



TECHNICAL DATA SHEET

DESCRIPTION

Lubrizol's freezemaster™ antifreeze is a non-toxic, premixed antifreeze that is UL listed for use in wet fire sprinkler systems. It has a freezing point of -15°F (-26.1°C), and is formulated for corrosion protection in all piping systems including metal pipe and fittings. freezemaster™ antifreeze has been developed to meet stringent UL 2901 and NFPA 13, 13R, 13D and 25 fire standards.

Refer to the freezemaster™ antifreeze Installation Guide for specific listings, approvals, directions and limitations.

Minimum Use Temperature: -12°F (-24.4°C)

Maximum Use Temperature: 150°F (65.6°C)

NOTE: freezemaster™ antifreeze solution should only be used in areas subject to freezing unless otherwise permitted by the authority having jurisdiction (AHJ).

DESIGN APPLICATIONS

freezemaster™ antifreeze is not listed for use in protecting extra hazard occupancies or flammable liquids, or use with ESFR sprinklers.

Designation	Use Temp Range	Application	Max Volume of Antifreeze in Sprinkler System
Antifreeze	-12°F to 150°F (-24°C to 66°C)	NFPA 13D ^[1]	≤500 gal; in accordance with NFPA 13D design criteria
		NFPA 13R – Residential Only (including corridors, garages that serve only a single dwelling unit, and compartmented Ordinary Hazard areas ≤500 sq ft) ^[1] Where NFPA 13R requires the use of NFPA 13 design criteria, refer to the NFPA 13 applications and volume limitations.	≤500 gal; in accordance with NFPA 13R design criteria Where NFPA 13 design criteria is required in areas of an NFPA 13R Occupancy, such as an attic, use the applicable volume limitation for the hazard area for NFPA 13.
		NFPA 13 - Light Hazard ^[1]	≤200 gal; in accordance with NFPA 13 design criteria or >200 gal to ≤500 gal; in accordance with NFPA 13 using the dry system hydraulic design criteria, where the system hydraulics are designed as a dry system even though the system is filled with antifreeze.
		NFPA 13 – Ordinary Hazard Groups 1 & 2 ^[1]	40 gal; in accordance with NFPA 13 design criteria
		NFPA 13 – Storage ^[1]	40 gal; in accordance with NFPA 13 design criteria

[1] The antifreeze solution is intended to be installed in accordance with the manufacturer's instructions. The use of the antifreeze solution is limited to the aboveground system piping only except for a limited length of underground piping that connects sections of the aboveground system. The viscosity of the antifreeze solution at use temperatures shall be considered in the hydraulic design for all systems using antifreeze. For systems greater than 40 gal (151 L), pipe sizing shall be determined using both the Darcy-Weisbach and Hazen-Williams approved hydraulic calculations. Because of the density of antifreeze, the K-factor shall be adjusted, and the friction loss shall be considered in the system design.

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PACKAGING

WEIGHT PER U.S. GALLON

9.1 lbs (4.1 kg)

PART NUMBER	DESCRIPTION
FRZ27-PP5P	freezemaster™ antifreeze -12°F 5-gallon pail
FRZ27-PTH55W	freezemaster™ antifreeze -12°F 55-gallon drum
FRZ27-T275B	freezemaster™ antifreeze -12°F 275-gallon tote

DIRECTIONS FOR USE

1. Empty the entire fire sprinkler system and then flush with water. Close all openings for antifreeze fill.
2. Do not dilute freezemaster™ antifreeze with water or combine with other products. It is good practice to first test the antifreeze with either a portable hydrometer for density, or with a portable refractometer for refractive index values.
3. Add freezemaster™ antifreeze to system. Ensure that there is room for the fluid thermal expansion with an appropriately sized expansion tank per NFPA 13 guidelines. Avoid the use of contaminated hoses and equipment that have come into contact with fluids other than freezemaster™ antifreeze.
4. After filling the system, follow NFPA guidelines for testing the system. Fluid samples should be tested from both a low and high point on the system.
5. NFPA requires a service tag to be affixed to the riser indicating the date last tested or replaced, type and concentration of fluid in the system, total volume of the system, contractor name and license number, and statement indicating the entire system was drained and replaced.

MAINTENANCE

freezemaster™ antifreeze can remain in the system all year. NFPA 25 requires that antifreeze be tested annually. A portable hydrometer or refractometer can be used to see if the solution has changed appreciably.

Store freezemaster™ antifreeze indoors in a cool, dry place. freezemaster™ antifreeze is non-hazardous. Dispose accordingly per SDS instructions.

TYPICAL PROPERTIES

APPEARANCE

Clear blue liquid

FREEZE POINT

-15°F (-26.1°C)

MINIMUM USE TEMPERATURE

-12°F (-24.4°C)

POUR POINT

-22.4°F (-30.2°C)

BURST POINT

-58°F (-50°C)

DENSITY AT 77°F (25°C)

1.085 g/cc

REFRACTIVE INDEX AT 77°F (25°C)

1.390

SPECIFIC GRAVITY AT 77°F (25°C)

1.088

FLUID EXPANSION/CONTRACTION

<5%