AJ621 SILICONE TRANSFORMER OIL

AJ621 Silicone Transformer Oil is formulated specifically for use as a dielectric fluid and dielecric coolant in electrical transformers. Unlike conventional polydimethylsiloxane fluids, **AJ621** is formulated to contain < 50ppm water content to ensure the highest degree of dielectric strength and stability.

AJ621 Silicone Transformer Oil is characterized by its high dielectric strength, wide service temperature range, high flash point, low vapor pressure, low pour point, low viscosity change at extremely high and low temperatures, and inertness to virtually all substrates. Ultimately, **AJ621** will prolong the service life of the transformer and reduce maintenance.

AJ621 Silicone Transformer Oil is an environmentally safe replacement for PCB containing askarels as the dielectric coolant for liquid-filled transformers. Its high thermal stability makes it a good choice for transformers that are located indoors or next to buildings where a thermally stable fluid is more critical.

Meets the requirements of the following specifications:
IEC 836 (International Electrotechnical Commission)

- IEC Specifications for silicone liquid for electrical purposes (Silicone Type T-1)
- IEC 1100: Classification of insulating liquids according to fire point and net caloric value (class K3). **AJ621** has a fire point exceeding the requirements of these documents and is within the IEC 1100 class with lowest net caloric value (heat of combustion)

ASTM D 4652-92: Silicone fluids for electrical insulation

AJ621Silicone Transformer Oil is also used as a Heat Transfer Fluid and Bath Fluid.

AJ621 Silicone Transformer Oil is exempt from federal VOC regulations including California CARB and South Coast Air Quality Management. It is HAP-free and RoHS Compliant.

Applications for AJ621 Include: silicone transformer oil, silicone transformer fluid, dielectric silicone fluid, electrical grade silicone oil, dielectric silicone oil, dielectric coolant, VOC exempt dielectric fluid, RoHS compliant dielectric fluid, PCG-free dielectric fluid

Note: The dielectric performance of a fluid is greatly affected by the quantity of absorbed moisture. The quantity of moisture absorbed by the PSF-Fluids is usually between 100 to 200ppm.

Properties

- High dielectric strength fluid
- Excellent dielectric coolant
- High flash point > 300°C…minimal flammability and high temp stability
- Non-Flammable
- Viscosity: 50cSt (centistokes)…preferred viscosity for dielectric strength and heat transfer
- Low water content: < 50ppm …high dielectric strength and thermal stability
- Wide Service temperature range: can operate at extreme high temperature and extreme low temperature
- High thermal oxidation resistance
- Self-extinguishing
- Exhibit significantly less viscosity change than petroleum based oils.
- Formulated from synthetic sources.
- Longer service life than conventional transformer oils
- Compatible with most existing transformer insulation systems
- Low toxicity
- Environmentally friendly: VOC Exempt & HAP Free
- Environmentally superior alternative to PCB's as transformer fluid

Typical Properties:

Parameter	Value
Physical properties:	
Appearance	Crystal clear fluid
Density @ 25°C	0.96 kg/dm3
Viscosity @ 25°C	50cSt (mm2)
Water content	<50ppm
Refractive Index	1.404
Electrical Properties:	
Dielectric Breakdown voltage	50kV
Permittivity @ 25°C, 50Hz	2.7
Dissipation factor @ 25C, 50Hz	0.0001
Volume resistivity @ 25C ohm.cm	1.0×10^{14}
Thermal properties:	
Flash point (open cup) >	300°C
Fire point (open cup)	370°C
Specific heat	1.51 KJ/kg.K
Thermal conductivity	0.151 W (m.K)
Oxygen index	21.4 TDLOI
Coefficient of Expansion, cc/cc/°C	10.55×10^{-4}