

2009 Silicone Bath Fluids Product Catalog

Clearco Products, Inc.

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Low Temperature Silicone Heat Transfer Fluids

PSF-2cSt Silicone Heat Transfer Fluid

Service Temperature Range: -80°C to 60°C (closed system only)
Lowest Temp Heat Transfer Medium!!!

PSF-2cSt Heat Transfer Fluid is a clear, colorless and odorless low-viscosity linear Polydimethylsiloxane that is formulated as a cold and heat transfer medium in a wide range of applications including freeze dryer and lyophilization.



In closed systems, PSF-2cSt Heat Transfer Fluid has an operating service temperature range of -80°C to 60°C. PSF-2cSt Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00026 g/cal/cm/sec °C. Its specific heat value is 0.410 cal/g/°C @ 25°C.

PSF-2cSt Heat Transfer Fluid has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). The lower the V.T.C., the lower the viscosity at lower temps. Thus, its viscosity will not increase significantly even at extremely low temperatures. This is critical for baths that have circulating or pumping systems that cannot operate with higher viscosity fluids.

Features

- Lowest temperature fluid in our line...-80°C service temperature
- Low viscosity...excellent for circulating baths.
- Low V.T.C...0.48 (little viscosity increase even at extremely low temps)
- Thermal Conductivity: 0.00026 g/cal/cm/sec °C
- Specific Heat: 0.410 cal/g/°C @ 25°C
- Low Pour Point: -100°C
- Low Flash Point: 75°C
- Boiling Point: 229°C
- High dielectric strength
- High resistance to oxidation
- Hydrophobic
- Exempt from federal VOC regulations

Applications include: low temperature heat transfer systems, heat transfer baths, heat transfer fluid in freeze drying equipment, heat transfer medium in lyophilization thermostats and cryostat fluids, 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,

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
3.28 kg	16.4 kg	4 x 16.4 kg
F.O.B. Phila., PA U.S.A.		

PSF-5cSt Silicone Heat Transfer Fluid

Service Temperature Range: -70°C to 130°C (closed system)
-70°C to 65°C (open system)

PSF-5cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity Linear Polydimethylsiloxane (CAS # 63148-62-9) that is formulated as a cold and heat transfer medium in a wide range of applications including freeze dryer and lyophilization.



In closed systems, PSF-5cSt Silicone Heat Transfer Fluid has an operating temperature range of -70°C to 130°C. In open system*, the operating temperature range is -70°C to 65°C. PSF-5cSt Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00028 g/cal/cm/sec °C. Its specific heat value is 0.390 cal/g/°C @ 25°C.

PSF-5cSt Silicone Heat Transfer 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 the lower temperatures.

Features

- Low viscosity: 5cSt @ 25°C
- Low viscosity...excellent for circulating baths
- Excellent Low Temp Serviceability
- Hydrophobic – insoluble with water
- Thermal Conductivity: 0.00028 g/cal/cm/sec °C
- Specific Heat:0.390 cal/g/°C @ 25°
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Chemically Inert
- Low Viscosity-temp-coefficient (V.T.C)... 0.54
- Low Service temperature range of -70°C
- Low Pour Point: -90°C
- Flash Point: 135°C
- High Resistance to Oxidation
- Exempt from federal VOC regulations

Applications include: low temperature heat transfer systems, heat transfer baths, heat transfer fluid in freeze drying equipment, heat transfer medium in lyophilization thermostats and cryostat fluids, 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,

Packaging

1-gallon (3.45kg)	5-gallon pail (17.25kg)	4 x5-gallon pails
3.45 kg	17.25 kg	4 x 17.25 kg
F.O.B. Phila., PA U.S.A.		

PSF-10cSt Silicone Heat Transfer Fluid

Service Temperature Range: -60°C to 150°C (closed system)
-60°C to 100°C (open system)

PSF-10cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity Linear Polydimethylsiloxane (CAS # 63148-62-9) that provides a wide service temperature range than the PSF-2cSt and PSF-5cSt.

PSF-10cSt Silicone Heat Transfer Fluid has an operating temperature range of -60°C to 150°C closed system. In open system, the operating temperature range is -60°C to 100°C. **PSF-10cSt Silicone Heat Transfer 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 Low Temperature Silicone Bath 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 the lower temperatures. This is crucial for baths that have to circulate or pump.

