

# 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.



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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](mailto: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.

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