

Transformer Oil A

Description

The inhibited electrical insulating oil, TRANSFORMER OIL A, is produced from a severely hydrotreated naphthenic oil to meet the specification requirements defined in IEC 60296:2012, special applications.

Application

TRANSFORMER OIL A is suitable for use in high loads applications.

Operation Characteristics

- Rapid heat transfer properties.
- High oxidation stability.
- Extended oil life.
- Transformer protection.

Specifications, Approvals, Recommendations

IEC 60296:2012

Typical Physical Characteristics

| TEST DESCRIPTION | TEST METHOD | SPECIFICATIONS | | VALUES |
|---|----------------|---------------------------|-------|--------------|
| Function | | MIN | MAX | |
| Viscosity, mm ² /s at 40°C | ISO 3104 | | 12.0 | 9.2 |
| Viscosity, mm ² /s at -30°C | ISO 3104 | | 1800 | 924 |
| Pour Point, °C | ISO 3016 | | -40 | -65 |
| Water Content, mg/kg | IEC 60814 | | 30 | 13 |
| Breakdown Voltage, kV, Before treatment | IEC 60156 | 30 | | 57 |
| Breakdown Voltage, kV, After treatment | IEC 60156 | 70 | | 73 |
| Density at 20°C, g/ml | ISO 12185 | | 0.895 | 0.875 |
| DDF at 90°C | IEC 60247 | | 0.005 | 0.001 |
| Refining/Stability | | | | |
| Appearance | ERTM-2 | PASS | | PASS |
| Acidity, mg KOH/g | IEC 62021-1 | | 0.01 | <0.01 |
| Interfacial Tension, mN/m | ASTM D 971 | 40 | | 48 |
| Corrosive Sulfur | DIN 51353 | Noncorrosive | | Noncorrosive |
| Corrosive Sulfur | ASTM D 1275, B | Noncorrosive | | Noncorrosive |
| Corrosive Sulfur | IEC 62535 | Noncorrosive | | Noncorrosive |
| DBDS | IEC 62697-1 | Not detected (<5mg/kg) | | Not detected |
| Inhibitors of IEC 60666 | IEC 60666 | 0.08 | 0.40 | 0.37 |
| Metal Passivator Additives of IEC 60666 | IEC 60666 | Not detected (<0.05mg/kg) | | Not detected |
| Other Additives | | See ^a | | |

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|---|------------------|------------------|-------|--------------|
| Other Additives | | See ^a | | |
| Sulfur, wt% | ISO 14596 | | 0.15 | 0.008 |
| Furfural Content, mg/kg | IEC 61198 | | 0.05 | <0.05 |
| Carbon Type Analysis, % | IR-Brandes | | | |
| Ca | | | | 9 |
| Cn | | | | 44 |
| Cp | | | | 47 |
| Performance | | | | |
| Oxidation Stability at 120°C, 500 hours | IEC 61125, C | | | |
| Total Acidity, mg KOH/g | | | 0.30 | 0.01 |
| Sludge, % | | | 0.05 | 0.02 |
| DDF at 90°C | | | 0.050 | 0.013 |
| Health, Safety and Environment | | | | |
| Flash Point, PMCC, °C | ISO 2719 | 135 | | 141 |
| PCA Content, % | BS 2000 Part 346 | | 3 | <3 |
| PCB Content | IEC 61619 | Not detected | | Not detected |

These are typical values. Small variation should be expected for future productions / blendings

Health, Safety and Environmental Protection

It is unlikely to cause any significant problem to the health or safety of the user when used properly, according to the typical handling of lubricating and usual personal hygiene practices. The used lubricants must be recycled in accordance with applicable legislation and placed in approved collection points. Do not discharge into drains, soil or water / sea. Always follow the instructions of the safety data sheet.