



# LFP<sup>®</sup> Antifreeze+

## for Fire Sprinkler Systems



### Features & Benefits

- Minimum use temperature -32°C/-25°F
- UL Listed and available in USA and Canada
- FBC™ System Compatible
- Helps meet requirements for NFPA 13, 13R, 13D and 25
- Listed for use in residential, commercial and some storage applications
- Can help meet NFPA requirements for the use of freeze protection methods
- For system volumes up to 500 gallons (1893 L)
- Available in totes, drums & pails
- Pre-mixed solution

The industry's first UL Listed antifreeze to reach a minimum use temperature of -32°C/-25°F.

### At-a-glance

LFP<sup>®</sup> Antifreeze+ is formulated to help ensure fire sprinkler systems operate as intended by allowing flow in temperatures as low as -32°C/-25°F. The solution is compatible with most sprinkler system materials, including CPVC, and can be more cost-effective, as well as easier to install and maintain, than alternate freeze protection methods, such as heat tracing or dry systems.

As part of the UL 2901 Listing process – the only industry-accepted standard for corrosion testing of antifreeze, LFP<sup>®</sup> Antifreeze+ passed multiple stringent corrosion tests. LFP<sup>®</sup> Antifreeze+ also meets NFPA requirements (13, 13R, 13D and 25) and is FBC™ compatible. Designed to perform in harsh climates to the lowest temperature threshold available on the market today, LFP<sup>®</sup> Antifreeze+ can now service a broader geographic footprint, reaching into the coldest North American regions.

LFP<sup>®</sup> Antifreeze, the first UL Listed antifreeze, is also available for residential applications featuring a -23.3°C/-10°F minimum use formulation.

Learn more at [www.tyco-fire.com](http://www.tyco-fire.com)



The power behind your mission





## LFP<sup>®</sup> Antifreeze for Fire Sprinkler Systems

Backed by over 150 years of fire protection expertise, these LFP<sup>®</sup> Antifreeze products were developed in a cross-functional collaboration between Johnson Controls fire sprinkler product engineering and special hazards chemists.

### LFP<sup>®</sup> Antifreeze Products Listing Limitations

Temperature Range	Application	Maximum Volume of Antifreeze in Sprinkler System
-25°F to 150°F (-32°C to 66°C)	NFPA 13D*	≤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)*  Note: 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  Note: 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*	≤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*	40 gal; in accordance with NFPA 13 design criteria
	NFPA 13 – Storage*	40 gal; in accordance with NFPA 13 design criteria

NOTES \*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 above ground system piping only, except for a limited length of underground piping that connects sections of the above ground 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.

### LFP<sup>®</sup> Antifreeze Products Pipe Fill

Tubing Size	Approximate Gallons of Fluid/100 ft			
	Steel Schedule 40 Pipe	Polybutylene Tube	CPVC Pipe	Copper Pipe Type L
1/2 in.		2		1.5
3/4 in.		2.5	3.5	2.5
1 in.	4.5	3.5	5	4.5
1 1/4 in.	8	5.5	8	6.5
1 1/2 in.	11	6.5	10.5	9.5
2 in.	17.5	8.5	16.5	16.0
2 1/2 in.	25		24.0	25
3 in.	38.5		35.5	
4 in.	66.5			

NOTE: Values are approximate.

Customer Service: Tel: 800.558.5236 • Fax: 800.877.1295  
 Technical Service: Tel: 800.381.9312 • Fax: 800.791.5500

Always refer to the Technical Data Sheets (TFP1682 and TFP1680) for a complete description of all listing criteria, design parameters, installation instructions, care and maintenance guidelines, and our limited warranty.

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