

## FRANLUBE HTO-50

### HEAT TRANSFER OIL

**DESCRIPTION:** Franlube HTO-50 is a non-corrosive 100% petroleum oil heat transfer fluid that is formulated to provide fast and efficient heat transfer when used in a closed system application with expansion tank temperatures up to 600°F (315°C).

Franlube HTO-50 is blended from the finest select high viscosity index severely solvent refined severely hydro treated 100% pure base oils available. These 100% pure base oils allow HTO-50 to exhibit the following performance characteristics:

**HIGH VISCOSITY INDEX** – This results in a minimum change in viscosity over a broad temperature range.

**HIGH THERMAL AND OXIDATIVE STABILITY** – This results in the product having resistance to cracking, carbon, sludge, varnish and lacquer formation during high temperature operation.

**LOW VOLATILITY CHARACTERISTICS** – The low volatility of paraffin base oils not only results in lower makeup requirements, but also helps eliminate vapor lock in circulating pumps and reduces the possibility of cavitation, which is destructive to centrifugal pump blades.

**FLASH AND FIRE POINTS SIGNIFICANTLY ABOVE 400°F (190.89°C) AND AUTO-IGNITION TEMPERATURE ABOVE 575°F (300°C).**

**BENEFITS:**

- High thermal efficiency for rapid and efficient transfer of heat.
- Low vapor pressure at elevated temperatures and high boiling point to prevent pressure build-up.
- Non-corrosive to system parts.
- Excellent hydrolytic stability and resistance to emulsification with water.
- Excellent compatibility with other heat transfer oils.
- Excellent compatibility with all types of seals, materials of construction and finishes commonly used in heat transfer systems.
- Non-fouling on degradation.
- Virtually odorless and essentially non-toxic.
- Long service life for proven trouble-free operation.

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**TYPICAL PROPERTIES:**

Specific Gravity 60°F	.8783
API Gravity 60°F (ASTM D-445)	29.2
Viscosity SUS @ 100°F (ASTM D-445)	250 - 270
Viscosity SUS @ 210°F	50
Viscosity Cst, @ 100°F	53.7 – 58.2
Viscosity Cst, @ 210°F	7.28
Viscosity Cst, @ 40°C	56
Viscosity Cst, @ 100°C	7.2
Viscosity Index (ASTM D 2270)	97
Flash Point °F/°C (ASTM D-92)	440°
Fire Point °F/°C (ASTM D-92)	480°/248.89°
Auto-ignition Temperature °F/°C	695°/368.33°
Pour Point °F/°C (ASTM D-97)	5°/-15°
Conradson Carbon % (ASTM D-524)	0.2
Ramsbottom Carbon Mass % (ASTM D-524)	0.5
Aniline Point °F/°C (ASTM D-611)	227°/108.33°
Total Acid No. (ASTM D-974)	0.01
Copper Strip Corrosion Test (ASTM D-130)	1b
Coefficient of Thermal Expansion	0.00054/°F / 0.00097°C
IP 48 Oxidation Characteristics -	
Viscosity @ 40°C (Unoxidized Oil), cSt	44.45
Viscosity @ 40°C (Oxidized Oil), cSt	86.92
Viscosity Ratio	1.96
Ramsbottom Carbon Residue (Unoxidized Oil), %	0.27
Ramsbottom Carbon Residue (Oxidized Oil), %	0.70
Increase in Carbon Residue after Oxidation	0.43
Evaporation Loss, %	7.55

**THERMAL PROPERTIES:**

Temperature °F	Specific Heat BTU/lb.°F	Thermal Conductivity BTU/(h x ft x °F)	GMS/CM Density
150	0.46	0.082	0.87
300	0.56	0.073	0.79
450	0.62	0.071	0.75
500	0.65	0.070	0.72

**SAFETY DATA & HANDLING:** Please refer to the MSDS for additional information.

**PACKAGING:** 5-Gallon Pails, 55-Gallon Drums, and 275-Gallon Totes.

The information contained in this technical bulletin is, to the best of our knowledge, true and accurate. However, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. This product should be used as per LaFrance recommendations and should not be modified.