



California State Fire Marshal Information Bulletin

National Fire Protection Association (NFPA) Interim Safety Alert Regarding Antifreeze in Residential Sprinklers

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The Office of the State Fire Marshal (OSFM) continues to strongly emphasize the importance of residential fire sprinklers as one of the most effective ways to prevent fire injury and death in the home and other residential occupancies. In California, thousands of residential fire sprinklers have successfully prevented fire injury and deaths and have protected communities from large fire losses. With the recent release of a National Fire Protection Association (NFPA) Safety Alert, this Information Bulletin is to assist in clarifying and assure our stakeholder's and the public's perspective has a balanced understanding of the issue. As is always the case, fire and life safety is the uppermost priority in the fire service.

The areas in California typically impacted by freezing temperatures which accounts for less than five percent (5%) of the total residential fire sprinkler installations; the NFPA safety alert specifically addresses the ratio/proportion of antifreeze additives to residential fire sprinkler systems. This is the result of the outcome of an initial set of fire tests conducted as part of a research study with the NFPA Fire Protection Research Foundation.

Based on information from these efforts, NFPA issued this interim safety alert and provided suggested recommendations until results of further testing on antifreeze is available. They have initiated additional fire tests to gain further information on antifreeze solution performance under various fire scenarios. The testing, conducted in conjunction with the NFPA Research Foundation, indicated that 70/30% glycerin and 60/40% propylene glycol antifreeze solutions may provide an unacceptable risk of harm to occupants in **certain** types of fire scenarios, in particular kitchen grease fires. The complete safety alert and research product may be viewed at the NFPA website: <http://www.nfpa.org/antifreeze>

For existing systems, the NFPA recommends contacting a sprinkler contractor to ascertain if there is antifreeze in the system; and suggested interim measures. The NFPA anticipates further guidance before the winter freezing months. Sprinkler piping can be protected by other means such as insulation, pipe wrap, and setting the temperatures in the house to prevent freezing. In new residential construction, there are options for fire sprinkler installations that do not require antifreeze; alternative sprinkler layout and designs and insulation over piping can provide the necessary protection from freezing conditions; and increased levels of insulation in exposed attic spaces may also serve to assist in compliance with California's Building Energy Efficiency Standards (Part 6, Title 24). For more information concerning new construction techniques and the reports from the residential fire sprinkler task force groups, please visit the OSFM website at: <http://osfm.fire.ca.gov>.

The sustained efforts of all stakeholders must focus on sharing information; working together; and continue to support the message that fire sprinklers are one of the most effective ways to save lives and property from fire; and to that end, assure the successful implementation of the 2010 California Residential Code and the residential fire sprinkler provisions.

For more information please visit our website <http://osfm.fire.ca.gov>