HOUGHTON CHEMICAL CORPORATION

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SAFE-T-THERM® HDR Product Data Sheet

Inhibited Propylene Glycol Based Heat Transfer Fluid

SAFE-T-THERM® HDR fluid is a heavy duty inhibited propylene glycol solution designed for use in hydronic systems for freeze and corrosion protection. SAFE-T-THERM® HDR is designed to extend fluid life where service temperatures are higher and the likelihood of thermal degradation is greater. It is sometimes also used in less demanding applications because the heavy duty inhibitors last longer and maintenance requirements can be reduced.

The SAFE-T-THERM® HDR is a formulation of reused / reclaimed Propylene glycol and a specially designed industrial package of corrosion inhibitors, including an orange dye for leak detection. Up to 100% of the Propylene glycol used in SAFE-T-THERM® HDR solutions is reused or reclaimed from a variety of industrial sources. SAFE-T-THERM® HDR solutions in water provide freeze protection to below -4°F (-20°C).

SAFE-T-THERM® HDR is designed to protect components commonly found in residential and commercial systems. SAFE-T-THERM® HDR can also be used with aluminum at temperatures below 150°F (66°C). At temperatures above 150°F (66°C), use of SAFE-T-THERM® HDR is not recommended because the inhibitors will not fully protect aluminum components in the system. SAFE-T-THERM® HDR should not be used with galvanized steel, polyvinyl chloride (PVC) or chlorinated polyvinyl chloride (CPVC).

Recommended use temperature range: -4°F to 225°F (-20°C to 107°C)

For health and safety information for this product, contact Houghton for a Safety Data Sheet (SDS).

SAFE-T-THERM® HDR
Typical Properties by Concentration

Properties[1]	40%	35%	30%	25%
Propylene Glycol	40%	35%	30%	25%
Performance Additives and Water	60%	65%	70%	75%
Appearance	Liquid, Clear, Orange	Liquid, Clear, Orange	Liquid, Clear, Orange	Liquid, Clear, Orange
Specific Gravity (15/15°C 60/60°F)	1.040 - 1.050	1.035 - 1.045	1.032 - 1.042	1.030 - 1.040
pH 50% glycol	9.0 - 10.7	9.0 - 10.7	9.0 - 10.7	9.0 - 10.7
Reserve Alkalinity (min)	6	6	5	4
Freeze Point Max	-4°F / -20°C	4°F / -16°C	10°F / -12°C	15°F / -10°C

[1]Mixtures based on volume of SAFE-T-THERM® HDR

Typical properties, not to be construed as specifications. As use conditions are not within its control, Houghton does not guarantee results from use of the information or products herein; and gives no warranty, express or implied.

NOTE: These figures are examples only and may not be appropriate to your situation. Generally, for an extended margin of protection, you should select a temperature in this table that is at least 3°C (5°F) lower than the expected lowest ambient temperature. Houghton Chemical Corporation recommends a minimum glycol concentration of 25%. At lesser concentrations the likelihood of bacteria growth increases. Also, at less than 25% concentrations there may not be enough inhibitor present to prevent corrosion of the system metals. Additional inhibitors can be purchased from Houghton Chemical Corporation.

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