



Product Information

PSF-100cSt Silicone Bath Fluid

Operating Temperature Range: -40°C to 170°C (open system) / -40°C to 230°C (closed system)



PSF-100cSt is a 100% PDMS Silicone Oil that offer a wide service temp range and high dielectric strength.

PSF-100cSt Silicone Bath Fluid is 100% linear PDMS Silicone / Polydimethylsiloxane with a viscosity of 100cSt (centistokes) @ 25°C. The fluid is clear, colorless and odorless.

PSF-100cSt Silicone Bath Fluid is characterized by its high flash point, wide service temperature range, low viscosity change at temperature, high dielectric strength, low vapor pressure, high resistance to oxidation and inertness to virtually all bath components.

In open system baths (presence of air), PSF-100cSt Silicone Bath Fluid has an operating temperature range of -40°C to 170°C. At 150°C, PSF-100cSt will remain stable for approximately 1-year.

In closed system*, the operating temperature range is wider due to the absence of air. The closed system operating range is -40°C to 230°C.

PSF-100cSt Silicone Bath Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). Thus, it will not exhibit a wide viscosity increase at the lower temperatures. For example, at -20°C, its viscosity only increases to 300cSt while at 150°C, it lowers to 15cSt. This is critical for baths that have pumping systems that cannot operate with higher viscosity fluids.

Bath Applications include: open system baths, closed system baths, constant temperature baths, circulating baths, low temperature refrigerated baths, closed loop baths, heat transfer medium.

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

Specifications

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

Features

- 100% PDMS Silicone Fluid
- Viscosity is easy to pump/circulate
- Clear fluid...easy to see instruments in the bath
- Hydrophobic – insoluble with water
- High dielectric strength
- Flash Point: 315°C

Typical Properties

Specific Gravity	Refractive Index	Pour Point	Flash Point	Surface Tension Dynes cm @ 25°C
0.966	1.4025	-55°C	315°C	20.9

Viscosity/Temp Specs.

Viscosity-Temperature Coefficient.....	0.60
Viscosity @ temperature @ 15°C.....	17cSt
@ 100°C.....	30cSt
@ 25°C.....	100cSt
@ 0°C.....	160cSt
@ -20°C.....	300cSt

Thermal Properties

Thermal Conductivity @ 25°C g cal/cm*sec* °C	Thermal Expansion cc/cc°C	Specific Heat @ 25°C J/g °C
0.00037	0.00096	1.5

Packaging

1-gallon (3.78 liters).....	3.6kg net wt.
5-gallon pail (18.9 liters).....	18kg net wt.
55-gallon drum (208 liters).....	200kg net wt.
F.O.B. Phila, PA U.S.A.	

Gel time @ Temperature (open system)

149°C	204°C	250°C	260°C	300°C
Approx 1-year	250 to 300 hours	40 to 60 hours	20 to 25 hours	<24 hours

Dielectric Properties

Dielectric Strength	400 volts/mil
Dielectric breakdown strength (2.5mm).....	≥50 kV
Dielectric Constant (50Hz).....	2.75 @ 25°C
Dissipation Factor (100Hz) @ 25C.....	0.0002
@ 150C.....	0.00016
Volume Resistance (ohm-cm) @ 25°C.....	1.0 x 10 ¹⁵
@ 150°C	5.0 x 10 ¹³

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
 Web: www.clearcoproducts.com