



HOUGHTON CHEMICAL CORPORATION

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SAFE-T-THERM® PROPYLENE GLYCOL BASE HYDRONIC HEAT TRANSFER FLUID

Typical Composition

	% by Weight
Propylene Glycol, USP Grade	95.40
Water & Food Grade inhibitors (ASTM D1123)	4.57
Dye	0.03

Typical Properties

Color	(Visual)	distinct orange
Clarity	(Visual)	clear, single phase
Specific Gravity, 20/20°C	(ASTM D1122)	1.050-1.058
Reserve Alkalinity	(ASTM D1121)	12.0 min
pH at 25°C 50% by volume	(ASTM D1287)	9.0-10.0
Flash Point	(ASTM D93)	
100% by volume		225°F
90% by volume		240°F
80% or less by volume		no flash detected
Ash	(ASTM D1119)	<1.0 max.
Boiling Point	(ASTM D1120)	
20% by volume		214°F
50% by volume		220°F
100% by volume		315°F
Freezing Point	(ASTM D3321)	
20% by volume		+19°F
40% by volume		-8°F
50% by volume		-26°F
100% by volume		n/a
Burst Protection		
20% by volume		+10°F
30% by volume		-24°F
40% by volume		-70°F
Viscosity @ 20°F in centistokes		
50% solution w/w		23
20% solution w/w		5
Specific Heat @ 20°F BTU/lb/°F		
50% solution v/v		0.84
20% solution v/v		0.96
Thermal Conductivity @ 20°F, BTU/(Hr) (Sq Ft) (°F/Ft)		
50.00% solution w/w		0.22
20.00% solution w/w		0.27

GENERAL INFORMATION

Use Recommendations - SAFE-T-THERM® is formulated for use in hydronic heating and cooling systems of all types especially when non-toxic properties are required. Most states require the use of propylene glycol based hydronic fluids when used in hydronic systems with automatic make-up water capabilities. Proper dilution, with water of good quality, is necessary to achieve desired freeze point protection and heat transfer capabilities. SAFE-T-THERM® may be diluted to 20% by volume without significantly affecting corrosion protection in most applications.

Hoses and Gaskets - No adverse effect on gaskets or hoses.

Cautionary Information - Store only in closed containers with complete cautionary information thereon, in a cool, secure place, out of reach of children.

SPECIFICATIONS/51787ANTIFREEZE/HYDRONIC