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SAFE-T-THERM® "HD" HEAVY DUTY PROPYLENE GLYCOL BASE HYDRONIC HEAT TRANSFER FLUID

Typical Composition

% by Weight

Propylene Glycol, USP Grade	(ASTM D1123)	94.00
Water & Inhibitors		5.97
Including a copper inhibitor		0.03
Dye		

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)	15.0 min
pH at 25°C 50% by volume	(ASTM D1287)	9.0-10.0
Flash Point	(ASTM D93)	225°F
100% by volume		240°F
90% by volume		no flash detected
80% or less by volume		<1.0 max.
Ash	(ASTM D1119)	
	(ASTM D1120)	
Boiling Point		216°F
33.33% by volume		220°F
50.00% by volume		315°F
100% by volume		
Freezing Point	(ASTM D3321)	21°F
15.00% by volume		-9°F
40.00% by volume		-26°F
50.00% by volume		-5°F
100.00% by volume		
Burst Protection		16°F
15.00% by volume		-24°F
30% by volume		-70°F
40% by volume		

SPECIFICATIONS/51787
ANTIFREEZE/HYDRONIC

Viscosity @ 20°F in centistokes
50% solution w/w
20% solution w/w

23
5

Specific Heat @ 20°F BTU/lb/°F
50% solution v/v
20% solution v/v

0.84
0.96

Thermal Conductivity @ 20°F,
BTU/(Hr) (Sq Ft) (°F/Ft)
50.00% solution w/w
20.00% solution w/w

0.22
0.27

GENERAL INFORMATION

Use Recommendations - SAFE-T-THERM® "HD" 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.

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