

2009 Silicone Bath Fluids Product Catalog

Clearco Products, Inc.

3430 G Progress Drive
Bensalem, PA 19020 U.S.A.
Tel: 215 639-2640
Fax: (215) 639-2919
Email: info@clearcoproducts.com
Web: www.clearcoproducts.com

Low Temperature Silicone Bath Fluids

PSF-2cSt Low-Temp Silicone Bath Fluid

Service Temperature Range: -80°C to 60°C (closed system only)
Lowest Temp Bath Fluid!!!

PSF-2cSt 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-2cSt Low Temperature Bath Fluid** has an operating service temperature range of -80°C to 60°C (closed system).

PSF-2cSt 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. 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 change even at extremely low temps)
- Clear, colorless & odorless fluid...easy to see bath instrumentation
- 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

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

Packaging

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

PSF-5cSt Low-Temp Silicone Bath Fluid

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

PSF-5cSt 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.



PSF-5cSt Low Temperature Silicone Bath Fluid has an operating temperature range of -70°C to 130°C closed system. In open system*, the operating temperature range is -70°C to 65°C.

PSF-5cSt 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.

Features

- Low viscosity: 5cSt @ 25°C
- Low viscosity...excellent for circulating baths
- Excellent Low Temp Serviceability
- Hydrophobic – insoluble with water
- Clear, colorless & odorless fluid...easy to see bath instrumentation
- 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

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

Packaging

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

PSF-10cSt Low-Temp Silicone Bath Fluid

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

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

PSF-10cSt Low Temperature Silicone Bath Fluid has an operating temperature range of -60°C to 150°C closed system. In open system, the operating temperature range is -70°C to 100°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
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Chemically Inert
- 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
3.52kg	17.6kg	4 x 17.6kg
F.O.B. Phila., PA U.S.A.		

PSF-20cSt Silicone Bath Fluid

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

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

PSF-20cSt Low Temperature Silicone Bath 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 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
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals*
- Chemically Inert
- Low Viscosity-temp-coefficient (V.T.C)... 0.59
- 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
3.6kg	18kg	4 x 18kg
F.O.B. Phila., PA U.S.A.		

Medium Temperature Silicone Bath Fluids

PSF-50cSt Silicone Bath Fluid

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

PSF-50cSt Silicone Bath 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 Bath 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 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

- Viscosity: 50cSt @ 25°C
- Wide Service temperature range
- Hydrophobic – insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals
- Chemically Inert
- 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
3.6kg	18kg	4 x 18kg
F.O.B. Phila., PA U.S.A.		

PSF-100cSt Silicone Bath Fluid

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

PSF-100cSt Silicone Bath 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 Bath 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 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

- Viscosity: 50cSt @ 25°C
- Wide Service temperature range
- Hydrophobic – insoluble with water
- Compatible with virtually all o-rings, gaskets, hoses, valves and seals
- Chemically Inert
- 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
3.6kg	18kg	4 x 18kg
F.O.B. Phila., PA U.S.A.		

High Temperature Silicone Bath Fluids

DPDM-400 High Temperature Silicone Bath Fluid

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

DPDM-400 High Temperature Silicone Bath Fluid is a clear, colorless silicone fluid that is classified as a Dimethyl-Diphenylsiloxane (CAS # 68083-14-7). Characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation and high resistance to shear, DPDM-400 is an excellent high temperature bath fluid and high temperature heat transfer fluid for systems operating > 200°C



In open system baths (presence of air), **DPDM-400 High Temp Bath Fluid** has an operating temperature range of 25°C to 250°C. In closed system baths, the operating ranges from 25°C to 300°C. Although it has a pour point of -30°C, it is not recommended for low temperature bath applications due to its acutely higher viscosities at lower temperatures (high V.T.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.

Bath Applications include: 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
- 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

Bath Applications include: 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.

Packaging

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

PM-125 High Temperature Silicone Bath Fluid

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

PM-125 High Temperature Silicone Bath Fluid is clear, colorless, and odorless silicone fluid that is classified as a Phenylmethylsiloxane (CAS#63148-52-7). Characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation and high resistance to shear, **PM-125 Silicone Bath Fluid** is an excellent high temperature bath fluid and high temperature heat transfer fluid for systems operating > 200°C.



In open system baths (presence of air), **PM-125 High Temp Silicone Bath Fluid** has an operating temperature range of 25°C to 230°C. In closed system baths, the operating ranges from 25°C to 300°C. Although it has a pour point of -30°C, it is not recommended for low temperature bath applications due to its acutely higher viscosities at lower temperatures (high V.T.C.).

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

Bath Applications include: 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
- 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

Bath Applications include: 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

Packaging

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

HT-110 High Temperature Bath Fluid

Service Temperature Range: Applications > 200°C (open system)

Heat Stabilized Silicone Fluid

HT-110 High Temp Silicone Bath Fluid is a Polydimethylsiloxane (CAS # 63148-62-9) formulated with an iron-siloxane additive to enhance thermal stability and resistance to oxidation. It can be used as a heat transfer in baths exceeding 200°C for extended periods.



HT-110 High Temperature Bath Fluid can withstand high temperatures and remain stable with little viscosity change and exhibits a high resistance to oxidation and gumming.

Due to the iron-siloxane additive, **HT-110 High Temp Bath Fluid** has a brownish-murky color and an odor when heated. If bath instrumentation, in high temp baths, needs to be visible within the bath, we recommend the DPDM-400 or PM-125 High Temperature Bath Fluids as an alternative.

In the presence of oxygen or air (open system), the HT-100 High Temp Silicone Bath Fluid has a greater resistance to high temperatures (see Table 1) than standard polydimethylsiloxane fluids.

Bath Applications include: 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: 100cSt @ 25°C
- Appearance: dark-brown color & odor when heated
- Excellent High Temperature Serviceability
- Service range: > 200°C (open system)
- 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

Bath Applications include: 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.

Pricing

1-gallon (3.6kg)	5-gallon pail (18kg)	4 x5-gallon pails
\$145.00 per gallon	\$125.00 per gallon	\$85.00 per gallon
F.O.B. Phila., PA U.S.A.		

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