



**THERMAL
FLUID
SOLUTIONS**

www.thermalfluidsolutions.com

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THERMINOL XP HEAT TRANSFER FLUID

Our Thermal Fluid Solutions Therminol XP heat transfer fluid is an extremely pure white mineral oil, specially designed for use in food process plants. This reliable, non-toxic oil has been created to increase operation efficiency and reduce environmental impact.

PERFORMANCE BENEFITS

- **Low Fouling** – The chemical composition of Therminol XP has been carefully selected to minimise system fouling resulting from oxidation and degradation of the fluid.
- **Practically Non-Toxic** – This product meets the purity specifications in U.S. Food & Drug Administration (FDA) Regulation 21 CFR 172.878.
- **Thermal Stability** – Users can expect many years of reliable, trouble-free operation, even when operating Therminol XP continuously at the recommended maximum temperature of 315°C (600°F).
- **Environmentally Friendly** – Therminol XP has outstanding regulatory status for those seeking heat transfer fluids which have minimum environmental reporting requirements.

**NSF and FDA
Approved**



**FDA U.S. FOOD & DRUG
ADMINISTRATION**



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PRODUCT SPECIFICATION

Appearance	Colorless, odorless liquid
Composition	White mineral oil
Maximum bulk temperature	315°C (600°F)
Maximum film temperature	330°C (625°F)
Normal boiling point	358°C (676°F)
Pumpability, at 300 mm ² /s (cSt)	-1°C (30°F)
Pumpability, at 2000 mm ² /s (cSt)	-20°C (-4°F)
Flash point, COC (ASTM D-92)	199°C (390°F)
Autoignition temperature (ASTM E-659)	346°C (655°F)
Autoignition temperature (DIN 51794)	363°C (685°F)
Pour point (ISO 3016)	-29°C (-20°F)
Minimum liquid temperatures for fully developed turbulent flow ($N_{Re} > 10000$)	
10 ft/sec, 1 in tube (3.048 m/s, 2.54 cm tube)	72°C (162°F)
20 ft/sec, 1 in tube (6.096 m/s, 2.54 cm tube)	51°C (123°F)
Minimum vapor temperatures for fully developed turbulent flow ($N_{Re} > 2000$)	
10 ft/sec, 1 in tube (3.048 m/s, 2.54 cm tube)	30°C (85°F)
20 ft/sec, 1 in tube (6.096 m/s, 2.54 cm tube)	17°C (63°F)
Coefficient of thermal expansion at 100°C	0.000892/°C (0.000495/°F)
Heat of vaporization at max. use temperature	214.0 kJ/kg (91.9 Btu/lb)
Kinematic viscosity at 100°C (ASTM D-445)	4.06 mm ² /s (cSt)
Kinematic viscosity at 40°C (ASTM D-445)	23.70 mm ² /s (cSt)
Liquid density at 25°C (ASTM D-4052)	875.0 kg/m ³ (7.30 lb/gal)
Average molecular weight	350
Pseudocritical temperature	542°C (1007°F)
Pseudocritical pressure	15.2 bar (220.0 psia)
Pseudocritical density	280 kg/m ³ (17.5 lb/ft ³)
Dielectric constant @ 23°C (ASTM D-924)	2.14

Email the **TFS Team**, office@thermalfluidsolutions.com
or visit www.thermalfluidsolutions.com