

Technical Data Sheet

Therminol® 66 Heat Transfer Fluid

Applications

- htf - aluminum foil printing
- htf - bakery
- htf - detergent
- htf - fine chemicals
- htf - food/feed/beverage processing
- htf - production of bioalcohol
- htf - production of biodiesel
- Abs
- Adhesives
- Biomass - orc
- Cement - waste heat recovery + orc
- Chemicals & petrochemicals
- Desalination
- Fibers
- Glass - waste heat recovery + orc
- Hybrid solar + orc
- Oil or gas processing
- Oil recycling
- Polyester (pet)
- Polyethylene
- Polymer & plastic
- Polypropylene
- Refining
- Resins
- Silicone
- Solar csp
- Specialty chemicals
- Styrene
- Tall oil

Key Attributes

- Experience
- Fouling Resistant
- Proven Fluid
- True 650° F (345° C) Performance



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Product Description

Therminol 66 is the world's most popular high-temperature, liquid-phase heat transfer fluid. Therminol 66 is pumpable at low temperatures, and offers high temperature thermal stability.

Performance Benefits

- **Experience**—Therminol 66 is the most popular high-temperature, liquid-phase heat transfer fluid in the world. No heat transfer fluid material in the world has a higher degree of customer satisfaction than Therminol 66.
- **Proven Fluid**—In a wide variety of applications and thousands of systems around the world, Therminol 66 delivers excellent performance.
- **True 650° F (345° C) Performance**—Therminol 66 sets the performance standard for high-temperature, liquid-phase fluids. Users can expect many years of reliable, trouble-free operation even when operating continuously at the recommended bulk temperature.
- **Fouling Resistant**—Therminol 66 is specifically engineered to resist solids formation and system fouling, providing more reliable operation and potential cost savings.

Typical Properties

Property	Test Method	Typical Value, Units
General		

Appearance		Clear, pale yellow liquid
Composition		Modified terphenyl
Recommended Bulk Temperature		345 °C (650 °F)
Maximum film temperature		375 °C (705 °F)
Normal Boiling Point		359 °C (678 °F)
Pumpability		
@300 mm ² /s (cSt)		11 °C (52 °F)
@ 2000 mm ² /s (cSt)		-3 °C (27 °F)
Flash Point		
COC	ASTM D92	184 °C (363 °F)
PMCC	ASTM D93	170 °C (338 °F)
Autoignition Temperature	ASTM E659	374 °C (705 °F)
	DIN 51794	399 °C (750 °F)
Pour Point	ISO 3016	-32 °C (-25 °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)		72 °C (162 °F)
20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		53 °C (128 °F)
Minimum liquid temperatures for transitional region flow, (NRe > 2000)		
10 ft/s, 1-in. tube (3.048 m/s, 2.54-cm tube)		35 °C (96 °F)
20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		26 °C (78 °F)
Coefficient of thermal expansion		
@ 200°C		0.000819 /°C (0.000455 /°F)
Viscosity, Kinematic		
@ 100°C	ASTM D 445	3.80 cSt, mm ² /s
@ 40°C	ASTM D 445	29.6 cSt, mm ² /s
Liquid Density		
@ 15°C	ASTM D 4052	1012 kg/m ³ (8.44 lb/gal)
@ 25°C	ASTM D 4052	1005 kg/m ³ (8.4 lb/gal)
Acidity	ASTM D 664	<0.2 mg KOH/g
Molecular Weight (Average)		252
Pseudocritical temperature		569 °C (1056 °F)
Pseudocritical pressure		24.3 bar (353 psia)
Pseudocritical density		317 kg/m ³ (19.8 lb/ft ³)
Copper Corrosion	ASTM D 130	<<1a
Moisture Content, maximum	ASTM E-203	150 ppm
Dielectric Constant		
@ 23°C	ASTM D-924	2.61



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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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