Features

- Low viscosity: 10cSt @ 25°C
- Excellent Low Temp Serviceability
- Hydrophobic – insoluble with water
- Thermal Conductivity: 0.00032 g/cal/cm/sec °C
- Specific Heat: 0.360 cal/g/°C @ 25°C
- Low Viscosity-temp-coefficient (V.T.C)... 0.56
- Wide Service temperature range of -70°C to 150°C (closed)
- Low Pour Point: -70°C
- Flash Point: 163°C
- High Resistance to Oxidation
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
3.52 kg	17.6 kg	4 x 17.6 kg
F.O.B. Phila., PA U.S.A.		

PSF-20cSt Silicone Heat Transfer Fluid

Service Temperature Range: -50°C to 220°C (closed system)
-50°C to 120°C (open system)

PSF-20cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity Linear Polydimethylsiloxane (CAS # 63148-62-9) provides a wide service temperature range.

PSF-20cSt Silicone Heat Transfer Fluid has an operating temperature range of -50°C to 220°C closed system*. In open system, the operating temperature range is -50°C to 120°C. **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 Low Temperature Silicone Bath 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 the lower temperatures. This is crucial for baths that have to circulate or pump.

Features

- Low viscosity: 20cSt @ 25°C
- Excellent Low Temp Serviceability
- Hydrophobic – insoluble with water
- Thermal Conductivity: 0.00034 g/cal/cm/sec °C
- Specific Heat: 1.6 J/g°C
- Wide Service temperature range of -50°C to 220°C (closed)
- Low Pour Point: -65°C
- Flash Point: 232°C
- High Resistance to Oxidation
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
3.6 kg	18 kg	4 x 18 kg
F.O.B. Phila., PA U.S.A.		

Wide Temperature Silicone Heat Transfer Fluids

PSF-50cSt Silicone Heat Transfer Fluid

Service Temperature Range: -40°C to 220°C (closed system)
-40°C to 170°C (open system)

PSF-50cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity Linear Polydimethylsiloxane (CAS # 63148-62-9) provides a wide service temperature range. In comparison to the PSF-2 to 10cSt, it has a significantly higher flash point and will remain stable at much higher temperature.

PSF-50cSt Silicone Heat Transfer Fluid has an operating temperature range of -40°C to 220°C closed system*. In open system, the operating temperature range is -40°C to 170°C. **PSF-50cSt Silicone Heat Transfer 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 Silicone Heat Transfer 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 the lower temperatures. This is crucial for baths that have to circulate or pump.

Features

- Viscosity: 50cSt @ 25°C
- Wide Service temperature range
- Hydrophobic – insoluble with water
- Thermal Conductivity: 0.00036 g/cal/cm/sec °C
- Specific Heat: 1.5 J/g °C
- Low Viscosity-temp-coefficient (V.T.C)... 0.59
- Pour Point: -55°C
- High Flash Point: 285°C
- High Resistance to Oxidation
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
3.6 kg	18 kg	4 x 18 kg
F.O.B. Phila., PA U.S.A.		

PSF-100cSt Silicone Heat Transfer Fluid

Service Temperature Range: -40°C to 220°C (closed system)
-40°C to 170°C (open system)

PSF-100cSt Silicone Heat Transfer Fluid is a clear, colorless and odorless low-viscosity Linear Polydimethylsiloxane (CAS # 63148-62-9) provides a wide service temperature range. In comparison to the PSF-2cSt to 10cSt, it has a significantly higher flash point and will remain stable at much higher temperature.

PSF-100cSt Silicone Heat Transfer Fluid has an operating temperature range of -40°C to 220°C closed system*. In open system, the operating temperature range is -40°C to 170°C. **PSF-100cSt Silicone Heat Transfer Fluid** has a Thermal Conductivity value of 0.00037 g/cal/cm/sec °C. Its specific heat value is 1.5 (J/g °C).

PSF-100cSt Silicone Heat Transfer 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 the lower temperatures. This is crucial for baths that have to circulate or pump.

Features

- Viscosity: 50cSt @ 25°C
- Wide Service temperature range
- Hydrophobic – insoluble with water
- Thermal Conductivity: 0.00037 g/cal/cm/sec °C
- Specific Heat: 1.5J/g °C
- Low Viscosity-temp-coefficient (V.T.C)... 0.60
- Low Service temperature range of -65°C
- Pour Point: -55°C
- High Flash Point: 315°C
- High Resistance to Oxidation
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
3.6 kg	18 kg	4 x 18 kg
F.O.B. Phila., PA U.S.A.		

