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SAFE-T-THERM® PDO BioGreen Product Data Sheet

Inhibited 1,3-Propanediol Based Heat Transfer Fluid

SAFE-T-THERM® PDO BioGreen fluid is a heavy duty inhibited 1,3-Propanediol solution designed for use in hydronic systems for freeze and corrosion protection. SAFE-T-THERM® PDO BioGreen 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® PDO BioGreen product is a formulation of 70 percent 1,3-Propanediol and a specially designed industrial package of corrosion inhibitors. SAFE-T-THERM® PDO BioGreen solutions in water provide freeze protection to -50°F (-45°C).

SAFE-T-THERM® PDO BioGreen includes a green dye, to help identify sources of leaks in pipes and joints. SAFE-T-THERM® PDO BioGreen is designed to protect components commonly found in residential and commercial systems. SAFE-T-THERM® PDO BioGreen can also be used with aluminum at temperatures below 150°F (66°C). At temperatures above 150°F (66°C) in an aluminum-based system, the use of SAFE-T-THERM® PDO BioGreen is not recommended because the inhibitors will not fully protect aluminum components at the higher temperatures. SAFE-T-THERM® PDO BioGreen should not be used with galvanized steel.

Recommended use temperature range: -50°F to 300°F (-45°C to 150°C)

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

SAFE-T-THERM® PDO BioGreen Typical Properties by Concentration

Properties ¹	70%	60%	50%	40%	35%	30%	25%
1,3-Propanediol	70%	60%	50%	40%	35%	30%	25%
Performance Additives and Water	30%	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)	1.042 - 1.062 @ 60°F	1.035 - 1.055	1.027 - 1.047	1.020 - 1.040	1.016 - 1.036	1.012 - 1.032	1.009 - 1.029
Ph	8.5 - 10.7	8.5 - 10.7	8.5 - 10.7	8.5 - 10.7	8.5 - 10.7	8.5 - 10.7	8.5 - 10.7
Reserve Alkalinity (min)	8	7	6	4	4	3	3
Freeze Point Max	-20°F (as 50%)	-50°F / -45°C	-20°F	-4°F / -20°C	4°F / -15°C	10°F / -12°C	15°F / -9°C

¹Concentrate based on volume of 1,3-Propanediol, mixtures based on volume of SAFE-T-THERM® PDO BioGreen

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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