DATA SHEET

H50EG-HTF

Ethylene Glycol-Based Heat Transfer Fluid Concentrate

H50EG-HTF, tested according to ASTM D1384, exceeds the performance requirements outlined in ASTM D3306. The inhibitor system is based on a high-phosphate, multicomponent formulation, which makes H50EG-HTF functionally equivalent to other leading brands and allows it to be mixed with themeffectively.

This formula contains 96.0% ethylene glycol and 4.0% inhibitors.

APPLICATIONS

- HVAC systems
- Process cooling and heating
- Solar heating
- Refrigeration warehouses floor heating
- Thermal energy storage
- Ice skating rinks
- Sidewalk snow melting systems
- Cold room dehumidifiers

OPERATING TEMPERATURE RANGE AND FREEZE/BURST PROTECTION

H50EG-HTF has a recommended operating temperature range of -60° F to 300° F and provides both freeze and burst protection for systems that 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. The concentration should be at least 30% ethylene glycol to maintain adequate corrosion inhibitors

CORROSION PROTECTION

H50EG-HTF meets or exceeds the ASTM DI384 and contains tolyltriazole to protect multi-metal systems. It is also completely compatible with most plastics, elastomers and types of rubber.

In addition, its effective buffering system neutralizes acids formed by the normal thermal and oxidative degradation of ethylene glycol, maintaining the pH in the optimal range.

BENEFITS

Made of a propylene-glycol base that reduces toxicity and disposal requirements

- Is the functional equivalent of Dowfrost™ and JEFFCOOL® P150
- Operates at temperatures from -60° F to 300° F
- Contains a unique additive package to:
  - Shield iron, steel, copper, brass, solder, and aluminum surfaces from acidic attack and rust formation
  - Prevent scaling and fouling of heat transfer surfaces
  - Buffer the pH to maintain it in the optimal operating range

RECOMMENDATIONS FOR DILUTION

Water used to dilute the H50EG-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 350 ppm hardness be used to dilute concentrate or be used as make-up water.

H50EG-HTF	Temp (°F)	30% Glycol Solution	40% Glycol Solution	50% GLycol Solution	60% Glycol Solution
Thermal Conductivity [BTU/(hr·ft³) (°F/ft)]	40	0.253	0.234	0.215	0.199
	180	0.291	0.267	0.241	0.220
	250	0.293	0.269	0.245	0.224
Specific Heat [BTU/(lb·°F)]	40	0.862	0.820	0.774	0.724
	180	0.915	0.883	0.849	0.816
	250	0.944	0.913	0.882	0.845
Viscosity, Centipoise	40	3.59	4.94	6.81	9.93
	180	0.66	1.82	0.96	1.09
	250	0.40	0.47	0.55	0.59
Density (lb/ft³)	40	65.71	66.61	67.50	68.33
	180	63.31	64.10	64.83	65.55
	250	61.42	62.15	62.81	63.44

Vol. % Ethylene Glycol	Vol. % H50EG-HTF Concentrate	Freezing Point °F	Boiling Point °F @760 mm Hg
30	31.2	3.7	220
40	41.5	-2.7	223
50	52.1	-34.6	226
60	62.5	-60.0	228

H50EG-HTF Characteristics

Composition (Concentrate)

Propylene Glycol	96.0 volume % max.
Inhibitors and Proprietary Ingredients	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 Glycol

96% Solution	240°F min.
50% Solution	none