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 0.00035 g 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 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*

Product Date

Product Code	PM-125
Chemical Name	Phenylmethylsiloxane
CAS No	63148-52-7
Appearance	Clear, colorless and odorless fluid
Viscosity@ 25C	125cSt
Minimum order	1-gallon (3.785 liters)

Typical Properties

Specific Gravity	Refractive Index	Pour Point	Flash Point	Viscosity/ Temp Coefficient	Surface Tension dynes cm @ 25°C
1.07	1.500	-51°C	315°C	0.76	24.5

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.....0.00035 g cal/cm•sec• °C
@ 50°C.....0.00036 g 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

Vapor Pressure vs. Temp

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)

Volatility (open system)

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

Volume Expansion vs. Temperature

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

Packaging

1-gallon (3.78 liters) .....4kg net wt.

5-gallon pail (18.9 liters) .....20kg net wt.

55-gallon drum (208 liters) .....200kg net wt.

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Viscosity to Temperature

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)

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