

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) ≥50kV.

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 polydimethylsiloxane fluids (PSF-Fluids), DPDM-400 exhibits much higher thermal stability. Although it is more expensive, it will provide a very long 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.

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

Viscosity/Temp Specs.

Viscosity/Temp Coefficient.....	0.82
Viscosity @25°C.....	400cSt (mm2/sec)
<u>Viscosity @ temperature</u>	
@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 Strength	400 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.....	4kg / 8.8lb
5-gallon pail.....	20kg / 44 lb
55-gallon drum	200kg quote upon request
F.O.B. Phila, PA 19135 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

<u>Thermal Gel Time (open system)</u>	
@ 250°C.....	1,500 to 2,000 hours
@ 260°C.....	>200 hours

For More Information, Contact:

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