



PSF-20cSt Dielectric Silicone Fluid

Dielectric Strength: 375 volts/mil Operating Temperature Range: -50°C to 220°C (closed system)



PSF-20cSt Dielectric Silicone Fluid provides high dielectric strength over a wide service temperature range.

PSF-20cSt Dielectric Silicone Fluid is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane (CAS # 63148-62-9) with a viscosity of 20cSt @ 25°C. **PSF-20cSt Dielectric Silicone Fluid** is characterized by its high dielectric strength, low pour point, 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-20cSt Dielectric Silicone Fluid has a dielectric strength of 375 volts/mil and a dielectric breakdown strength (2.5mm) ≥50kV. **PSF-20cSt Silicone Heat Transfer Fluid** has a Thermal Conductivity value of 0.00034 g/cal/cm/sec °C. Its specific heat value is 1.6 (J/g °C)

PSF-20cSt Silicone Bath Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). Thus, its viscosity will not significantly increase even at extremely low temperatures. For example, at -40°C, its viscosity increases to only 125cSt. 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, calibration bath fluids for low temperature, low temperature closed system baths, low temperature constant temperature baths, low temperature circulating baths, low temperature circulator baths, low temperature refrigerated baths, low temperature closed loop baths,

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

Specifications

| | |
|------------------|-------------------------|
| Product Code | PSF-20cSt |
| Chemical Name | Polydimethylsiloxane |
| CAS # | 63148-62-9 |
| Appearance | Clear, colorless liquid |
| Viscosity Class | Low |
| Non-Flammable | Yes |
| Thermally Stable | Yes |

Viscosity @ temperature

| | |
|-----------------------------------|--------------------------|
| Viscosity-Temperature-coefficient | ...0.59 |
| Viscosity @ 25°C |20cSt (centistokes) |
| Viscosity @ 0°C |35cSt |
| Viscosity @ -20°C |60cSt |
| Viscosity @ -40°C |125cSt |

Dielectric Properties

| | |
|---------------------------------------|-----------------------------|
| Dielectric Strength |375 volts/mil |
| Dielectric breakdown strength (2.5mm) |≥50 kV |
| Dielectric Constant (50Hz) |2.72 @ 25°C |
| Dielectric Constant (100Hz) |2.68 @ 25°C |
| |2.32 @ 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 x 10 ¹³ |

Typical Product Data

| Specific Gravity | Refractive Index | Pour Point | Flash Point | Surface Tension | Thermal Conductivity @ 25°C g/cal/cm/sec °C | Thermal Expansion cc/cc °C | Specific Heat @ 25°C J/g °C |
|------------------|------------------|------------|-------------|-----------------|---|----------------------------|-----------------------------|
| 0.950 | 1.4000 | -65°C | 232°C | 20.6 | 0.00034 | 0.00107 | 1.6 |

Typical Product Data (cont'd)

| Volume Resistivity | Molecular weight | Dielectric constant 50Hz | Dielectric strength volts/mil |
|--------------------|------------------|--------------------------|-------------------------------|
| ≥1 | 2,000 | 2.72 | 375 |

Packaging

| | |
|------------------------|------------|
| 1-gallon |3.6kg |
| 5-gallon pail |18kg |
| 55-gallon drum |190kg |
| Terms F.O.B. Phila, PA | |

For More Information, Contact:

Clearco Products Co., Inc.
 3430 G. Progress Drive
 Bensalem, PA 19020
 Tel: 215 639-2640
 Fax: 215 639-2919
 Email: info@clearcoproducts.com
 Web: www.clearcoproducts.com