

****Attention Homeowners and Persons with Residential Fire Sprinkler Systems****

Division of Fire Safety Advisory Bulletin

August 25, 2010

Kevin Klein, Division Director

The National Fire Protection Association (NFPA) released a safety alert that discusses safety issues related to the use of antifreeze in residential fire sprinkler systems. Antifreeze is often used in fire sprinkler systems that are exposed to cold temperatures protecting the system from freezing and becoming nonfunctional. It is important to understand that not all residential fire sprinkler systems contain antifreeze.

To read the NFPA safety alert click the following link:

<http://www.nfpa.org/assets/files//Antifreeze.safety.alert.Aug.2010.pdf>

The NFPA safety alert was released due to a recent incident that involved a residential sprinkler system, containing a high concentration of antifreeze, discharging during a kitchen fire that resulted in a single fatality and serious injury to another person. Investigation of the incident and subsequent research on antifreeze use in sprinkler systems has shown that certain antifreeze types and at certain concentrations may pose a risk to occupants during a fire event.

As a result of the safety alert, effective August 25, 2010 the Division of Fire Safety will no longer approve new building projects that use antifreeze in the fire sprinkler system designed to protect dwelling units.

It must be emphasized that fire sprinklers remain a reliable and effective method to decrease fire-related deaths and injuries in homes and have been proven effective for over 60 years. Since most fires occur in the home, it is important to keep current fire sprinkler systems turned on while using the information provided in this bulletin and associated links to become informed and educated on all available options before making a decision.

To assist Colorado citizens that have fire sprinkler system installed containing antifreeze, the Colorado State Division of Fire Safety has the following information to assist homeowners and fire suppression system contractors in making decisions regarding their safety.

The following tips are offered to **homeowners**:

1. **DO NOT TURN YOUR SYSTEM OFF.**
 - a. Sprinklers have been proven to save lives and you are safer with it kept in service.
2. Don't try to drain your system and refill it yourself.
 - a. Draining antifreeze into the sewer system, sump, or onto the ground is prohibited.
 - b. Sprinklers are complex systems that require training and expertise to repair, maintain, and modify.
3. Contact your insurance company.
 - a. They may have special requirements you must follow to remain insured.
4. Contact the installer of your fire sprinkler system.
 - a. This information can usually be found where the main fire sprinkler system piping is located.

5. If you cannot determine who installed your sprinkler system or they are no longer in business, contact a certified suppression contractor to assist you. Click the link below to obtain a list of current certified contractors:
 - a. <http://dfs.state.co.us/Suppression/Year%202010%20Sprinkler%20Contractors1.pdf>
 - b. Do not allow non-certified suppression contractors to install or perform maintenance on your system.
6. Discuss your options with your suppression contractor.
 - a. These professionals have the experience and knowledge to best guide you in making the right decisions regarding you and your family's safety.

The following guidance is offered to fire **suppression contractors and sprinkler installers**:

1. Contact all of your customers that you have installed or performed maintenance on a sprinkler system containing antifreeze and discuss options with them. Remember to reinforce the importance of keeping their sprinkler systems in service for their safety.
2. Design new systems to the amended requirements of NFPA 13, 13R, or 13D. Click the following links for more information and guidance:
 - NFPA 13: <http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=13>
 - NFPA 13R: <http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=13R>
 - NFPA 13D: <http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=13D>
3. For existing antifreeze systems and maintenance contracts involving antifreeze systems, determine whether an alternative method, other than antifreeze, is available to protect sprinkler piping and water supplies from freezing (i.e. insulation, re-routing of pipe in conditioned spaces, etc).
4. If antifreeze is the only viable option, the NFPA advises to use only factory pre-mixed glycerin (maximum 50:50 mixture) or factory pre-mixed propylene glycol (40:60) mixtures depending on pipe type and performance requirements specified by NFPA 13, 13R, or 13D.
5. It is recommended that all existing systems be completely drained of its current antifreeze and replaced with new, factory premixed solutions of antifreeze at the mixture rates specified above.
6. Check your local jurisdiction for any specific requirements regarding antifreeze sprinkler systems.

Your Colorado Division of Fire Safety is working diligently and very closely with various state and national professional groups to provide updated and relevant information so that home owners, residential managers, business owners, and suppression contractors can become informed so as to make rational, effective decisions. As more information is released, we will continue to keep everyone informed.

For more information, contact your local fire department or the Division of Fire Safety.