



Tuesday e-Tech Alert
March 25, 2008
Number 111

CPVC Best Practices

A coalition of manufacturers of CPVC pipe and fittings for the fire sprinkler industry is working to develop a comprehensive program aimed at proper installation and use of their products in the fire sprinkler industry. This program addresses many of the issues raised in NFSA's January 17th online seminar on the subject, and includes aspects of installation techniques, testing and product compatibility. The efforts include the production of uniform manufacturer installation instructions, three types of product compatibility warnings, and a uniform instructional video.

Product compatibility is receiving the most attention. While the Lubrizol (formerly Noveon) company has had its own chemical compatibility approval program in place for its BlazeMaster® piping for several years, the program mainly addresses ancillary items expected to be part of fire sprinkler systems, such as thread sealants and antifreeze solutions. To date they have approved more than fifty products, including insulation materials and system accessories such as seismic separation assemblies and flexible drops. Perhaps more importantly, however, their website also lists nearly fifty specific products in the "Unacceptable Product – Do Not Use" category. In addition to certain brand name caulks, firestopping materials, wrapping tapes and thread sealants, the list includes some items presented in a generic fashion such as peppermint oil, vaseline, roofing tar and vegetable oils. Additional commentary cautions against the possible detrimental effects of contact with insecticides and termiticides, leak detection techniques involving dishwashing liquids with synthetic detergents, and direct contact with flexible wire or cable with insulation containing plasticizers. Residual oils are a concern, whether they are from within the sprinkler system itself or from outside sources such as HVAC equipment. Primers, cleaners and solvent cements containing appreciable amounts of acetone are a special concern for metal insert parts if exposed to freezing. In kitchen areas, direct or airborne contact with grease and cooking oils is listed as a potential problem. Fungicides, spray-on coatings, and residual chemicals from soldering or other operations on metal piping also raise red flags. This information is available at www.blazemaster.com.

In almost all of these cases, the concern is for environmental stress cracking over time with the CPVC products. The product manufacturers have recognized that it is not only the fire sprinkler contractors and their employees that need to be educated to the compatibility concerns, but also general contractors, other trades at the work site, authorities having jurisdiction, and property owners and their maintenance people.

CPVC products came into the NFPA sprinkler standards as special listed products and have gradually been addressed more and more generically over the years. Product specification standards have been added, along with hanger spacing and some other aspects of installation. The only acknowledgement of CPVC compatibility issues in NFPA 13, however, is in the annex caution against the use of glycol-based antifreeze solutions in A.7.6.2 (2007 edition).

Although most of these issues relate to the use and handling of materials at the jobsite, system technicians should also be aware of the need to follow best practices when calling for the use of CPVC products and when acknowledging the use of products in combination with building interfaces such as penetrations of fire resistive assemblies. As the manufacturer coalition produces new instructional materials, efforts should be made to monitor and address all such guidance.

Upcoming NFSA “Technical Tuesday” Seminar – April 1st

Topic: Foam Systems Update

Instructor: Russell P. Fleming, P.E., NFSA Executive Vice President

Date: April 1, 2008

This seminar will focus on recent changes to the NFPA standards on foam and foam-water systems (NFPA 11 and 16). The presentation will include a discussion of the use of the Darcy formula for hydraulic calculations for piping carrying foam concentrate. Special attention will be given to the growing acceptance of fixed piping systems employing compressed air foam (CAF) technology.

Information and registration for the above “Technical Tuesday” and “Business Thursday” seminars are available at www.nfsa.org or by calling Dawn Fitzmaurice at 845-878-4200 ext. 133 or email: dawn@nfsa.org.

Additional NFSA training opportunities include...

NFSA Two-Week Technician Training Classes

April 7-18, 2008 (waiting list only)	Orlando, FL
August 4-15, 2008	Providence, RI
October 13-24, 2008	Chicago, IL
November 10-21, 2008	Houston, TX

For more information, contact Nicole Sprague using Sprague@nfsa.org or by calling 845-878-4200 ext. 149.

In-Class Training Seminars

The NFSA training department also offers in-class training on a variety of subjects at locations across the country. Here are some seminars scheduled for 2008:

Mar 25	Jacksonville, FL	Pumps for Fire Protection
Mar 26	Jacksonville, FL	Hydraulics for Fire Protection
Mar 27	Jacksonville, FL	Sprinkler Protection for General Storage
Mar 28	Jacksonville, FL	Sprinklers for Dwellings
Apr 22	Richmond, CA	Pumps for Fire Protection
Apr 23	Richmond, CA	Fire Pump Layout & Sizing (a.m.)
Apr 23	Richmond, CA	Commissioning & Acceptance Testing (p.m.)
Apr 24	Richmond, CA	Inspection, Testing & Maintenance (CA Edition)

Apr 29	McFarland, WI	Plan Review Policies & Procedures
Apr 30	McFarland, WI	Pumps for Fire Protection
May 1	McFarland, WI	Commissioning & Acceptance Testing (a.m.)
May 1	McFarland, WI	Fire Pump Layout & Sizing (p.m.)
May 6-7	Colorado Springs, CO	NFPA 13 Overview & Intro to Plan Review
May 7	Mundelein, IL	Introduction to Sprinklers (a.m.)
May 7	Mundelein, IL	NFPA 13 Update 2002 (p.m.)
May 8-9	Mundelein, IL	NFPA 13 Overview & Intro to Plan Review
May 8	Colorado Springs, CO	Sprinklers for Dwellings
May 13	Quincy, MA	Sprinklers for Dwellings
May 14	Quincy, MA	Basic Seismic (a.m.)
May 14	Quincy, MA	Standpipe Systems (p.m.)
May 15	Quincy, MA	Pumps for Fire Protection

For more information on these seminars, or to register, please visit www.nfsa.org or call Dawn Fitzmaurice at 845-878-4207 or email seminars@nfsa.org.

NFSA Tuesday eTechAlert is c. 2008 National Fire Sprinkler Association, and is distributed to NFSA members on Tuesdays for which no NFSA Technical Tuesday Online Seminar is scheduled. Statements and conclusions are based on the best judgment of the NFSA Engineering staff, and are not the official position of the NFPA or its technical committees or those of other organizations except as noted. Opinions expressed herein are not intended, and should not be relied upon, to provide professional consultation or services. Please send comments to Russell P. Fleming, P.E. fleming@nfsa.org.

About the National Fire Sprinkler Association

Established in 1905, the National Fire Sprinkler Association (NFSA) is the voice of the fire sprinkler industry. NFSA leads the drive to get life-saving and property protecting fire sprinklers into all buildings; provides support and resources for its members – fire sprinkler contractors, manufacturers and suppliers; and educates authorities having jurisdiction on fire protection issues. Headquartered in Patterson, N.Y., NFSA has regional operations offices throughout the country. www.nfsa.org.