



## Product Information

### Pure Silicone Fluid 1.5cst Low Temperature Bath Fluid

**Operating Temperature Range: -65°C to 25°C closed system only**



Pure Silicone Fluid 1.5cst Low Temperature Bath Fluid has a service temperature range of -65°C to 25°C (closed system only)

Clearco **Pure Silicone 1.5cSt Low Temperature Bath Fluid** is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane that is formulated for Low Temperature Baths and Low Temperature Heat Transfer Applications.

In closed system baths, PSF-1.5cSt Low Temperature Bath Fluid has an operating service temperature range of -65°C to 25°C. Due to its low flash point and high volatility, PSF-1.5cSt is not recommended for open bath systems. Fast rate of evaporation will require frequent replenishment of the fluid.

PSF-1.5cSt has a low viscosity-temperature coefficient or VTC (viscosity @99°C ÷viscosity @ 38°C). The lower the VTC, the lower the viscosity at lower temps. Thus, its viscosity will not increase significantly even at extremely low temperatures. For example, at -40°C, the viscosity of PSF-1.5cSt is only 6cSt. This is critical for baths that have pumping systems that cannot operate with higher viscosity fluids.

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

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

#### Features

Super low viscosity – provides excellent low temperature pump-ability  
Clear, colorless and odorless fluid – easy to see instruments inside of the bath  
Excellent Low Temperature Serviceability  
Low Temperature heat transfer fluid  
VOC Exempt  
High Compressibility  
High Oxidation Resistance  
Insoluble in water  
Compatible with virtually all o-rings, gaskets, valves and seals \*

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

#### Viscosity/Temperature

Viscosity-Temp Coefficient (V.T.C.)	0.46
Viscosity @25°C	1.5cSt
Viscosity @25°C	1.5cSt
@-25°C	3cSt
@-40°C	6cSt
@-60°C	<20cSt

#### CAS Information

Identity	CAS #	%
Decamethyltetrasiloxane	141-62-8	>85
Dodecamethylpentasiloxane	141-63-9	<10
Octamethyltrisiloxane	107-51-7	<10

#### Properties

Appearance: clear, colorless, odorless	Viscosity @ 25C.....1.5cSt
Pour Point.....-75°C	<u>Operating temperature stability</u> Closes system.....-60°C to 25°C
Flash point..... 63°C	<u>Dielectric Properties</u> Dielectric Constant.....2.39 Dielectric Strength .....350 volts/mil
Boiling Point (0.5mm, C).....192°C	Vapor Density (air =1).....>1 Vapor Pressure @ 25°C.....4mm
Specific gravity: 0.85	Volatility @ 150°C (open system)..... 100%
Refractive Index: 1.3880	Evaporation Rate (butyl acetate = 1): 0.7
Thermal Expansion (cc/cc/C, 0-150°C).....0.00134	Molecular weight.....340 Surface Tension.....18.0
Coefficient of Thermal Conductivity g/cal/cm/sec °C.....2.5	
Specific Heat @ 25°C.....0.410 cal/g/°C	
Volume Resistivity @ 25°C (ohm-cm).....5.0 x 10 <sup>14</sup>	

#### \* Packaging: 1.5 Centistokes

1-gallon container	2.5kg
5-gallon container	15kg
55-gallon drum (160kg)	quoted upon request

Terms F.O.B. Phila, PA U.S.A.

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