



DATA SHEET

# H60PG-HTF

## Food Grade/USP Propylene Glycol-Based Heat Transfer Fluid Concentrate

H60PG-HTF is a formulated heat transfer fluid that contains only USP grade propylene glycol and food grade additives. The FDA has classified all ingredients as GRAS, or generally recognized as safe, and acceptable as food additives (Food Additives Regulations, Subparts 182 and 184).

H60PG-HTF can be used in food processing applications in which incidental or accidental contact with foods and beverages may occur. Propylene glycol has a lower acute oral toxicity than ethylene glycol and is preferable and often required in food processing applications.

### APPLICATIONS

- Food and beverage processes and facilities
- HVAC systems
- RV winterization
- Ice skating rinks
- Cold room dehumidification
- Cosmetic or pharmaceutical facilities

### FREEZE AND BURST PROTECTION

H60PG-HTF has a recommended operating temperature range of -50° F to 225° F. The lowest temperature to which the product can be exposed depends upon the amount of its dilution with water.

H60PG-HTF provides both freezing protection and burst protection for systems that may be exposed to low temperatures. The freezing point is the temperature at which ice crystals first begin to appear in the fluid. As the temperature continues to fall below this point, an ice/glycol slush forms

until the temperature at which the solution freezes solid is reached. The latter is the burst point, or the point at which the expanded, frozen fluid can cause piping and pumps to crack or rupture.

### CORROSION PROTECTION

When tested according to ASTM D1384, the standard corrosion test for these metals, H60PG-HTF exceeds the performance requirements outlined in ASTM D3306. It shields metals from acidic attack and rust formation and is completely compatible with most plastics, and types of rubber.

### BENEFITS

- Made of a propylene-glycol base that reduces toxicity and disposal requirements
- Is the functional equivalent of Dowfrost™ and JEFFCOOL® P150 and can be mixed with these
- Operates at temperatures from -60° F to 225° F
- Contains a unique additive package that:
  - Guards against corrosion of copper, brass, solder, steel, cast iron, and aluminum
  - Helps prevent scaling and fouling of heat transfer surfaces
  - Buffers the pH to keep it in the optimal operating range

### RECOMMENDATIONS FOR DILUTION

Water used to dilute the concentrate can be low-hardness city water or well water, although the use of deionized water or distilled water is best. It is recommended to use water with no more than 170 mg/L as calcium carbonate hardness to dilute H60PG-HTF concentrate or as make-up water.

H60PG-HTF	Temp (°F)	15% Glycol Solution	30% Glycol Solution	40% Glycol Solution	50% Glycol Solution	60% Glycol Solution
Thermal Conductivity [BTU/(hr·ft³) (°F/ft) ]	40	0.282	0.253	0.231	0.211	0.190
	180	0.327	0.285	0.255	0.228	0.199
	325	0.321	0.284	0.254	0.217	0.189
Specific Heat [BTU/(lb·°F)]	40	0.955	0.915	0.855	0.802	0.740
	180	0.989	0.967	0.924	0.886	0.839
	325	1.010	0.992	0.995	0.973	0.942
Viscosity, Centipoise	40	2.85	5.69	9.58	14.01	23.11
	180	0.49	0.62	0.81	1	1.21
	325	0.20	0.38	0.34	0.37	0.39
Density (lb/ft³)	40	63.67	64.76	66.33	67.00	67.60
	180	61.36	62.01	62.91	63.79	64.11
	325	58.28	58.61	58.73	59.02	59.04

Vol. % Propylene Glycol	Vol. % H60PG-HTF Concentrate	Freezing Point °F	Boiling Point °F @760 mm Hg
15	15.6	23	212
30	31.2	8	216
40	41.6	-8	219
50	52.1	-31	222
60	62.5	-58	225

## H60PG-HTF Characteristics

### Composition (Concentrate)

Propylene Glycol	96.0 volume % max.
Inhibitors and deionized water	4.0 volume % min.

### Color

Colorless

### pH

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

### Specific Gravity @60°F

96% Solution	1.04 min.
50% Solution	1.02 min.

### Reserve Alkalinity

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

### Flash Point Propylene Glycol

96% Solution	>200°F
50% Solution	none