



## Product Information

### PSF-1.5cst Silicone Heat Transfer Fluid

**Operating Temperature Range: -80°C to 150°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.

#### 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: easy to see instruments inside of the bath*
- *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
0.851	1.3874	-100°C	57°C	194°C	18.0	1mmHg	100%	340

#### Thermal Properties

Thermal Conductivity @ 50°C g cal/cm•sec• °C	Coeff. of Thermal Expansion cc/cc °C	Specific Heat cal/g/°C
0.00025	0.00134	0.410

\* Thermal conductivity: 0.10 W/m °C

\* Specific Heat: 1.8 J/g

#### Packaging

1-gallon (3.78 liter) .....	3.2kg net wt.
5-gallon pail (18.9 liters).....	16kg net wt.
55-gallon drum (208 liters).....	150kg 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	2.36	5.0 x 10 <sup>14</sup>

#### 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

#### For More Info, Contact:

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