

## Paramount Transformer Oil

- Inhibited Electrical Insulating Oil



### Overview

Paramount Transformer Oil is inhibited mineral insulating oil with high dielectric strength and excellent cooling properties. This product is blended with selected base oil and additives.

### Application

This product has been specially developed for use in transformers, switchgears, circuit breakers, tap changers and all high voltage electrical equipments.

### Performance Standard

Paramount Transformer Oil meets the performance standard of the following specifications :

- ❖ British Standard BS 148-1998
- ❖ Class I & II
- ❖ International Standard IEC 60296-2012 Edition 4.0

### Features & Benefits

- ❖ **High Dielectric Strength** This product both meets and exceeds the toughest demand on dielectric strength, when stored and handled correctly.
- ❖ **Excellent Cooling Properties** This standard grade offers excellent cooling characteristics; ensuring heat is efficiently removed from core and windings.
- ❖ **Outstanding Oxidation Stability** This grade provides outstanding oxidation stability for enhanced transformer life and minimum maintenance.
- ❖ **Low Sludge Formation** This transformer oil shows low sludge formation due to its excellent solubility; redeeming clogging threat.

### Handling & Storage

In order to maintain its high dielectric strength for use as insulating oil, the oil must be kept clean and dry. Contamination with even a small amount of water will significantly decrease the dielectric strength. The drums should be stored indoors and covered to protect them from dust and debris. Every effort should be made to use the entire drum once the seal is broken to help prevent contamination. If contamination is suspected, always inspect the drum and test the oil for dielectric strength before use.

## Typical Properties

Properties	Test Method	Typical Value
<b>1. Function</b>		
Density @ 15°C, g/ml	ISO 3675/12185	0.8314
Density @ 20°C, g/ml	ISO 3675/12185	0.8284
Density @ 30°C, g/ml	ISO 3675/12185	0.8205
Viscosity @ 40°C, cSt	ISO 3104	8.20
Viscosity @ -30°C, cSt	IEC 61868	786.3
Pour Point, °C,	ISO 3016	-40
Water content, ppm	IEC60814	10
Dielectric Breakdown Voltage @ 60 Hz, VDE electrode (2.50 mm gap)		
Dielectric Breakdown Voltage (after treat), kV	IEC 60156	>70
Dielectric Breakdown Voltage (as received), kV	IEC 60156	>40
Dielectric Dissipation Factor @60 Hz, %		
- @ 90°C	IEC 60247	0.0008
<b>2. Refining /Stability</b>		
Appearance	Visual	Bright & Clear
Acidity, mg KOH/g	IEC 62021	<0.01
Interfacial Tension, mN/m	EN 14210	49
Total Sulphur Content,%	ISO 14596	Not Detectable
Corrosive Sulphur	DIN 51353	Non Corrosive
Potentially Corrosive Sulphur	IEC 62535	Non Corrosive
DBDS, mg/kg	IEC 62697-1	<1
Antioxidant Inhibitor content, %wt	IEC 60666	0.34
Metal Passivator additive, %wt	IEC 60666	<1
2 Furfural & Related compound, mg/kg	IEC 61198	<0.001
<b>3. Performance</b>		
Oxidation Stability (@ 120 °C, 500 hrs)		IEC 61125C
: Sludge, %wt		< 0.01
: TAN, mg KOH/g		< 0.1
: DDF @90 °C		0.029
<b>4. Health, Safety and Environment (HSE)</b>		
Flash Point by PMCC, °C	ISO 2719	148
PCA Content, %wt	IP 346	0.8
PCB Content, %wt	IEC 61619	Not Detectable

These properties are typical of current production, variations in these properties may occur.

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Paramount Energy Pte Ltd.; Singapore.