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Hi-Temp Down-Hole Silicone Fluids Matrix

Properties			
Composition	DPDM-400 Down-Hole Silicone Fluid	PM-125 Down-Hole Silicone Fluid	PSF-100cSt Down-Hole Silicone Fluid
Chemical family	Phenyl Silicone	Phenyl Silicone	Polydimethylsiloxane
Chemical name	Diphenyl-Dimethylsiloxane	Phenylmethylsiloxane	Polydimethylsiloxane
CAS No.	68083-14-7	63148-52-7	63148-62-9
General properties			
Appearance	clear, colorless	clear, colorless	clear, colorless
Odorless	Yes	Yes	Yes
Hydrophobic	Yes	Yes	Yes
Viscosity @ 25°C	400cSt	125cSt	100cSt
V.T.C.	0.82	0.76	0.60
Specific gravity	1.07	1.07	0.966
Soluble in water	No	No	No
Temperature Specs			
Pour point	-30°C	-51°C	-50°C
Flash point	315°C	315°C	315°C
Boiling point	>250C	>250°C	>250°C
Specific heat	0.35cal/g °C	1.498k J/kg. K @ 40°C.	1.5 J/g K @ 25°C
Thermal expansion cc/cc/°C	0.00073	0.00075	0.0096
Thermal conductivity g/cal/cm/sec °C	0.00032	0.00036	0.00037
Thermal conductivity @25 °C W/m °C			0.16
Open system Service temperature	25°C to 250°C	25°C to 230°C	-40°C to 170°C
Closed system Service temperature	25°C to 300°C	25°C to 300°C	-40°C to 230°C
Dielectric Properties			
Dielectric Constant 50Hz	2.88	2.90	2.74
Dielectric breakdown strength 2.5mm kV	≥50	≥50	≥50
Dielectric Strength volts/mil	400	400	400
Dielectric loss tangent 50Hz	<0.0005	<0.0005	≤0.0001