



PSF-2cSt Silicone Heat Transfer Fluid

Operating Temperature Range: -80°C to 60°C closed system only



PSF-2cSt Silicone Heat Transfer Fluid is an excellent fluid for temperatures as low as -80°C.

PSF-2cSt 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-2cSt Low Temperature Silicone Bath Fluid** has an operating service temperature range of -80°C to 60°C (closed system*).

PSF-2cSt 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). It is widely used in Freeze Drying/Lyophilization applications.

PSF-2cSt Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00026 g/cal/cm/sec °C. Its specific heat value is 0.410 cal/g/°C @ 25°C.

PSF-2cSt Silicone Heat Transfer Fluid has a low viscosity-temperature coefficient or VTC (viscosity @99°C ÷ viscosity @ 38°C). The lower the VTC, the lower the viscosity at lower temps. Thus, its viscosity will not increase significantly even at extremely low temperatures. For example, at -60°C, the viscosity of PSF-2cSt is <20cSt. This is critical for 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, heat transfer medium in lyophilization thermostats and cryostat fluids, 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.

Features

- Super low viscosity – provides excellent low temperature pump-ability
- Clear, colorless and odorless fluid –
- 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

Viscosity/Temperature

Viscosity-Temp Coefficient (V.T.C).....	0.48
Viscosity @25°C.....	2cSt
Viscosity @-35°C.....	8cSt
@-40°C	10cSt
@-60°C.....	<20cSt

Properties

Appearance: clear, colorless, odorless	Viscosity @ 25C.....	2cSt
Pour Point.....	<u>Operating temperature stability</u>	
Flash point.....	Closed system.....	
Boiling Point (0.5mm, °C).....	-80°C to 60°C	
Specific gravity: 0.873	<u>Dielectric Properties</u>	
Refractive Index: 1.3900	Dielectric Constant.....	2.45
Thermal Expansion cc/cc °C.....	Dielectric Strength	350 volts/mil
0.00117	Vapor Density (air =1).....	>1
Thermal Conductivity g/cal/cm/sec °C.....	Vapor Pressure @ 25°C.....	1mmHg
0.00026	Volatility @ 150°C (open system).....	100%
Specific Heat @ 25°C.....	Evaporation Rate (butyl acetate = 1):	<1
0.410 cal/g/°C	Molecular weight.....	410
Volume Resistivity @ 25°C (ohm-cm).....	Surface Tension.....	18.7
5.0 x 10 ¹⁴		

* Packaging

1-gallon pail.....	3.28kg
5-gallon pail.....	16.4kg
4 x 5-gallon pails	
55-gallon drum.....	170kg
Terms F.O.B. Phila, PA U.S.A.	

CAS Information

Identity	CAS #	%
Dodecamethylpentasiloxane	141-63-9	>90%
Decamethyltetrasiloxane	141-62-8	<10%
Octamethylcyclotetrasiloxane	556-67-2	<10%

For More Information, Contact:

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