



TriaFrost – PG

Inhibited Propylene Glycol Heat Transfer Fluid

DESCRIPTION

TriaFrost PG is an Inhibited Propylene Glycol based Heat Transfer Fluid designed for use in hydronic heating systems that require the use of an anti-freeze fluid.

TriaFrost PG contains a specially formulated package of industrial inhibitors to help prevent metal corrosion inside the heating system. The inhibitor package protects many metals and plastics commonly found in residential and commercial systems including: cast iron, steel, solder, copper, and brass.

TriaFrost PG has been formulated with ingredients which are Generally Regarded As Safe (GRAS) by the FDA for use as an aqueous heat transfer fluid for closed primary and secondary refrigeration and cooling systems.

APPLICATIONS

Suitable applications of **TriaFrost PG** include:

- Heating Ventilation and Air Condition (HVAC) systems
- Fermentation tank cooling systems
- Packaging carbonated beverages
- Cooling liquid foods
- Snow melting systems
- Refrigeration coil defrosting
- Conveyor roller defrosting
- Refrigeration warehouse floor heating
- Solar systems
- Secondary heating and cooling, freeze and burst protection of pipes, various de-icing, defrosting and dehumidifying

*It is recommended that you select a temperature that is at least 3°C or 5°F lower than your lowest expected temperature.

TYPICAL PROPERTIES

Specific gravity @60°F	1.05-1.06
Lbs/gallon	8.78
Color	Colorless
Flash point, COC, °F	225
pH, 50% solution	9.5-10.5
Reserve alkalinity, (min)	10-12

SYSTEM CLEANING

Existing systems: Remove spent fluid, flush system thoroughly with clean water combined with 1-2%/vol trisodium phosphate (TSP). If significant corrosion is present consult a professional cleaning provider.

New system: Flush with 1-2%/vol TSP or other approved cleaning compound to remove initial fabrication residue.

INSTALLATION

*Consult dilution chart to obtain proper freeze and/or burst protection for your system. Charge system with TriaFrost and water**. Circulate for 24 hours. Obtain a sample of fluid in system and test for proper dilution using a refractometer or contact your TriaFrost representative for assistance.

HANDLING & STORAGE

Storage of TriaFrost PG presents no unusual problems. The material has a low toxicity, has a high flash point, and can be handled without posing a hazard to health. Undiluted TriaFrost PG may freeze where ambient temperatures fall below 0°F. Freezing will not harm TriaFrost PG. Transfer container to an environment where temperatures are above 40°F and proceed with proper fluid dilution and installation.

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ENVIRONMENT & TOXICITY

Propylene Glycol (PG) is a superior product in terms of consumer safety and the environment where incidental contact with food or beverage could occur. PG does not persist in the environment. Please refer to the MSDS for proper health, safety and disposal information.

WATER QUALITY**

The use of hard water, or softened water as a diluent for TriaFrost PG is not recommended. Diluent water must meet recommended criteria. De-ionized or distilled water should be used.

Impurity	Level
Chlorides	25 ppm, max
Sulfates	25 ppm, max
Magnesium	25 ppm, max
Total hardness	100 ppm, max

Heat transfer properties, 60% solution		
Temp, °F	Specific heat Btu/lb °F	Viscosity, cps
-30	0.741	498
-10	0.752	183
10	0.764	74
30	0.776	34
50	0.787	17

% TriaFrost PG			
Temp		Freeze protection	Burst protection
°C	°F	% volume	% volume
-12	10	31	21
-17	1	39	25
-22	-7	44	29
-25	-13	48	32
-31	-25	53	35
-36	-34	57	37
-42	-43	60	37
-51	-60	65	37
-73	-100	NA	60

Typical freeze and boiling points		
% Volume TriaFrost PG	Freeze point, °F	Boiling point, °F
31	10	216
39	1	217
44	-7	219
53	-25	223
60	-43	225
79	NA	237

US gallons per 100 feet of pipe								
Pipe diameter nominal size, inches								
	3/8"	1/2"	1"	1-1/2"	2"	2-1/2"	3"	4"
Schedule 40 steel pipe	0.99	1.58	4.49	10.57	17.43	24.87	38.4	66.13

*All product data points are typical results, not to be construed as specifications

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