CLEARCO

Order Toll Free: 800 533-5823

Product Information

PM-125 High Temperature Silicone Heat Transfer Fluid

Service Temperature: 25°C to 300°C (closed system)

PM-125 High Temp Silicone Heat Transfer Fluid is recommended for service temps of 25°C to 300°C.

PM-125 High Temperature Silicone Heat Transfer Fluid is a clear, colorless, and odorless silicone fluid that is classified as a Phenylmethylsiloxane (CAS#63148-52-7) with a viscosity of 125cSt @ 25C. It is formulated for use as a heat transfer medium for high temperature ranging from 25ºC to 300ºC (closed system*).

PM-125 High Temperature Silicone Heat Transfer Fluid is characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation, high dielectric strength and hydrophobic nature (insoluble in water). It has a high VTC (viscosity-to-temperature coefficient) so its viscosity will lower quickly when heated, allowing for the fluid to be easily pumped.

PM-125 High Temperature Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00035g/cal/cm/sec °C. Its specific heat value is 1.498k J/kg. K @ 40°C.

When compared to Polydimethylsiloxane fluids (PSF-Fluids), PM-125 Heat Transfer Fluid exhibits much higher thermal stability and resistance to oxidation. Although it is more expensive, it will provide a much longer service life.

Applications include: high temp heat transfer, high temperature open system baths, high temperature closed system baths, constant temperature baths, high temperature circulating baths, high temp closed loop baths, high temperature heat transfer baths, high temperature fluids for laboratory research apparatus and instruments.

*Closed system baths are systems from which air has been excluded

Features

- Excellent High Temp Stability
- Service range: -40 to 315°C (closed system)
- High Oxidation Resistance
- Non-Flammable
- High Temperature bath fluid for laboratory research apparatus and instruments.
- High Dielectric strength –dielectric fluid in capacitors
- High Temperature heat transfer applications
- Compatible with virtually all o-rings, gaskets, valves, seals, and hoses *
- VOC Exempt

Not recommended for silicone o-rings where the fluid may cause swelling

Thermal Properties

Specific Heat
@ 0°C……...1.418 kJ/kg K
@ 40°C……1.498kJ/kg. K
@ 100°C……..…….1.615 kJ/kg. K.
@200°C……1.812 J/kg. K

Thermal Conductivity
@25°C……..0.00035g/cal/cm/sec °C
@ 50°C…….0.00036g/cal/cm/sec °C

Thermal Gel Time (open system)
months @ 200°C……14 months
hours @ 250°C……1,200 hours
hours @ 260°C……200 hours

Properties

Pour Point °C……-51°C
Flashpoint……315°C
Ignition Temperature…….482°C

Surface tension……...24.5
Specific Gravity……1.07
Refractive index……1.500

Viscosity/Temp Coefficient……0.76
Viscosity @25C……125cSt (mm2/sec)

Viscosity @ temperature
@ 99°C……20cSt (mm2/sec)
@ 38°C……84cSt (mm2/sec)
@ 25°C……125cSt (mm2/sec)
@ -29°C……..22,000cSt (mm2/sec)

Volatility (open system)
12 months @ 150C……4%
12 months @ 200C……15%
4 hours @ 250C……..1.2%
48 hours @ 250C……5.5%

Vapor pressure vs. Temperature
@228°C…….11 Pa
@244°C…….25 Pa
@263°C…….84 Pa
@277°C…….155 Pa
@380°C…….13,332 Pa
(1mm Hg = 133.322Pa)

Volume Expansion vs. temperature
-18°C to 149°C…….0.00075
150°Cto 204°C…….0.00077
205°C to 260°C……0.00080

Compressibility
@ 7MPa……0.5%
@20MPa…….1.4%
@35MPa……..2.3%
@50MPa……3.0%
@75MPa…….4.2%
@100MPa……5.2%
@150MPa…….6.8%

Packaging

1-gallon pail……..…….. 4 kg
5-gallon pail……20 kg
55-gallon drum……220 kg Quote Upon Request
F.O.B. Phila, PA U.S.A.

For More Information, Contact:

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