

TECHNICAL DATASHEET: TRANSFORMER OIL

PG 1/2 - REV 2 - REV DATE: 01/06/2021

DESCRIPTION:

Transformer Oil was specially formulated for the South African market by one of the largest manufactures of transformer oil in the world. Conforming to both NRS 079-1:2004 as well as IEC 6660296:2003 and developed to deliver strong resistance to oil degradation. The product provides excellent oxidation stability for a longer transformer life with minimum maintenance and to give optimum performance in electrical transformers and switchgear.

APPLICATION:

Transformer Oil is suitable for filling most types of transformers and switchgear. While the IEC specifications require a minimum electric strength (breakdown voltage) of 30 kV, it recognizes that oil in drums cannot be expected to retain the electric strength obtained at the time of filling. To ensure that the oil in service complies with the minimum requirements, it has a breakdown voltage exceeding 70 kV when filled in drums. Special care is needed in storage, when handling, and sampling and also in service to keep the oil clean and dry. It must be stored under cover and its storage time must be reduced to a minimum. It should not be transferred from one form of packaging or container to another. Transformer oil should preferably be filtered & dried before being transferred into high voltage apparatus. Aeration during filling must be prevented. The oil condition should be regularly checked during service.

FEATURES AND ADVANTAGES:

- · High levels of rust inhibition.
- · Good wheel flushing and.
- · Stable solution tolerant to hard waters.
- · Free from scums and oil separation.
- · Low foaming characteristics.
- · Free from bad odour.
- · Excellent filterability with good sump life.

PERFORMANCE LEVEL:

- · IEC 296.82 (Class 1) @BS148:98: Class I and Class II; 60296:03 Table 2: U.
- · IS 335:05.
- · JS 2320 Class I
- · ASTM D1275
- · DIN 51353
- · ESP 32/406 (all other tests performed)
- · SANS(SABS55)
- · NRS 079-1:2004

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PHYSICAL PROPERTIES:

Appearance: The oil shall be clear, transparent, and free from suspended matter or sediment.

Density @ 20°C, kg/DMm³: 0.880 Kinematic Viscosity @ 40°C, cSt: 8.6 Interfacial Tension @ 25°, mN/m: 48 Flash Point (PMCC), °C: 148 Pour Point, °C: -57

Neutralisation Value:

(a) Total acidity mg KOH/gm: 0.01 (b) Inorganic Acidity/Alkalinity: n/a

Electric Strength (Breakdown Voltage)

i. Prior Transport: >70kv ii On delivery: >60kv

Dielectric Dissipation Factor (Tan Delta)

@ 50Hz@90°C: >0.001 (a) TAN mg KOH/mg: 030 (b) Sludge Content % by Wt. 0.1 (c) Volatile Acidity Max, mg KOH/g Nil PCB Content %mass: Nil

Antioxidan Additives: Not Detectable.

Water Content mg/kg: < 20

Corrosive Sulphur: Non Corrosive. Presence of Oxidation Inhibitor: 0.15 min, 0.4 max.

PRODUCT ICON:



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