Insulating cPVC with spray foam insulation

Think cPVC and spray foam insulation are incompatible? Think again.

Extensive industry testing from proves that when applied properly according to standard manufacturer application guidelines, spray foam insulation will not damage cPVC plumbing pipes and fire sprinkler systems. Industry tests also indicate that cPVC piping shows no signs of environmental stress cracking (ESC) when spray foam insulation is applied correctly.

WHY INSULATE WITH SPRAY FOAM INSULATION?
Spray foam insulation is a high-performance material that provides both thermal insulation and air-sealing making it a superior insulation option in residential and commercial applications. Insulating with spray foam insulation like Icynene helps protect pipes from freezing during the cold winter months and can significantly reduce noise transfer from water hammering and protect the pipes from the resulting vibration.
**WHAT IS CPVC AND WHY SHOULD I USE IT?**
cPVC, or chlorinated polyvinyl chloride, pipe is a PVC homopolymer that has been subject to a chlorination reaction. Since it has a higher temperature tolerance than PVC (180°F compared to 140°F), cPVC is typically used for fire suppression systems, potable water distribution and corrosive fluid handling. As a result, cPVC has been successfully installed into residential, commercial and industrial projects.

**WHAT IS SPRAY FOAM INSULATION?**
Spray foam insulation is a high-performance insulation material that provides immediate and long-term benefits including thermal insulation, air sealing, improved air quality and moisture management. Applied as a liquid, spray foam insulation expands within seconds to fill the entire cavity for complete coverage. There are a variety of spray foam insulation types including low density open-cell and medium density closed cell. As a two component product, installation should only be completed by a licensed, certified spray foam contractor for residential, commercial and industrial projects.

**CAN’T SPRAY FOAM CAUSE CPVC SYSTEMS TO FAIL?**
Comprehensive industry testing led by the Spray Polyurethane Foam Alliance, in collaboration with cPVC manufacturer Lubrizol, in 2009 demonstrated that no environmental stress cracking of the cPVC is caused by the SPF products tested.

The results of the study show that all of the SPF products tested, including open-cell SPF, closed-cell SPF, one-component foams, and foams made from natural-oil based materials do not cause ESC and are compatible in direct contact with CPVC piping systems.

In fact, test data indicates that when applied properly according to standard application guidelines by a licensed spray foam professional, spray foam insulation is considered safe and effective to use in conjunction with cPVC plumbing pipes and fire sprinkler systems. Manufacturer’s standard application guidelines will specify the allowed initial pass thickness and the recommended wait time between each new application pass for a proper and safe installation.

**WHY SHOULD I USE A LICENSED SPRAY FOAM PROFESSIONAL?**
Make sure the job gets done right the first time and avoid application, adhesion or ESC issues by having a licensed spray foam contractor apply Icynene spray foam insulation on your cPVC piping systems. With the right application technique, cPVC will be able to perform as prescribed without the risk of environmental stress cracking. Find your nearest residential, commercial or industrial Icynene spray foam contractor on icynene.com.

Footnotes:

Updated May 2014 • Product information and specifications subject to change without notice. For the most current Icynene spray foam insulation product information, please consult Icynene.com. cPVC pipe imagery courtesy of the Plastic Pipe & Fitting Association (www.ppfahome.org).