



# Product Information

## PSF-2cSt Silicone Bath Fluid

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



*PSF-2cSt Low Temperature Silicone Bath Fluid has a service temperature range of -80°C to 150°C (closed system only)*

**PSF-2cSt Silicone Bath Fluid** is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane with a viscosity of 2cSt @ 25C.

PSF-2cSt is characterized by its low viscosity, low pour point, low viscosity change at temperature, high dielectric strength, low viscosity change at low temperatures and inertness to virtually all bath components.

In closed system baths, **PSF-2cSt Silicone Bath Fluid** has an operating service temperature range of -80°C to 150°C. Due to its low flash point and high rate of evaporation, PSF-2cSt is not recommended for open bath systems. Fast rate of evaporation will require frequent replenishment of the fluid.

**PSF-2cSt Silicone Bath 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 baths that have pumping systems that cannot operate with higher viscosity fluids.

Bath Applications include: low temperature closed system baths, low temp constant temperature baths, low temp circulating baths, recirculating coolers, refrigerated circulators, refrigerated baths, closed loop baths, low temperature heat transfer baths, low viscosity calibration fluid, heat transfer fluid in freeze drying equipment, fluid for thermostats.

### Features

- Super low viscosity: easy to pump & circulate at low temperatures
- 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 as 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.....	-100°C	<u>Operating temperature stability</u>	
Flash point.....	75°C	Closed system.....	-80°C to 60°C
Boiling Point (0.5mm, °C).....	229°C	<u>Dielectric Properties</u>	
Specific gravity: 0.873		Dielectric Constant.....	2.45
Refractive Index: 1.391		Dielectric Strength .....	350 volts/mil
Thermal Expansion cc/cc °C.....	0.00117	Vapor Density (air =1).....	>1
Thermal Conductivity g/cal/cm/sec °C.....	0.00026	Vapor Pressure @ 25°C.....	1mmHg
Specific Heat @ 25°C.....	0.410 cal/g/°C	Volatility @ 150°C (open system).....	100%
Volume Resistivity @ 25°C (ohm-cm).....	5.0 x 10 <sup>14</sup>	Evaporation Rate (butyl acetate = 1):	<1
		Molecular weight.....	410
		Surface Tension.....	18.7

### Packaging

1-gallon.....	3.28kg net wt.
5-gallon pail.....	16.4kg net wt.
55-gallon drum.....	170kg net wt.

F.O.B. Phila, PA U.S.A.

### CAS Information

Identity	CAS #	%
Dodecamethylpentasiloxane	141-63-9	100
<i>Also under the general Polydimethylsiloxane CAS No. 63148-62-9.</i>		

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