



TULSTAR PRODUCTS, INC.

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TS-3487U

Electrical Transformer Insulating Oil Uninhibited Type I

TS3487U Oils meet the ANSI/ASTM D 3487, NEMA TR-P8-1975 &
CAN/CSA-C50-97 Type I (Class B) Specs

<u>Property</u>	<u>ASTM</u>	<u>Spec.</u>	<u>Typical</u>
Aniline Point, ° C	D-611	63/84	77
Color	D-1500	0.5 Max.	L0.5
Flash Point, ° C	D-92	146 Min.	150
Interfacial Tension @ 25 ° C, dynes/cm	D-971	40 Min.	50
Pour Point, ° C	D-97	-50 Max.	-52
Spec. Grav. 15°C/15° C	D-1298	0.9100 Max.	0.8849
Viscosity, cSt (SUS) @ 100 ° C	D-445	3.0 Max.	2.332
@ 40 ° C		12.0 Max.	9.385
@ 0 ° C		76.0 Max.	59.4
Appearance	D-4176	Clear & Bright	C & B
Dielectric breakdown (kv)	D-877	30 Min.	45
Gassing Tendency, uL/min.	D-2300B	30 Max.	21
Power Factor @ 60 Hz, % max. @ 25 ° C	D-924	0.05 Max.	0.001
@ 100 ° C		0.30 Max.	0.031
Oxidation Stability @ 72 Hours % Sludge, by Mass	D-2440	0.15 Max.	0.0065
Total Acid Number mg KOH/g		0.50 Max.	0.0398
Rotating Bomb, minutes	D-2112	195 Minutes	358
Oxidation Inhibitor, % Mass	D-2668	0.08 Max.	0.07
Water, ppm	D-1533	35 Max.	12
Neutralization Number, mg KOH/g	D-974	0.03 Max.	0.011
Corrosive Sulfur	D-1275	Non-corrosive	Non-corrosive
PCB Contact, ppm	D-4059	None detected	None detected

DATE: 01/31/2004