

HOUGHTON CHEMICAL CORPORATION

52 Cambridge Street • Allston (Boston) • MA 02134

Phone: (800) 777-2466 • Fax: (617) 254-2713

www.houghton.com



SAFE-T-THERM® HD Biobased Product Data Sheet

Inhibited Propylene Glycol Based Heat Transfer Fluid

SAFE-T-THERM® HD Biobased fluid is a heavy duty phosphate-inhibited propylene glycol solution designed for use in hydronic systems for freeze and corrosion protection. SAFE-T-THERM® HD Biobased 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® HD Biobased concentrate is a formulation of 95 percent propylene glycol and a specially designed industrial package of corrosion inhibitors. SAFE-T-THERM® HD Biobased solutions in water provide freeze protection to below -60°F (-51°C).

SAFE-T-THERM® HD Biobased includes a green dye, for leak detection. SAFE-T-THERM® HD Biobased is designed to protect components commonly found in residential and commercial systems. SAFE-T-THERM® HD Biobased 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® HD Biobased is not recommended because the inhibitors will not fully protect aluminum components in the system. SAFE-T-THERM® HD Biobased should not be used with galvanized steel or Chlorinated polyvinyl chloride (CPVC).

Recommended use temperature range: -50°F to 325°F (-46°C to 163°C)

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

SAFE-T-THERM® HD Biobased Typical Properties by Concentration							
Properties ¹	Conc.	60%	50%	40%	35%	30%	25%
Propylene Glycol	95%	60%	50%	40%	35%	30%	25%
Performance Additives and Water	5%	40%	50%	60%	65%	70%	75%
Appearance	Liquid, Clear, Green	Liquid, Clear, Green	Liquid, Clear, Green	Liquid, Clear, Green	Liquid, Clear, Green	Liquid, Clear, Green	Liquid, Clear, Green
Specific Gravity (15/15°C 60/60°F)	1.057 - 1.067	1.055 - 1.062	1.050 - 1.060	1.040 - 1.050	1.035 - 1.045	1.032 - 1.042	1.030 - 1.040
pH 50% glycol	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0	9.0 - 11.0
Reserve Alkalinity (min)	16	10	8	6	6	5	4
Freeze Point Max	-22°F / -31°C (as 50%)	-49°F / -45°C	-22°F / -31°C	-4°F / -20°C	4°F / -16°C	10°F / -12°C	15°F / -10°C

¹Concentrate based on volume of Propylene Glycol, mixtures based on volume of SAFE-T-THERM® HD Biobased

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 and/or a biostat can be purchased from Houghton Chemical Corporation.

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