CLEARCO

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Product Information

Down Hole Silicone Fluids (medium viscosities)

Service Temperature: -40°C to 230°C (closed system)

Down-Hole Silicone Fluids are durable medium viscosity fluids that can withstand high temps and extreme pressures in the harshest Downhole environments.

PSF-Medium Viscosity Down-Hole Silicone Fluids are linear Polydimethylsiloxane (CAS#63148-62-9) fluids with viscosities of 50cst, 100cSt, 200cSt, 350cSt, 500cSt & 1,000cSt (centistokes) @ 25°C.

Down-Hole Silicone Fluids are excellent choices for the ever harsher environments in the Downhole Oil and Gas Industries. They are characterized by their low pour points, wide service temperature ranges, high compressibility, stability at extremely high pressures, low viscosity change at temperature (low V.T.C.), low surface tension, high dielectric strength, long service life, and hydrophobic nature (insoluble in water).

Unlike conventional fluids like mineral oil, Silicone Fluids will not coagulate under pressure. Even at high pressures of 4,000MPa, the fluid will not solidify.

Silicone Fluids are widely used as damping fluids due to their inertness and low viscosity change over a wide temperature range. They have low viscosity-temperature coefficient or V.T.C. (viscosity @99°C ÷viscosity @ 38°C). Thus, their viscosity will not significantly increase even at low temperatures. This is critical for systems that cannot pump or circulate higher viscosity fluids.

Down-Hole Silicone Fluids are particularly effective for use in instruments and gauges that will operate at a wide service temperature range. The fluids are hydrophobic and prevent humidity from entering the gauge/instrument housing. Ultimately, **Down-Hole Silicone Fluids** will extend the service life of the equipment that it fills and provide more accurate readings even in the harshest of conditions.

Specifications

Chemical Name	Polydimethylsiloxane
CAS No	63148-62-9
Appearance	Clear, colorless fluid
Viscosity @ 25°C	50cSt to 1,000cSt
Non-toxic	yes
Non-flammable	Yes
Non-reactive	Yes

Features

- Dampen vibration in gauges, instruments, meters and avionic instruments
- Wide Service Temperature Range
- High Oxidation resistance
- Stability at extreme pressures
- Newtonian behavior under shear …viscosity is constant & independent of velocity gradient.
- Low viscosity change at temperature (low V.T.C.)
- Inert to virtually all o-rings, gaskets, seals and valves *
- High Dielectric Strength

*not recommended for Silicone o-rings due to possibility of swelling

Typical Product Data

Viscosity (cSt)	Specific Gravity	Refractive Index	Pour Point	Flash Point °F (open cup)	V.T.C	Surface Tension	Thermal Expansion (cc/cc/c 0-150°C)	Thermal Conductivity g/cal/cm/sec °C	Maximum Volatility @ 150°C (%wt)	Specific Heat BTU/lb. °F
50	0.960	1.402	-55°C	285°C	0.59	20.8	0.00106	0.00036	0.5	0.36
100	0.966	1.4030	-55°C	315°C	0.60	20.9	0.00096	0.00037	0.5	0.36
200	0.968	1.4031	-50°C	315°C	0.60	21.0	0.00096	0.00037	0.5	0.36
350	0.970	1.4032	-50°C	315°C	0.60	21.1	0.00096	0.00037	0.5	0.36
500	0.971	1.4033	-50°C	315°C	0.60	21.1	0.00096	0.00038	0.5	0.36
1,000	0.971	1.4035	-50°C	315°C	0.61	21.2	0.00096	0.00038	0.5	0.36

Packaging

1-gallon……8lbs / 3.6kg
5-gallon pail……40lbs / 18kg

55-gallon drum……440 lbs / 200kg

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

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