

HOUGHTON CHEMICAL CORPORATION

52 Cambridge Street • Allston (Boston) • MA 02134

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

www.houghton.com



SAFE-T-THERM® GRAS Biobased Product Data Sheet

Inhibited Propylene Glycol Based Heat Transfer Fluid

SAFE-T-THERM® GRAS Biobased is an inhibited propylene glycol based fluid designed for use in all hydronic systems where freeze and corrosion protection is required. The SAFE-T-THERM® GRAS Biobased formula includes 95% propylene glycol produced from a totally renewable process which converts glycerine produced by biofuel production into propylene glycol.

SAFE-T-THERM® GRAS Biobased heat transfer fluid is formulated with ingredients which are generally recognized as safe (GRAS) by the FDA for use as an aqueous heat transfer medium for closed primary and secondary refrigeration and cooling systems. Components in our formulation conform to the requirements of 21 CFR 184.1666; 21 CFR 182.6285; 21 CFR 74.1705, 74.1706 & 74.2340 as applicable. A letter from the USDA can also be provided upon request.

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

Recommended use temperature range: -50°F (-45°C) to 230°F (110°C)

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

SAFE-T-THERM® GRAS Biobased Typical Properties by Concentration							
Properties ¹	Conc.	60%	50%	40%	35%	30%	25%
Propylene Glycol	96%	60%	50%	40%	35%	30%	25%
Performance Additives and Water	4%	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)	1.055 - 1.065	1.050 - 1.059	1.043 - 1.054	1.035 - 1.042	1.034 - 1.042	1.029 - 1.038	1.024 - 1.034
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)	12	6	6	4	4	3	3
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® GRAS 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.

NOTICE: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

Date Revised: 9 March 2020

w:\lab\admin\product data sheets\hydronics\safe-t-therm® gras biobased data sheet 200309.docx