



SOLAR HI-TEMP Heat Transfer Fluid and Anti-Freeze Solution for HVAC, Potable Water, and Solar Systems.

TYPE

Nontoxic, Glycerin Based, Heat Transfer Fluid and Anti-Freeze Solution with special anti-corrosion inhibitors, and color indicators, that provides heat transfer up to 180°C (356°F), freeze protection to -26°C (-15°F) and burst protection to -46°C (-50°F).

RECOMMENDED USES

SOLAR HI-TEMP Heat Transfer Fluid and Anti-Freeze Solution provides optimal heat transfer, freeze and corrosion protection for water based systems without the risk of environmental contamination. **SOLAR HI-TEMP** Heat Transfer Fluid and Anti-Freeze Solution works excellent in:

- Evacuated Tube Solar Collectors
- Closed Back Solar Systems
- Closed Loop Solar Systems
- Hydronic HVAC Systems
- Potable Water Lines
- Fire Sprinkler Systems

SOLAR HI-TEMP Heat Transfer Fluid and Anti-Freeze Solution is ready to use. No dilution is necessary to maintain maximum heat transfer and freeze protection. The formula provides an error free method to protect the system. **SOLAR HI-TEMP** Heat Transfer Fluid and Anti-Freeze Solution is suitable for use with continuous operating systems with temperatures up to 180°C (356°F), and will not degrade significantly from short term exposures to temperatures up to 232°C (450°F).

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SOLAR HI-TEMP

HEAT TRANSFER FLUID AND ANTI-FREEZE SOLUTION

PROPERTIES AT VARIOUS TEMPERATURES

Temperature Celsius	Viscosity Centipoises/mPa·s	Coefficient of Thermal Conductivity K1=0.0010+0.00000155(t)	Specific Heats Cal/g°C or Btu/lb°F	Vapor Pressure mm Hg	Density g/l
-20	55.6	0.00097	1.60	1	1.1255
-10	30.2	0.00098	1.60	2	1.1255
0	15.2	0.00100	0.71	3	1.1256
10	9.7	0.00102	0.73	4	1.1256
20	6.5	0.00103	0.75	5	1.1256
30	4.9	0.00105	0.76	31	1.1257
40	3.8	0.00106	0.77	65	1.1257
50	2.8	0.00108	0.77	97	1.1257
60	2.3	0.00109	0.78	122	1.1257
70	1.8	0.00111	0.79	192	1.1258
80	1.5	0.00112	0.80	325	1.1258
90	1.3	0.00114	0.82	454	1.1258
100	1.1	0.00116	0.83	607	1.1258
200	0.9	0.00131	0.88	724	1.1261

Solar Hi-Temp expands as temperature increases. To determine the volume of expansion, use the following formula:

$$\frac{\rho(T_{\text{LOW}}) - \rho(T_{\text{HIGH}})}{\rho(T_{\text{HIGH}})} \times \text{Volume} = \text{Expansion Volume}$$

$\rho(T_{\text{LOW}})$ = the density at the lowest anticipated temperature.
 $\rho(T_{\text{HIGH}})$ = the density at the highest anticipated temperature.

PHYSICAL PROPERTIES

Freeze Point	-26°C (-15°F)
pH	5.8
Color	Deep Blue
Specific Gravity @ 20° C	1.13 g/l
Weight per Gal. @ 20° C	9.41 lbs. (4.08 kg)
Coefficient of Thermal Expansion (Gravimetric)	0.000505 (15-20°C Temperature interval) 0.000510 (20-25°C Temperature interval) 0.000520 (20-25°C Temperature interval)
Change in Specific Gravity per Degree	

SOLAR HI-TEMP Heat Transfer Fluid and Anti-Freeze Solution is nontoxic, nonflammable, and non-corrosive. **SOLAR HI-TEMP** Heat Transfer Fluid and Anti-Freeze Solution is considered "Generally Recognized as Safe" by the Federal Food and Drug Administration.



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The Industry Standard Over 100

*The BOD5/COD ratio is >0.5 which suggests that this product is readily biodegradable. This normally allows the solution to be water flushed down sewers. Check with local ordinances and regulations in your area prior to disposal.

www.solarhitemp.com