



SILICONE[®] ARK- 50 cSt Transformer Liquid
Coolant and Insulating Silicone for Electric Transformers.

Industry Silicone[®]

The Transformer Liquid is suitable for transformers and other electrical equipment designed to operate at high temperatures or at very low temperatures..



INDUSTRIES / SILICONE® ARK - 50

Silicone[®] ARK - 50 Transformer Fluid

SILICONE[®] ARK - 50 Transformer Liquid is a polydimethyl silicone liquid that meets the requirements of: International Electro technical Commission (IEC) 836 "specifications for silicone liquid for electrical purposes" (Silicone Type T-1). ASTM D 4652-92 "silicone fluids for electrical insulation". IEC 1100 - "Classification of insulating liquids according to fire point and net calorific value" (Class K3).

APPLICATIONS

Test Requirements of transformer fluid in IEC 836

Parameters	Unit	Value
Appearance		Crystal clear liquid
Density at 25°C (77°F)	kg/dm ³	0.96
Viscosity at 25°C (77°F)	mm ² /s	50
Water content	ppm	30
Specific heat	kJ/kg.K	1.51
Thermal conductivity	W/(m.K)	0.151
Refractive index at 25°C (77°F)		1.404
Breakdown voltaje	kV	50
Permittivity at 25°C (77°F) – 50Hz		2.7
Dissipation factor at 25°C (77°F) -50Hz		0.0001
Volume resistivity at 25°C (77°F) ohm.cm		1.0x10 ¹⁴
Flash point open cup	°C	>300
Flash point open cup	°F	>572
Fire point open cup	°C	370
Fire point open cup	°F	>698

Test methods are described in IEC 836.

Transformer Liquid complies with all of the requirements of IEC 836 Silicone Type T-1. The above typical values EXCEED the minimum requirements of IEC 836.

Typical Values – Should not be considered as specifications.

STORAGE & HANDLING

It is recommended that normal safety precautions be taken while handling the product. The material should be stored in original containers in a cool place and protected from direct exposure to sunlight.

LIMITATIONS :These products are neither tested nor represented as suitable for medical or pharmaceutical

APPLICATIONS

Test Requirements of transformer fluid in IEC 836

Property	Test Method	Permissible Values	Typical ARK 50 Values
Physical			
Color	8	Max 35	
Appearance	8	Clear, free from suspended matter and sediment	
Density at 20°C (68°F) (kg/dm ³)	9	0.995 to 0.970	
Kinematic viscosity at 40°C (104°F) (mm ² /s)	10	40 ± 4	
Flash point (°C/°F) (closed cup) 11	11	Min 240/464	260/500
Fire point (°C/°F) (open cup) 12	12	Min 330/626	370/698
Refractive index at 20°C (68°F)	13	1.404 ± 0.002	
Pour point (°C/°F) 15 Max -50/-58	15	Max -50/-58	370/698
Chemical			
Water content (mg/kg) 16 Max 50 30	16	Max 50	30
Neutralisation value (mg KOH/g) 17 Max 0.02 0.008	17	Max 0.02	0.008
Electrical			
Breakdown voltage (kV) 19 Min 40 50	19	Min 40	50
Dielectric dissipation factor (tg) at 90°C (194°F) and 50 Hz	20	Max 0.001	0.0005
Permittivity at 90°C (194°F) 20	20	2.55 ± 0.052	
d.c. resistivity at 90°C (194°F) (G ohm.m) 20 Min 100 1000	20	Min 100	1000

Test methods are described in IEC 836.

Transformer Liquid complies with all of the requirements of IEC 836 Silicone Type T-1. The above typical values EXCEED the minimum requirements of IEC 836.