



## PSF-2cSt Silicone Heat Transfer Fluid

**Operating Temperature Range: -80°C to 150°C closed system only**



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

**PSF-2cSt Silicone 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 Silicone Heat Transfer Fluid** has an operating service temperature range of -80°C to 150°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,*

### Specifications

Chemical Name	Polydimethylsiloxane / PDMS Silicone Oil
CAS #	63148-62-9
Appearance	Clear, colorless, odorless fluid
Minimum Order	1-gallon (3.785 liters)

### Features

- Super low viscosity: provides excellent low temperature pump-ability
- Clear, colorless and odorless fluid
- Low Temperature heat transfer fluid
- Insoluble in water
- Compatible with virtually all o-rings, gaskets, valves and seals \*

### Typical Product Data

Specific Gravity	Refractive Index	Pour Point	Flash Point closed cup	Boiling Point @ 760mm	Surface Tension dynes/cm @ 25°C	Vapor Pressure@ 25°C	Volatile content @ 150°C (open)	Molecular weight
0.873	1.3900	-100°C	75°C	229°C	18.7	1mmHg	100%	410

### Thermal Properties

Thermal Conductivity @ 50°C g cal/cm•sec• °C	Thermal Expansion cc/cc °C	Specific Heat cal/g/ °C
0.00026	0.00117	0.410

\* Thermal conductivity: 0.11 W/m °C

\* Specific Heat: 1.8 J/g

### Packaging

1-gallon (3.78 liters).....	3.28kg net wt.
5-gallon pail (18.9 liters) .....	16.4kg net wt.
55-gallon drum (208 liters) .....	170kg net wt.
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### Dielectric Properties

Dielectric Strength volts/mil	Dielectric constant (100Hz) @ 25C	Volume Resistivity @ 25°C(ohm-cm)
350 volts/mil	2.44	5.0 x 1014

### Viscosity/Temperature

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

### For More Info, Contact: Clearco Products Co., Inc.

15 York Road  
Willow Grove, PA 19090  
U.S.A.

Tel: (215) 366-7860

Fax: (215) 366-7862

Email: [info@clearcoproducts.com](mailto:info@clearcoproducts.com)

Web: [www.clearcoproducts.com](http://www.clearcoproducts.com)