PSF-10cSt Dielectric Silicone Fluid

Dielectric Strength: 375 volts/mil Operating Temperature Range: −60°C to 200°C (closed system)

PSF-10cSt Dielectric Silicone Fluid is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane (CAS # 63148-62-9) with a viscosity of 10cSt @ 25°C.

PSF-10cSt 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-10cSt Dielectric Silicone Fluid has a dielectric strength of 375 volts/mil and a dielectric breakdown strength (2.5mm) ≥50kV. PSF-10cSt Dielectric Silicone Fluid has a Thermal Conductivity value of 0.00032 g/cal/cm/sec °C. Its specific heat value is 0.360 cal/g/°C @ 25°C.

PSF-10cSt Dielectric Silicone Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C +viscosity @ 38°C). The lower the VTC, the lower the viscosity changes at temperature. Thus, its viscosity will not significantly increase even at extremely low temperatures. For example, at −40°C, its viscosity increases to only 75cSt.

Applications include: low temperature heat transfer fluid, low temperature bath fluid, dielectric fluid, calibration bath fluid

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

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>PSF-10cSt Dielectric Silicone Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Family</td>
<td>PDMS Silicone</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Polydimethylsiloxane</td>
</tr>
<tr>
<td>CAS#</td>
<td>63148-62-9</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless, odorless</td>
</tr>
<tr>
<td>Non-Flammable</td>
<td>Yes</td>
</tr>
<tr>
<td>Hydrophobic</td>
<td>Yes</td>
</tr>
<tr>
<td>Minimum Order</td>
<td>1-gallon (3.785 liters)</td>
</tr>
</tbody>
</table>

Dielectric Properties

- Dielectric Strength: 375 volts/mil
- Dielectric breakdown strength (2.5mm): ≥50 kV
- Dielectric Constant (50Hz): 2.68 @ 25°C
- Dielectric Constant (100Hz): 2.64 @ 25°C
- Dielectric Constant (100Hz): 2.28 @ 150°C
- Dissipation Factor (100Hz): @ 25°C: 0.00002
  - @ 150°C: 0.00016
- Volume Resistance (ohm-cm): @ 25°C: 1.0 x 10¹⁵
  - @ 150°C: 5 x 10¹⁵
- Surface Tension (dynes/cm @ 25°C): 20.1

Technical Data

<table>
<thead>
<tr>
<th>Specific Gravity</th>
<th>Refractive Index</th>
<th>Pour Point</th>
<th>Flash Point (closed cup)</th>
<th>Boiling Point</th>
<th>Surface Tension (dynes/cm @ 25°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.935</td>
<td>1.3990</td>
<td>-70°C</td>
<td>163°C</td>
<td>&gt;200°C</td>
<td>20.1</td>
</tr>
</tbody>
</table>

Thermal Properties

<table>
<thead>
<tr>
<th>Thermal Conductivity @ 25°C</th>
<th>Thermal Expansion @ 25°C</th>
<th>Specific Heat @ 25°C</th>
<th>Volatile content @ 70°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00032</td>
<td>0.00108</td>
<td>0.360</td>
<td>0.68%</td>
</tr>
</tbody>
</table>

Packaging

- 1-gallon (3.78 liters) .......... 3.52kg
- 5-gallon pail (18.9 liters)......... 17.6kg
- 55-gallon drum (208 liters) ................. 190kg
  - F.O.B. Phila, PA U.S.A.

For More Info, Contact:
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