



Product Information

PSF-1.5cst Silicone Heat Transfer Fluid

Operating Temperature Range: -70°C to 120°C closed system only



PSF-1.5cst Silicone Heat Transfer Fluid is an excellent heat transfer medium for systems requiring a low viscosity and low temp stability.

PSF-1.5cst Low Temperature Heat Transfer Fluid is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane that is formulated as a cold and heat transfer medium in a wide range of applications. **PSF-1.5cst Silicone Heat Transfer Fluid** has an operating service temperature range of -70°C to 120°C (closed system only*).

PSF-1.5cst 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, long service life, and hydrophobic nature (insoluble in water).

PSF-1.5cst Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00025 g cal/cm •sec •°C. Its specific heat value is 0.410 cal/g/°C @ 25°C.

PSF-1.5cst has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). The lower the V.T.C., the lower the viscosity will be at lower temps. Thus, its viscosity will not increase significantly even at extremely low temperatures. For example, at -40°C, the viscosity of PSF-1.5cst is only 6cSt. 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, thermostats and cryostat fluids, calibration bath fluids for low temperature, low temperature closed system baths, low temperature circulating baths, low temperature circulator baths, low temperature refrigerated baths, low temperature closed loop baths.

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

Features

- Super low viscosity – provides excellent low temperature pumpability
- Clear, colorless and odorless fluid – easy to see instruments inside of the bath
- Excellent Low Temperature Serviceability
- Low Temperature heat transfer fluid
- VOC Exempt
- High Compressibility
- High Oxidation Resistance
- Insoluble in water
- Compatible with virtually all o-rings, gaskets, valves and seals *

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

Properties

Appearance: clear, colorless, odorless	Viscosity @ 25°C.....1.5cSt
Pour Point.....-90°C	<u>Operating temperature stability</u>
Flash point.....63°C	Closed system.....-70°C to 50°C
Boiling Point (0.5mm, °C).....194°C	<u>Dielectric Properties</u>
Specific gravity: 0.853	Dielectric Constant (50Hz)....2.39
Refractive Index: 1.3880	Dielectric Strength350 volts/mil
Coefficient of Thermal Expansion (cc/cc/ °C).....0.00134	Vapor Density (air =1).....>1
<u>Thermal Conductivity @ 25°C</u>	Vapor Pressure @ 25°C.....1mmHg
g/cal/cm/sec °C.....0.00025	Volatility
W/m °C0.10	@ 150°C (open system).....100%
<u>Specific Heat @25°C</u>	Evaporation
0.410 cal/g °C	Rate (butyl acetate = 1): 0.7
1.8 J/g °C	Molecular weight.....340
Volume Resistivity @ 25°C	Surface Tension.....18.0
(ohm-cm).....5.0 x 10 ¹⁴	

Viscosity/Temperature

Viscosity-Temp Coefficient (V.T.C.).....	0.46
Viscosity @25°C.....	1.5cSt
Viscosity @25°C.....	1.5cSt
@-25°C.....	3cSt
@-40°C.....	6cSt
@-60°C.....	<20cSt

CAS Information

Identity	CAS #	%
Polydimethylsiloxane	63148-62-9	100

Packaging

1-gallon.....	3.2kg
5-gallon pail.....	16kg
55-gallon drum.....	150kg
F.O.B. Phila, PA U.S.A.	

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