



TECHNICAL DATA SHEET FOR XCELTHERM® ELECTRICAL INSULATING OIL, TYPE I
ASTM D3487-09 I/A/W FED SPEC# VV-I-530

Physical Characteristics	Requirement	Typical Results	Test Method
Aniline point, °C, min	63	76	ASTM D611
Color, max	0.5	L0.5	ASTM D1500
Flash point, min, °C	145	157	ASTM D92
Interfacial tension at 25°C, min, dynes/cm	40	49	ASTM D971
Pour point, max, °C	-40	-64	ASTM D97
Relative density (specific gravity), 15°C/15°C max	0.91	0.8860	ASTM D1298
Viscosity , cSt at:			ASTM D445
100°C	3.0	2.4	
40°C	12.0	9.6	
0°C	76.0	65.4	
Visual examination	clear and bright	clear and bright	

Electrical Characteristics	Requirement	Typical Results	Test Method
Dielectric breakdown voltage at 60 Hz:			
Disk electrodes, min, kV	30	40	ASTM D877
VDE electrodes 0.080-in. (2.03-mm) gap, min, kV	35	55	ASTM D1816
Dissipation factor (or power factor), at 60 Hz max, %:			ASTM D924
25°C	0.05%	0.01%	
100°C	0.30%	0.04%	

Chemical Characteristics	Requirement	Typical Results	Test Method
Corrosive sulfur	Noncorrosive	Noncorrosive	ASTM D1275
Water, max, ppm	35	8	ASTM D1533
Neutralization number, total acid number, max, mgKOH/g	0.03	0.01	ASTM D974
PCB content, ppm	Not detectable	Not detectable	ASTM D4059

* Data represents typical laboratory samples and are not guaranteed for all samples