ORISON

BioTherm Fluids® Fire 48™

FIRE SPRINKLER SYSTEM
48% Glycerin Pre-Mix

BioTherm Fluids® Fire 48™ is a patented, biobased, non-toxic, glycerin/water blend designed for wet fire sprinkler systems. Fire 48 is factory pre-mixed to NFPA guidelines of a 48% glycerin/water solution and is considered "GRAS", (Generally Recognized As Safe) by the FDA (Federal Food and Drug Administration).

Fire 48 is FBC™ System Compatible. FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with FlowGuard Gold®, BlazeMaster® and Corzan® pipe and fittings. FBC™, FlowGuard Gold®, BlazeMaster® and Corzan®are licensed trademarks of The Lubrizol Corporation. Fire 48 has not been tested to any other system other than those listed.

The use of Fire 48 should be in conformance with any/all state, local and NFPA requirements. NFPA 25 requires the freeze point of the system should be tested at least once/year to confirm proper concentration and freeze point of the fluid. System variables such as leaks, pressure surges and even temperature change can cause Fire 48 to leak out of the system and allow water to flow into the sytem; which can affect the freeze point.

Freeze point range can quickly be determined by a specific gravity tester available from Orison, or more accurately by a refractometer (Brix). A chart showing Brix readings and freeze point is shown below. Do not use glycol testers to dtermine freeze point protection.

FBC™ SYSTEM COMPATIBLE

PROTECTION TO -15F (-26C)

ADVANTAGES

48% Factory Pre-mix
Biobased
Non-Toxic (GRAS)
Neutral pH
Non-Glycol
Non-Hazardous

IceClear® FS % / Spec. Grav.	Glycerin %	Brix Value (68ºF) (Refractometer)	Freeze Point ºF / ºC	Boiling Point ºF / ºC	Specific Heat @ 35º F	Viscosity cSt @ 68º F (20º C)
100 / 1.139	48	42	-15º / -26º	224º / 107º	.776	5.5
75 / 1.10	36	32.7	2º / -16.5º	219º / 104º	.834	4
50 / 1.07	24	23	16º / -9º	216º / 102º	.873	2.4

MAINTENANCE DIRECTIONS

1. Follow original equipment manufacturer's instructions for adding antifreeze.
2. Test Fire 48 prior to filling system.
3. Evacuate all water/fluid from system and drain drops per NFPA requirements.
4. Can be used with glycerin only based technologies. Do not mix with non-glycerin anti-freeze/heat transfer fluids or chemicals.
5. Follow NFPA guidelines for testing the fluid after filling. Samples should be taken from a minimum of a high point and low point. Results should be comparable to each other and to the sample of the fluid tested prior to filling system.
6. NFPA requires a tag to be affixed to the riser indicating the date tested or replaced, the type and concentration by volume of fluid used, system capacity (in volume), contractor name and license number and a statement indicating if the entire system was drained and replaced with antifreeze.

Availability
5 gallon pails
55 gallon drums
275 gallon totes
330 gallon totes
Bulk truck

HMIS	
HEALTH	0
FLAMMABILITY	0
INSTABILITY	0
SPECIFIC	0

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