



TRANSFORMER OILS

PRODUCT DATA SHEET

		60-08 Naphthenic Type I	60-15 Naphthenic Type II	60-30 Naphthenic Type II	N60-08 Naphthenic Type I	N60-15 Naphthenic Type II	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)

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.