



DPDM-400 Diphenyl-Dimethylsiloxane Fluid

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



DPDM-400 Silicone Fluid is a Dimethyl-Diphenylsiloxane (Diphenyl-Dimethylsiloxane) [CAS # 68083-14-7] with a viscosity of 400cSt @ 25°C. The fluid is clear, colorless and odorless.

The fluid is characterized by its high flash point, high service temperature range, low vapor pressure, high resistance to oxidation, high dielectric strength, high Refractive index and inertness to virtually all components.

DPDM-400 is an excellent high temperature bath fluid and high temperature heat transfer fluid. In open system baths (presence of air), DPDM-400 High Temp Bath Fluid has an operating temperature range of 25°C to 250°C. Although it has a pour point of -30°C, it is not recommended for use at low temperatures due to its acutely higher viscosities at lower temperatures (see Viscosity/temp specs). In closed system baths*, the operating ranges from 25°C to 300°C.

When compared to PDMS Silicone fluids (PSF-Fluids), DPDM-400 exhibits much higher thermal stability and resistance to oxidation.

With the replacement of methyl groups with Diphenyl groups, DPDM-400 has a high Refractive Index (1.505) than conventional PDMS Silicones. It is widely used in optical applications that require the high RI value.

Applications include: high temperature bath fluid, high temperature heat transfer fluid, high temperature dielectric fluid, high RI Fluid.

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

Features

- Excellent High Temp Stability
- High Oxidation Resistance
- High Dielectric strength
- High Refractive Index
- Excellent lubricity

Typical Product Data

Specific Gravity	Refractive Index	Pour Point	Flash Point	Viscosity-temp coefficient	Surface Tension dynes/cm @ 25°C	Volatile content @ 150°C (24hrs)
1.07	1.505	-30C	315C	0.82	25.2	Max 0.3%

Thermal Properties

Thermal Conductivity @ 50°C cal/cm•sec• °C	Thermal Expansion cc/cc °C	Specific Heat cal/g/ °C, 25°C
0.00032	0.00073	0.35

Thermal Gel Times (open system)

@ 250°C.....	1,500 to 2,000 hours
@ 260°C.....	>200 hours

Dielectric Properties

Breakdown Voltage KV/2.5mm	Dielectric constant (50Hz) @	Dissipation Factor (50Hz)
>50	2.88	<0.0005

Packaging

1-gallon.....	4kg
5-gallon pail.....	20kg
200kg drums.....	quote upon request
F.O.B. Phila, PA 19135 U.S.A.	

Viscosity/Temp Specs.

Viscosity/Temp Coefficient.....	0.82
Viscosity @25°C.....	400cSt (mm2/sec)
<u>Viscosity @ temperature</u>	
@250°C.....	7cSt
@ 200°C.....	11cSt
@100°C.....	46cSt
@50°C.....	167cSt
@25°C.....	400cSt
@ 0°C.....	1,770cSt
@ -25°C.....	24,800cSt

For More Info, Contact:
Clearco Products Co., Inc.
 15 York Road
 Willow Grove, PA 19090
 U.S.A.

Tel: (215) 366-7860
 Fax: (215) 366-7862
 Email: info@clearcoproducts.com
 Web: www.clearcoproducts.com