

PSF-50cSt Dielectric Silicone Fluid

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



PSF-50cSt Dielectric Silicone Fluid offers high dielectric strength (400volts/mil) over a wide service temperature range.

PSF-50cSt Dielectric Silicone Fluid is 100% linear Polydimethylsiloxane / PDS Silicone (CAS# 63148-62-9) with a viscosity of 50cSt @ 25°C. The 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 surface tension, long service life, and hydrophobic nature (insoluble in water).

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

PSF-50cSt Dielectric Silicone Fluid has a Thermal Conductivity value of 0.00036 g cal/cm•sec• °C. Its specific heat value is 1.5 J/g °C.

PSF-50cSt 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 lower temperatures.

Applications include: heat transfer systems, closed system baths, constant temperature baths, circulating baths, low temperature refrigerated baths, closed loop baths,

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

Specifications

Product Code	PSF-50cSt
Chemical Name	Polydimethylsiloxane / PDMS Silicone
CAS #	63148-62-9
Appearance	Clear, colorless liquid
Viscosity Class	Low
Non-Flammable	Yes
Thermally Stable	Yes
Availability	1 – 5 – 55 gallon drums
Minimum Order	1-gallon (3.785 liters)

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	0.00002
@ 150C	0.00016
Volume Resistance (ohm-cm)	
@ 25°C	1.0×10^{15}
@ 150°C	5.0×10^{13}

Typical Product Data

Specific Gravity	Refractive Index	Pour Point	Flash Point	Surface Tension dynes cm @ 25°C	Thermal Conductivity @ 25°C g cal/cm•sec• °C	Thermal Expansion cc/cc °C	Specific Heat @ 25°C J/g °C
0.960	1.4015	-55°C	285°C	20.8	0.00036	0.00106	1.5

Viscosity/Temp Data

Viscosity-Temperature Coefficient.....0.59

Viscosity @ temperature

@ 170°C.....9cSt
 @ 100°C.....17cSt
 @ 25°C.....50cSt
 @ 0°C.....80cSt
 @ -40°C.....240cSt

Packaging

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

CAS Information

Polydimethylsiloxane.....CAS No 63148-62-9

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