

CALTRAN[®]

ELECTRICAL INSULATING OILS (IEC 60296:2020, Ed. 5)

Calumet has more than 25 years of experience producing highly refined, clean and stable electrical insulating fluids. Calumet participates in the annual DOBLE Survey of Electrical Insulating Mineral Oils and Transformer Oil.

CALTRAN[®] 60-00 TVBU is a superior naphthenic transformer oil that fully meets IEC 60296:2020 general specifications for uninhibited, unused oil for transformers and JIS C 2320 Electrical Insulating Oils (including Amendment 1, 2010).

CALTRAN[®] 60-40 TVBI is a superior paraffinic transformer oil that fully meets IEC 60296:2020 general specifications for inhibited, unused oil for transformers.

The IEC 60296:2020 standard is a recognized international standard and applicable to specifications and test methods for mineral insulating oils.

PROVIDES

- **Compliance:** Fully meets IEC 60296: 2020, Ed.5 general specifications
- **Confidence:** Verified by an accredited independent laboratory
- **Safety:** Meets IP 346 and Modified Ames criteria for biological safety
- **Performance:** Outstanding oxidation stability under severe conditions
- **Flexibility:** Fully miscible with insulating oils meeting IEC 60296: 2020 specifications
- **Value:** Optimal protection against corrosion, extended oil life, and greater efficiency
- **Choice:** Latest advancements in transformer oil technology

PACKING & SHIPPING

Available in:

- Tank Truck
- Rail Car

Please inquire for drums

HANDLING & SAFETY

This product should be stored in sealed containers at ambient temperature. Read and understand the Safety Data Sheet (SDS) before using this product.



Download a digital copy of this brochure.

CALTRAN® (IEC 60296:2020, Ed. 5) TYPICAL PROPERTIES

| PROPERTIES | METHOD | 60-40 TVBI | 60-00 TVBU |
|--------------------------------|-------------|---------------|---------------|
| Viscosity @ 40 °C | ISO 3104 | 8.04 | 8.89 |
| Viscosity @ -30 °C | ISO 3104 | 435.8 | 723.8 |
| Pour Point | ISO 3016 | -59 | -46 |
| Water Content | IEC 60814 | 16 | 15 |
| Breakdown Voltage | IEC 60156 | 58 | 70 |
| Density @ 20 °C | ISO 3675 | 0.8690 | 0.8690 |
| DDF @ 90 °C (Before Oxidation) | IEC 60247 | 0.002 | 0.001 |
| Appearance | Visual | B/C | B/C |
| Acidity | IEC 62021-1 | <0.010 | <0.010 |
| Interfacial Tension | ISO 6295 | 44.8 | 44.8 |
| Total Sulfur Content | ISO 14596 | - | 9.0 |
| Inhibitors of IEC 60666 | IEC 60666 | 0.35 | ND |
| Corrosive Sulfur | DIN 51353 | Non-corrosive | Non-corrosive |
| Metal Passivator Additives | IEC 60666 | ND | ND |
| Antioxidant Additive | IEC 60666 | - | ND |
| Furfural Content | IEC 61198 | 0.004 | 0.004 |
| Oxidation Stability | IEC 61125C | 514 | 164 |
| Total Acidity | IEC 61125C | 0.49 | 0.97 |
| Sludge | IEC 61125C | 0.16 | 0.32 |
| DDF @ 90 °C (After Oxidation) | IEC 60247 | 0.160 | 0.090 |
| Gassing | IEC 60628A | - | 13.0 |
| Flash Point | ISO 2719 | 148 | 156 |
| PCA Content | IP 346 | 0.7 | 0.7 |
| PCB Content | IEC 61619 | <1 | ND |
| Volume Resistivity | JIS C 2101 | - | 0.5738 T .0 m |

TECHNICAL ASSISTANCE

For product or technical questions, contact your Sales Representative or Calumet Product Support at (800) 437-3188 or email technical@calumet.com.

Calumet's sampling and testing procedures in effect at the time of production will be used for certification testing. Results may be based on tank certification, manufacturing data, periodic testing and/or most recent product restock. Typical values only represent the values one would expect if the property were tested in our laboratories with our test methods on the specified date. Some product properties are not frequently measured, and accordingly typical values are not based on a statistically relevant number of tests. The information in this document relates only to the named product. The user is solely responsible for all determination regarding any use and any process.



CORPORATE HEADQUARTERS

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SALES INQUIRIES
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