

Technical Report Best Way to Protect a BlazeMaster® Fire Sprinkler System Against Freezing

BlazeMaster® pipe and fittings are only approved for used in wet pipe fire sprinkler systems. Questions frequently arise regarding how best to protect BlazeMaster® fire sprinkler systems against freezing. Freezing is only a concern when BlazeMaster® pipe and fittings are used in regions where cold temperatures are likely.

Preferably, a properly insulated fire sprinkler system is the best method of installation to adequately freeze protect without the use of an antifreeze solution.

If necessary to use an antifreeze solution, only glycerin-water solutions are recognized by NFPA 13, 13D and 13R for use in BlazeMaster® fire sprinkler systems. Glycol based antifreeze solutions, such as propylene glycol, are not recommended for use in BlazeMaster® systems.

When using glycerin to freeze protect a BlazeMaster® fire sprinkler system remember:

- *To consider the use of a glycerin and water solution antifreeze loop rather than the practice of installing glycerin and water solutions into the entire sprinkler system.*
- *Glycerin and water require thorough mixing before introduction into the system.*
- *Avoid contamination of the glycerin by not using recycled off-grade glycerin or by mixing the glycerin-water solution in contaminated drums.*
- *Follow the NFPA 13 guidelines regarding the use of expansion chambers [NFPA 13, Section 4-5.3.2] and 40-gallon maximum antifreeze volume [NFPA 13, Section A-4-5.1] applicable for steel, copper and CPVC systems.*
- *Always follow the UL approved, manufacturer's installation instructions for detailed information on the use of antifreeze solutions in BlazeMaster® fire sprinkler systems.*

It is important to remember that properly installed BlazeMaster® CPVC fire sprinkler systems have performed trouble free for years. Furthermore, adequate freeze protection can be achieved by following proper installation practices, proper insulation procedures and the proper use of glycerin and water antifreeze solutions.