

DPDM-400 High Temperature Dielectric Silicone Fluid

Dielectric Strength: 400 volts/mil Operating Temperature Range: 25°C to 300°C (closed system)



DPDM-400 High Temperature Dielectric Silicone Fluid has a service range of 25°C to 300°C.

DPDM-400 High Temperature Dielectric Silicone 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.

DPDM-400 Dielectric Silicone Fluid is characterized by its high dielectric strength, high flash point, high service temperature range, and low vapor pressure, high resistance to oxidation, 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 Dielectric Silicone Fluid has a dielectric strength of 400 volts/mil and a dielectric breakdown strength (2.5mm) ≥ 50 kV.

DPDM-400 High Temperature Dielectric Silicone 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 conventional PDMS Silicone fluids (PSF-Fluids), DPDM-400 exhibits much higher thermal stability. Although it is more expensive, it will provide a very long service life at higher temps.

Applications include: high temp heat transfer, high temperature dielectric coolant, high temperature bath fluid, high RI Index fluid, high temperature damping fluid.

Viscosity/Temp Specs.

Viscosity/Temp Coefficient.....0.82

Viscosity @25°C.....400cSt (mm²/sec)

Viscosity @ temperature

@250°C.....7cSt (mm²/sec)

@ 200°C.....11cSt

@100°C.....46cSt

@50°C.....167cSt

@25°C.....400cSt

@ 0°C.....1,770cSt

@ -25°C.....24,800cSt

Dielectric Properties

Dielectric Strength400 volts/mil

Dielectric breakdown strength (2.5mm)..... ≥ 50 kV

Dielectric Constant (100Hz).....2.88 @ 25°C

.....2.35 @ 150°C

Dissipation Factor (100Hz) @ 25°C.....0.0005

Packaging

1-gallon (3.78 liters)4kg

5-gallon pail (18.9 liters)20kg

55-gallon drums (208 liters)200kg

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

Typical Product Data

Specific Gravity	Refractive Index	Pour Point	Flash Point	Boiling Point	Surface Tension Dynes cm @ 25°C	Thermal Conductivity @ 25°C cal/cm/sec °C	Thermal Expansion cc/cc °C	Specific Heat @ 25°C cal/g °C
1.07	1.505	-30°C	315°C	>250°C	25.2	0.00032	0.00073	0.35

Gel Times

Thermal Gel Time (open system)

@ 250°C.....1,500 to 2,000 hours

@ 260°C.....>200 hours

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