High Temperature Silicone Heat Transfer Fluids

DPDM-400 Silicone Heat Transfer Fluid

Service Temperature Range: 25°C to 300°C (closed system)
25°C to 250°C (open system)

DPDM-400 High Temperature Silicone Heat Transfer Fluid is a clear, colorless silicone fluid that is classified as a Dimethyl-Diphenylsiloxane (CAS # 68083-14-7) with a viscosity of 400cSt @ 25°C. It is formulated for use as a heat transfer medium for high temperature ranging from 25°C to 300°C (closed system*).



DPDM-400 High Temperature Silicone Heat Transfer Fluid is characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation, high dielectric strength and hydrophobic nature (insoluble in water). It has a high VTC (viscosity-to-temperature coefficient) so its viscosity will lower quickly when heated, allowing for the fluid to be easily pumped.

DPDM-400 High Temperature Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00032g/cal/cm/sec °C. Its specific heat value is 0.35 (cal/g °C @ 25°C.)

When compared to polydimethylsiloxane fluids (PSF-Fluids), DPDM-400 exhibits much higher thermal stability and higher resistance to oxidation. It will provide a very long service life for baths operating > 200°C.

Applications include: high temp heat transfer, high temperature open system baths, high temperature closed system baths, constant temperature baths, high temperature circulating baths, high temp closed loop baths, high temperature heat transfer baths, high temperature fluids for laboratory research apparatus and instruments.

Features

- Viscosity: 400cSt @ 25°C
- Excellent High Temperature Serviceability
- Service range: 25°C to 250°C (open system)
- Service range: 25°C to 300°C (closed system)
- High Viscosity-temp-coefficient (V.T.C)... 0.82
- Thermal Conductivity: 0.00032 g/cal/cm/sec °C
- Specific Heat: 0.35 cal/g °C @ 25°
- Fluid thins quickly when heated...excellent for high temp baths that have to circulate or pump the fluid
- Hydrophobic – insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Flash Point: 315°C
- High Resistance to Oxidation
- High Dielectric Strength
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
4 kg	20 kg	4 x 20 kg
F.O.B. Phila., PA U.S.A.		

PM-125 Silicone Heat Transfer Fluid

Service Temperature Range: 25°C to 220°C (closed system)
25°C to 120°C (open system)

PM-125 High Temperature Silicone Heat Transfer Fluid is a clear, colorless, and odorless silicone fluid that is classified as a Phenylmethylsiloxane (CAS#63148-52-7) with a viscosity of 125cSt @ 25°C. It is formulated for use as a heat transfer medium for high temperature ranging from 25°C to 300°C (closed system*).



PM-125 High Temperature Silicone Heat Transfer Fluid is characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation, high dielectric strength and hydrophobic nature (insoluble in water). It has a high VTC (viscosity-to-temperature coefficient) so its viscosity will lower quickly when heated, allowing for the fluid to be easily pumped.

PM-125 High Temperature Silicone Heat Transfer Fluid has a Thermal Conductivity value of 0.00035g/cal/cm/sec °C. Its specific heat value is 1.498k J/kg. K @ 40°C.

When compared to Polydimethylsiloxane fluids (PSF-Fluids), PM-125 Heat Transfer Fluid exhibits much higher thermal stability and resistance to oxidation. Although it is more expensive, it will provide a much longer service life.

Applications include: high temp heat transfer, high temperature open system baths, high temperature closed system baths, constant temperature baths, high temperature circulating baths, high temp closed loop baths, high temperature heat transfer baths, high temperature fluids for laboratory research apparatus and instruments.

Features

- Viscosity: 125cSt @ 25°C
- Excellent High Temperature Serviceability
- Service range: 25°C to 250°C (open system)
- Service range: 25°C to 300°C (closed system)
- High Viscosity-temp-coefficient (V.T.C)... 0.76
- Thermal Conductivity: of 0.00035g/cal/cm/sec °C
- Specific Heat: 1.498k J/kg. K @ 40°C.
- Fluid thins quickly when heated...excellent for high temp baths that have to circulate or pump the fluid
- Hydrophobic – insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Flash Point: 315°C
- High Resistance to Oxidation
- High Dielectric Strength
- Exempt from federal VOC regulations

Packaging

1-gallon pail	5-gallon pail	4 x5-gallon pails
4 kg	20 kg	4 x 20 kg
F.O.B. Phila., PA U.S.A.		

For More Information, Contact:

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