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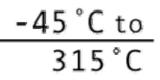
# Therminol 59 Heat Transfer Fluid



products

### Product Description

Therminol 59 is a synthetic heat transfer fluid with excellent low temperature pumping characteristics (to -45° C) and is thermally stable to  $315^{\circ}$  C. Performance features of Therminol 59 include:





- Heating or Cooling Operation Therminol 59 has surprisingly low viscosity for a high temperature heat transfer fluid. It is ideally suited for combination heating and cooling applications delivering excellent heat transfer rates even at 20° C. Batch processes will benefit from the excellent cooling performance Therminol 59 delivers.
- Superb Low Temperature Pumpability Low viscosity at exceptionally cold temperatures makes this an ideal fluid for northern climates. In fact, Therminol 59 was originally developed for use on the North Slope in Alaska, a supreme test of low temperature pumpability.
- Long Life Means Low Cost Like all the Therminol fluids, long fluid life is a given with Therminol 59. Users can expect many years of reliable, trouble-free operation, even when operating continuously at the recommended upper temperature limit of 315° C. Long life means fewer fluid change-outs and that means low operating costs, which is critical in today's highly competitive business environment.

#### Applications

Therminol 59 is used in a wide variety of industries, such as:

- Oil and Gas Processing
- Switch Condensers
- Pharmaceuticals Manufacturing
- Specialty and Batch Chemical Production
  - Biodiesel

For more information on Therminol 59 systems and applications <u>e-mail</u> us or contact your <u>local sales representative</u>.

## **Detailed Properties**

<u>Click here to download the product bulletin</u> containing detailed physical and transport properties for Therminol 59.

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#### **Typical Properties**

Therminol® 59 Heat Transfer Fluid



http://www.therminol.com/pages/products/eu/59.asp

Appearance	Light yellow liquid
Composition	Alkyl substituted aromatic
Moisture Content, Maximum	200 ppm
Flash Point (ASTM D-92)	146 °C (295 °F)
Fire Point (ASTM D-92)	154 °C (310 °F)
Autoignition Temperature (ASTM D-2155)	404 °C (760 °F)
Kinematic Viscosity, at 40 °C	4.0 cSt
Kinematic Viscosity, at 100 °C	1.43 cSt
Density at 25 °C	971 kg/m3 (8.10 lb/gal)
Specific Gravity (60 °F/60 °F)	0.979
Coefficient of Thermal Expansion at 200 °C	0.000946/°C (0.000525/°F)
Average Molecular Weight	207
Pour Point	-68 °C (-90 °F)
Pumpability, at 2000 mm2/s (cSt)	-49 °C (-56 °F)
Pumpability, at 300 mm2/s (cSt)	-37 °C (-35 °F)
Minimum Temperatures for	
Fully Developed Turbulent Flow (Re = 10000	))
10 ft/sec, 1-in tube	17 °C (63 °F)
20 ft/sec, 1-in tube	0 °C (32 °F)
Transition Region Flow (Re = 2000)	
10 ft/sec, 1-in tube	-16 °C (4 °F)
20 ft/sec, 1-in tube	-24 °C (-12 °F)
Normal Boiling Point	289 °C (553 °F)
Heat of Vaporization at Maximum Use Temp 315°C	227 kJ/kg (97.5 Btu/lb)
Optimum Use Range	-45 °C to 315 °C (-50 °F to 600 °F)
Maximum Film Temperature	345 °C (650 °F)
Pseudocritical Temperature	514 °C (957 °F)
Pseudocritical Pressure	22.3 bar (323 psia)
Pseudocritical Density	287 kg/m3 (17.9 lb/ft3

Operating Range -45 °C to 315 °C (-50 °F to 600 °F)

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