

PSF-100cSt Dielectric Silicone Fluid

Dielectric Strength: 400 volts/mil Operating Temperature Range: -40°C to 230°C (closed system)



PSF-100cSt Dielectric Silicone Fluid is a 100% PDMS Silicone that offers high dielectric strength over a wide service temperature range.

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

PSF-100cSt Dielectric Silicone Fluid is characterized by its high dielectric strength, wide service temperature range, high flash point, low viscosity change at temperature (low V.T.C.), low pour point, low surface tension, long service life, and hydrophobic nature (insoluble in water).

PSF-100cSt Dielectric Silicone Fluid has a dielectric strength of 400 volts/mil and a dielectric breakdown strength (2.5mm) >50kV. **It has a service temperature range of -40°C to 230°C (closed system).**

PSF-100cSt Dielectric Silicone 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.

Applications include: dielectric coolant, dielectric fluid, heat transfer fluid, laboratory bath fluid, calibration bath fluid, circulating bath fluid,

**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)

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

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

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

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

Dielectric Properties

Dielectric Strength	400 volts/mil
Dielectric breakdown strength (2.5mm).....	>50 kV
Dielectric Constant (50Hz).....	2.75 @ 25°C
Dielectric Constant (100Hz).....	2.71 @ 25°C
Dielectric Constant (100Hz	2.35 @ 150°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

Packaging

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

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