVC piping water systems can last for up to 50 years or longer, where many metal piping systems would have been replaced. This makes CPVC the idea choice for potable water in the home.

Sustainable

CPVC is derived from approximately 2/3 of widely abundant salt and 1/3 from petroleum derivatives, while polyethylene and polypropylene are derived from nearly 100% petroleum derivatives.

Reduced Global Warming Potential

CPVC piping systems have a 50-70% lower Global Warming Potential than copper piping systems (source is PPFA sponsored report from Franklin Associates in June 2008).

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