



Pure Silicone Fluid 3cSt Low Temperature Bath Fluid



Product Information

Operating Temperature Range: -60°C to 90°C closed system only



Pure Silicone Fluid 3cSt Low Temperature Bath Fluid has a service temperature range of -60°C.

Clearco **Pure Silicone Fluid 3cSt Low Temperature Bath Fluid** is a clear, colorless, and odorless low-viscosity linear Polydimethylsiloxane (CAS # 63148-62-9) that is formulated for use as a low temperature baths fluid and a low temperature heat transfer fluid.

Due to its low flash point and volatility, it is not recommended for open system above ambient (evaporation will require frequent replenishment). However, in closed system baths*, the PSF-3cSt has a wider operating temperature range of -60°C to 90°C.

PSF-3cSt Low Temperature Silicone Bath Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). Thus, its viscosity will not increase significantly even increase significantly even at extremely low temperatures. For example, at -40°C, its viscosity increases to only 20cSt. This is critical for baths that have pumping systems that cannot operate with higher viscosity fluids.

Bath Applications include: low temperature open system baths, low temperature closed system baths, low temperature constant temperature baths, low temp circulating baths, refrigerated baths, closed loop baths, heat transfer baths, heat transfer fluid in freeze drying equipment, thermostats

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

Features

- 100% silicone fluid
- Low viscosity: 3cSt @ 25°C
- Excellent Low Temp Serviceability
- Excellent Low Temp heat transfer fluid
- Hydrophobic – insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Chemically Inert
- Clear, Colorless, Odorless
- Low V.T.C : 0.51
- Low Vapor pressure
- Low Pour Point: -70°C
- Flash Point: 100°C
- High Resistance to Oxidation
- VOC Exempt

*Not recommended for silicone o-rings where the fluid may cause swelling.

Specifications

| | |
|---------------|------------------------------------|
| Chemical name | Polydimethylsiloxane |
| Synonym | Dimethylsiloxane, PDMS fluid |
| Appearance | Clear Liquid – colorless, odorless |
| Minimum Order | 1-gallon |

Packaging: 3 Centistokes

| | |
|--------------------------------|-------|
| 1-gallon pail..... | 2.5kg |
| 5-gallon pail..... | 15kg |
| 55-gallon drum..... | 170kg |
| Terms: F.O.B. Phila, PA U.S.A. | |

CAS Information

| Identity | CAS # | % |
|------------------------------|------------|-----|
| Polydimethylsiloxanes | 63148-62-9 | >80 |
| Dodecamethylpentasiloxane | 141-63-9 | <20 |
| Decamethyltetrasiloxane | 141-62-8 | <5 |
| Octamethylcyclotetrasiloxane | 556-67-2 | <2 |

Typical Product Data

| Specific Gravity | Viscosity-Temp Coefficient | Flash Point | Pour Point | Refractive Index | Coefficient of Thermal Expansion cc/cc/°C 0-150°C | Thermal Conductivity @ 25C g/cal/cm/sec °C | Surface Tension | Dielectric Constant | Dielectric Strength |
|------------------|----------------------------|-------------|------------|------------------|---|--|-----------------|---------------------|---------------------|
| 0.898 | 0.51 | 100°C | -7°C | 1.3935 | 0.00114 | 0.00027 | 19.2 | 2.50 | 350 |

Typical Product Data (cont'd)

| Boiling Point | Vapor Density (air = 1) | % Volatile | Molecular weight | Vapor Pressure @ 25°C |
|---------------|-------------------------|------------|------------------|-----------------------|
| >229°C | NA | NA | 550 | 1mmHg |

For More Information, Contact:

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