



CALTRAN[®] C50

ELECTRICAL INSULATING OILS

CALTRAN[®] C50 insulating oils are developed using high quality base stocks to deliver a product that provides excellent performance in electrical service. CALTRAN C50 insulating oils are designed and manufactured to provide cooling and insulating properties as well as promote resistance to oxidation and sludge formation.

CALTRAN C50 insulating oils are recommended for use in electrical applications subject to extremely cold conditions and forced oil cooling systems. Potential applications include load transformers, tap changers, switches and circuit breakers required to operate at ambient temperatures below -25 °C.

CALTRAN C50 insulating oils meet or exceed Canadian Standards Association C50-14 specifications for Class A and Class B, Type I and Type II insulating oils.

PRODUCTS

C50A & C50B UNINHIBITED (TYPE I)	C50A & C50B INHIBITED (TYPE II)	C50A INHIBITED (TYPE II) NEGATIVE GASSING
CALTRAN 60-08 C50A	CALTRAN N60-30 C50A	CALTRAN N60-30 C50A
CALTRAN 60-08 C50B	CALTRAN 60-30 C50B	

FEATURES

- Excellent Low Temperature Fluidity
- Outstanding Corrosion Control
- Exceptional Insulating Properties
- Superior Oxidation Stability

BENEFITS

- Improves circulation and heat transfer for operation at low temperatures in remote locations
- Ability to withstand high levels of electrical field strength while assisting in the prevention of corona discharge or arcing
- Highly refined to remove corrosive sulfur compounds which prevents corrosion of copper components and formation of copper sulfides
- Oxidatively stable for long service life

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.

CALTRAN® TYPICAL PROPERTIES

PROPERTIES	METHOD	60-08 C50A	60-08 C50B	N60-30 C50A	60-30 C50B
Class		Class A	Class B	Class A	Class B
Type		Type I	Type I	Type II	Type II
Flash Point, COC (°C)	ASTM D92	146	153	149	150
Viscosity @ 40 °C (cSt)	ASTM D7279	7.70	8.74	7.75	8.14
Viscosity @ 0 °C (cSt)	ASTM D445	42.78	53.86	44.04	47.75
Viscosity @ -40 °C (cSt)	ASTM D445	1,511	2,000	1,780	2,087
Pour Point (°C)	ASTM D97	-65	-65	-56	-63
Color, ASTM	ASTM D1500	L0.5	L0.5	L0.5	L0.5
Dielectric Breakdown @ 60 Hz, Disc (kV)	ASTM D877	38	41	39	41
Dielectric Breakdown, VDE @ 2 mm gap (kV)	ASTM D1816	46	60	45	60
Dielectric Breakdown Impulse (kV)	ASTM D3300	288	397	300	300
Gassing Tendency (µL/min)	ASTM D2300	15	12	-9	15
Interfacial Tension (dyne/cm)	ASTM D971	49.0	48.9	47.2	47.1
Density @ 15 °C (kg/m3)	ASTM D4052	0.8774	0.8743	0.8758	0.8772
Power Factor @ 25 °C (%)	ASTM D924	0.042	0.004	0.004	0.001
Power Factor @ 100 °C (%)	ASTM D924	0.01	0.07	0.01	0.05
Neutralization Number (mg KOH/g)	ASTM D974	0.002	0.014	0.010	0.003
Strong Acids (mg KOH/g)	ASTM D974	NIL	NIL	NIL	NIL
Corrosive Sulfur	ASTM D1275B	Non-corrosive	Non-corrosive	Non-corrosive	Non-corrosive
Potentially Corrosive Sulfur	IEC 62535	Non-corrosive	Non-corrosive	Non-corrosive	Non-corrosive
DBDS Content (ppm)	IEC 62697-1	< 5	< 5	< 5	< 5
Oxidation Inhibitor Content (%)	ASTM D2668	0.06	0.06	0.28	0.27
Oxidation Stability	ASTM D2440				
72 Hours @ 110 °C, Acid Number, mg KOH/g	Sludge (%)	0.01	0.01	0.01	0.01
72 Hours @ 110 °C, Sludge %	Acid Number (mg KOH/g)	0.02	0.01	0.01	0.01
164 Hours @ 110 °C, Acid Number, mg KOH/g	Sludge (%)	0.01	0.05	0.01	0.04
164 Hours @ 110 °C, Sludge %	Acid Number (mg KOH/g)	0.08	0.01	0.01	0.02
Oxidation Stability, RPVOT (minutes)	ASTM D2112			280	265
Water Content (ppm)	ASTM D1533	12	14	7	9
PCB Content (ppm)	ASTM D4059	< 1	< 1	< 1	< 1
2-Furaldehyde (µg/L)	ASTM D5837	6	6	5	5

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.

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CALUMET

CORPORATE HEADQUARTERS

1060 N Capitol Ave Suite 6-401 • Indianapolis IN 46204-1044
Calumet.com • 800.437.3188 • 317.328.5660

CUSTOMER SUPPORT
customerservice@calumet.com

PRODUCT SUPPORT
technical@calumet.com

SALES INQUIRIES
sales@calumet.com