



EGI

ETHYLENE GLYCOL-BASED
INDUSTRIAL HEAT TRANSFER FLUID

PRODUCT #249 [CONC.] #239 [PREMIX]

Overview

EGI-HTF is an industrial formulated heat transfer fluid containing an inhibitor package that controls corrosion of metals, helps prevent scaling and fouling of heat transfer surfaces and buffers the pH to maintain it in the optimum operating range. EGI-HTF tested according to the ASTM standard methods, exceeds the performance requirements of the industry. The product is available as concentrate and ready-to-use premixes. The inhibitor system is based on a high-phosphate, multi-component formulation which makes it ideal for a wide variety of commercial and industrial applications.

Product Features:

- Inhibitor system is phosphate-based.
- Functionally equivalent to DOWTHERM™ and JEFFCOOL® E100 and can be mixed with these products with no adverse effects.
- Operating range of -60°F to +300°F.
- Controls corrosion of metals.
- Helps prevent scaling and fouling of heat transfer surfaces.
- Buffers the pH to maintain it in the optimal operating range.

Applications:

- HVAC system freeze/burst/corrosion protection
- Process cooling/heating
- Solar heating
- Floor heating
- Thermal energy storage
- Ice skating rinks
- Sidewalk snow melting systems
- Cold room dehumidification

Operating Temperature Range and Freeze/Burst Protection

EGI-HTF has a recommended operating temperature range of -60°F to +300°F and can be used to provide both freeze and burst protection for systems which may be exposed to very low temperatures. To obtain adequate freeze protection, select a glycol concentration with a freeze point at least 5°F below the lowest anticipated ambient temperature. When diluting concentrate maintain at least 30% EGI by volume for adequate corrosion protection.

Corrosion Protection

EGI-HTF provides outstanding corrosion protection for copper, brass, solder, steel, and cast iron and aluminum. It meets or exceeds the standard industry corrosion test for these metals. It is also compatible with most plastics, elastomers and types of rubber. The Inhibitor package protects iron, steel and aluminum metal surfaces from acidic attack and rust formation. EGI-HTF also contains Tolyltriazole to protect copper, brass and solder used in multi-metal systems. The buffering system neutralizes acids formed by the normal thermal and oxidative degradation of ethylene glycol, thus maintaining the pH in its optimal range.





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Physical Property	Temp(°F)	15% Glycol Solution	30% Glycol Solution	40% Glycol Solution	50% Glycol Solution	60% Glycol Solution
Thermal Conductivity [BTU/(hr·ft ³) (°F/ft)]	40	0.265	0.253	0.234	0.215	0.199
	180	0.307	0.291	0.267	0.241	0.220
	250	0.310	0.293	0.269	0.245	0.224
Specific Heat [(BTU/(lb·°F)]	40	0.885	0.862	0.820	0.774	0.724
	180	0.933	0.915	0.883	0.849	0.816
	250	0.958	0.944	0.913	0.882	0.845
Viscosity, Centipoise	40	3.11	3.59	4.94	6.81	9.93
	180	0.59	0.66	1.82	0.96	1.09
	250	0.37	0.40	0.47	0.55	0.59
Density, (lb/ft ³)	40	65.19	65.71	66.61	67.50	68.83
	180	62.90	63.31	64.10	64.83	65.55
	250	61.05	61.42	62.15	62.81	63.44

Composition (Concentrate)

Ethylene Glycol 96.0 volume % max.
 Inhibitor Package 4.0 volume % min.

Color *Pink*
(or custom dye option)

pH:
 50% Solution 9.8-10.8
 30% Solution 9.6-10.6

Specific Gravity (60°F) Ethylene Glycol

96% Solution 1.125 min.
 50% Solution 1.070 min.

Reserve Alkalinity

96% Solution 10.0 mL min.
 50% Solution 5.0 mL min.

Flash Point Ethylene Glycol

50% Solution none

Vol. % Ethylene Glycol	Vol. % EGI-HTF	Freezing Point °F	Boiling Point °F @ 760 mm Hg
15	15.6	23.6	215
30	31.2	3.7	220
40	41.6	-2.7	223
50	52.1	-34.6	226
60	62.5	-60.0	228

Water Quality Requirements

Water used to dilute the EGI-HTF concentrate can be low-hardness, city water, or well water, although the use of deionized water is best. It is recommended that water with no more than 170 ppm hardness be used to dilute concentrate or be used as make-up water.

This product contains no warranties. Customer is responsible for determining whether product and the information in this document are appropriate for Customer's use. Please visit <https://www.crystal-clean.com/htf-disclaimer> for full details.