



Product Information

PSF-20cSt Silicone Heat Transfer Fluid

Operating Temperature Range: -50°C to 220°C (closed system)



PSF-20cSt Silicone Heat Transfer Fluid is 100% PDMS Silicone that offers a wide service temperature range.

PSF-20cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane (CAS No. 63148-62-9) with a viscosity of 20cSt @ 25°C. It is formulated as a cold and heat transfer medium with an operating service temperature range of -50°C to 220°C (closed system*).

PSF-20cSt Silicone Heat Transfer Fluid is characterized by its low pour points, low temperature stability, wide service temperature range, low viscosity change at temperature (low V.T.C.), low surface tension, high dielectric strength, long service life, and hydrophobic nature (insoluble in water).

PSF-20cSt Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00034 g/cal/cm/sec °C. Its specific heat value is 1.6 (J/g °C)

PSF-20cSt Silicone Heat Transfer Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷ viscosity @ 38°C). Thus, its viscosity will not significantly increase even at extremely low temperatures. For example, at -40°C, its viscosity increases to only 125cSt. This is critical for baths that have pumping systems that cannot operate with higher viscosity fluids.

Applications include: low temperature heat transfer systems, heat transfer baths, heat transfer fluid in freeze drying equipment, calibration bath fluids for low temperature, low temperature closed system baths, low temperature constant temperature baths, low temperature circulating baths, low temperature circulator baths, low temperature refrigerated baths, low temperature closed loop baths,

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

Specifications

Chemical Name	Polydimethylsiloxane
CAS #	63148-62-9
Appearance	Clear, colorless liquid
Viscosity Class	Low
Non-Flammable	Yes
Thermally Stable	Yes

Features

- 100% PDMS silicone fluid
- Non-Flammable
- Wide Service Temperature Range
- Hydrophobic: insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Chemically Inert
- Low V.T.C...viscosity remains low even at very low temps
- Low Vapor pressure
- Low Pour Point: -65°C
- Flash Point: 232°C
- High Dielectric Strength
- High Resistance to Oxidation

*Not recommended for silicone o-rings...may cause swelling.

Viscosity @ temperature

Viscosity-Temperature-coefficient.....	0.59
Viscosity @ 25°C.....	20cSt (centistokes)
Viscosity @ 0°C.....	35cSt
Viscosity @ -20°C.....	60cSt
Viscosity @ -40°C.....	125cSt

Typical Product Data

Specific Gravity	Refractive Index	Pour Point	Flash Point	Boiling Point	Surface Tension	Thermal Conductivity @ 25°C g/cal/cm/sec °C	Thermal Expansion cc/cc °C	Specific Heat @ 25°C J/g °C
0.950	1.4000	-65°C	232°C	>200 °C	20.6	0.00034	0.00107	1.6

Typical Product Data (cont'd)

Volume Resistivity	Molecular weight	Dielectric constant 50Hz	Dielectric strength volts/mil
≥1	2,000	2.72	375

Packaging

1-gallon.....	3.6kg net wt.
5-gallon pail.....	18kg net wt.
55-gallon drum.....	190kg net wt.

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