



# TOTAL ISOVOLTINE KA 7-4 Type I

## High Voltage Insulating Oil

### USES

- Transformers, switchgears, contact breakers, welding set and all high voltage electrical equipments.

### PROPERTIES

- Excellent resistivity, power factor and dielectric strength.
- Suitable anti-oxidation and high thermal stability.
- Low viscosity ensuring satisfactory cooling.
- Excellent stability in operation and resistance to aging.
- Very low pour point

### SPECIFICATION

- ASTM D 3487 Type I
- BS 148 Class IA
- KS C 2301
- JIS C 2320
- IEC 60296(T)

### CHARACTERISTICS

Test items	Method	Unit	Typical Value
Density at 15°C	ASTM D-1298	g/cm <sup>3</sup>	0.8496
Kinematic Viscosity at 40°C	ASTM D-445	(cSt)	11.11
at 100°C			2.76
Flash Point, PM	ASTM D-93	°C	164
Pour Point	ASTM D-97	°C	-44.0
Neutralization Value	ASTM D-974	mgKOH/g	0.007
Water Content	ASTM D-1533	ppm	25 <sup>b)</sup>
Interfacial Tension at 25°C	ASTM D-971	dynes/cm	42
Aniline Point	ASTM D 611	°C	81
Anti-oxidant Additives	ASTM D-1473	%	0.05
Corrosive Sulfur at 140°C, 19hrs	ASTM D-1275	-	Non-Corrosive
Breakdown Voltage, 2.5mm	ASTM D-877	kV	60
Volume Resistivity at 80°C	ASTM D-1169	Ω·cm	1.5X10 <sup>15</sup>
Dissipation Factor at 100°C, 40-60Hz	ASTM D-924	%	0.002
Oxidation Stability at 110°C, 164hrs	ASTM D-2440		
- Sludge		wt% by mass	0.003
- Neutralization Value		mgKOH/g	0.21
PCB Content	ASTM D-4059	ppm	Not detectable

Above characteristics are mean values given as an information.