EASTMAN

Technical Data Sheet

Therminol® 58 Heat Transfer Fluid

Applications

- Asphalt storage
- Chemicals & petrochemicals
- Desalination
- Hot mix asphalt
- Htf - food/feed/beverage processing
- Htf - mdf
- Htf - production of biodiesel
- Oil or gas processing
- Polymer & plastic
- Specialty heat-sensitive polymers

Key Attributes

- Excellent compatibility
- Excellent resistance to fouling
- Optimal pumpability

Product Description

Therminol 58 is an efficient, reliable, medium-temperature synthetic fluid engineered to deliver exceptional heat transfer performance at maximum bulk temperatures up to 300°C (575°F). It delivers dependable, uniform process heat with no need for high pressures. With a superior life span, Therminol 58 provides excellent performance over the fluid life when compared to common mineral oil-based fluids as well as lower-tier synthetic heat transfer fluids.

Performance Benefits

- **Optimal pumpability—**Non-sludge-producing chemistry enables pumpability at lower temperatures than the majority of other mineral oil-based heat transfer fluids.
- **Excellent compatibility—**Therminol 58 is noncorrosive to metals commonly used in the construction of heat transfer systems.
- **Excellent resistance to fouling—**Therminol 58 has been shown to be significantly less sensitive than mineral oils to the negative consequences (sludging, fouling) of thermal oxidation.

Typical Properties

Property	Test Method	Typical Value, Units
General		
Appearance		Clear, yellow liquid
Composition		Synthetic hydrocarbon mixture
Maximum bulk temperature		300 °C (575 °F)
Maximum film temperature		339 °C (642 °F)
Normal Boiling Point		352 °C (665 °F)
Pumpability		
@300 mm2/s (cSt)		-6 °C (21 °F)
@ 2000 mm2/s (cSt)		-26 °C (-15 °F)
Flash Point		
COC	ASTM D92	195 °C (383 °F)
Autoignition Temperature	ASTM E659	351 °C (664 °F)
Pour Point	ISO 3016	-54 °C (-65 °F)
Minimum liquid temperatures for fully developed turbulent flow (NRe > 10000)		

10 ft/s, 1-in. tube (3.048 m/s, 2.54-cm tube)		69 °C (156 °F)
20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		47 °C (117 °F)
Minimum liquid temperatures for transitional region flow, (NRe > 2000)		
10 ft/s, 1-in. tube (3.048 m/s, 2.54-cm tube)		26 °C (79 °F)
20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		14 °C (57 °F)
Coefficient of thermal expansion		
@ 200°C		0.000975 /°C (0.000542 /°F)
Heat of Vaporization[a]		248.1 kJ/kg (107.1 Btu/lb)
Molecular Weight (Average)		312
Pseudocritical temperature		496 °C (925 °F)
Pseudocritical pressure		13.07 bar (189.6 psia)
Pseudocritical density		261.3 kg/m^3 (16.31 lb/ft^3)
Moisture Content, maximum	ASTM E-203	150 ppm
Dielectric Constant		
@ 23°C	ASTM D-924	2.4

[a]*at maximum use temperature*

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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