



CALTRAN™ TRANSFORMER OILS

Calumet Specialty Products Partners has over 25 years of experience producing highly-refined, clean, and stable electrical insulating fluids. Calumet is a long standing participant in the Annual DOBLE Survey on transformer oil.

Developed in-house by Calumet's R&D group, CALTRAN transformer oils have excellent dielectric properties, high thermal stability and good resistance to oxidation. CALTRAN transformer oils fully meet ASTM D3487 specifications for Type I and Type II mineral insulating oil in electrical apparatus.

PRODUCTS

Naphthenic Type I

CALTRAN 60-08
CALTRAN N60-08

Naphthenic Type II

CALTRAN 60-30
CALTRAN 60-15
CALTRAN N60-15
CALTRAN N60-30

SHIPPING LOCATIONS

Karns City, Pennsylvania
Bensalem, Pennsylvania
Princeton, Louisiana
Houston, Texas

TECHNICAL ASSISTANCE

For product or technical questions contact your Sales Representative or Calumet Product Support.

Product Support:
1-800-437-3188

www.calumetlubricants.com

PRODUCT FEATURES

- Excellent physical, chemical, and electrical properties
- Good oxidation resistance
- Rapid heat transfer properties
- Outstanding low temperature properties without the need for pour point depressants
- Miscible with all comparable hydrocarbon-based transformer oils
- Meets ASTM D3487 Type I and Type II application specifications

CALTRAN™ TRANSFORMER OILS

PRODUCT DATA SHEET

		CALTRAN 60-08 Naphthenic Type I	CALTRAN 60-15 Naphthenic Type II	CALTRAN 60-30 Naphthenic Type II	CALTRAN N60-08 Naphthenic Type I	CALTRAN N60-15 Naphthenic Type II	CALTRAN N60-30 Naphthenic Type II
Physical Properties	ASTM Method	Typical	Typical	Typical	Typical	Typical	Typical
VISCOSITY, cSt @ 0°C	D445	53.86	53.83	56.74	53.21	51.18	53.56
VISCOSITY, cSt @ 40°C	D445	8.74	8.73	9.21	8.82	8.53	8.71
VISCOSITY, cSt @ 100°C	D445	2.29	2.28	2.35	2.30	2.28	2.28
API GRAVITY @ 60°F	D4052	30.3	30.1	30.1	30.2	30.4	30.2
DENSITY @ 15°C KG/DM3	D4052	0.8743	0.8755	0.8749	0.8748	0.8735	0.8747
FLASH POINT, COC °C	D92	153	150	154	151	154	153
POUR POINT °C	D97	-61	-60	-62	-61	-60	-61
COLOR, ASTM	D1500	L0.5	L0.5	L0.5	L0.5	L0.5	L0.5
ANILINE POINT °C	D611	80.0	79.4	80.6	79.9	80.0	79.64
NEUTRALIZATION NUMBER, mg KOH/G	D974	0.014	0.014	0.014	0.013	0.014	0.013
WATER CONTENT, ppm	D1533	14	15	12	15	15	13
DIELECTRIC BREAKDOWN VOLTAGE @ 60 Hz							
DISK ELECTRODES, Min, kV	D877	40	42	40	40	40	39
VDE ELECTRODES, Min, kV 0.040-in. (1.02-mm) gap	D1816	30	30	30	30	30	30
VDE ELECTRODES, Min, kV 0.080-in. (2.03-mm) gap	D1816	60	60	60	60	60	59
DIELECTRIC BREAKDOWN VOLTAGE, IMPULSE CONDITIONS	D3300	397	300	300	301	300	299
CORROSIVE SULFUR	D1275 **	n/corr.	n/corr.	n/corr.	n/corr.	n/corr.	n/corr.
INTERFACIAL TENSION	D971	50.6	48.9	51.0	50.1	50.5	50.6
OXIDATION STABILITY							
72 HR SLUDGE, Mass%	D2440	0.00	0.01	0.01	0.01	0.01	0.01
72 HR ACID, mg KOH/G	D2440	0.00	0.01	0.01	0.01	0.01	0.01
164 HR SLUDGE, Mass%	D2440	0.00	0.01	0.01	0.01	0.02	0.01
164 HR ACID NO., mg KOH/G	D2440	0.00	0.01	0.01	0.04	0.01	0.01
OXIDATION INHIBITOR CONTENT, Mass %	D2668	0.07	0.18	0.28	0.07	0.15	0.27
OXIDATION STABILITY, RPVOT, min	D2112		255	265		265	258
GASSING TENDENCY, uL/min	D2300	16	16	18	-9	-17	-28
POWER FACTOR, 25°C %	D924	0.003	0.004	0.006	0.003	0.005	0.004
POWER FACTOR, 100°C %	D924	0.05	0.07	0.07	0.06	0.05	0.07
PCB CONTENT, ppm	D4059	<1	<1	<1	<1	<1	<1
ASTM D3487 Standards		PASS	PASS	PASS	PASS	PASS	PASS

** Formerly D1275 (Method B)