

CHASE International Exports Ltd.

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Transformer Oil, Inhibited
 PRODUCT TYPE: Hydrotreated Light Naphthenic
 Distillate + Oxidation Inhibitor
 CAS NO.: 64742-53-6, 128-37-0

PROPERTIES	METHOD	ASTM D3487-09, TYPE II LIMITS		INSPECTION
		MIN	MAX	
Physical				
Aniline Point, F (C)	D611	145 (63)		164
Color	D1500		0.5	L0.5
Flash Point, F (C)	D92	293 (145)		305
Interfacial Tension @ 25C, dynes/cm	D971	40		51*
Pour Point, F (C)	D97		-40 (-40)	-70 (-57)*
Specific Gravity @ 60F/15C	D1298		0.9100	0.8905
Viscosity, SUS @ 210F (cSt @ 100C)	D445		36 (3.0)	34.2(2.34)
Viscosity, SUS @ 100F (cSt @ 40C)			66 (12.0)	60.8(9.80)
Viscosity, SUS @ 32F (cSt @ 0C)			350 (76.0)	300 (62.0)*
Visual Examination	D1524	B & C		B & C
Chemical				
Oxidation Inhibitor** w%	D2668	0.15	0.30	0.29*
Oxidation Stability	D2440			
72 hours, w% Sludge			0.1	0.01*
Neut. No., mg KOH/g			0.3	<0.01*
164 hours, w% Sludge			0.2	0.01*
Neut. No., mg KOH/g			0.4	<0.01*
Rotating Bomb, minutes	D2112	195		300*
Corrosive Sulfur, Modified (B)	D1275	Non-Corrosive		Non-Corrosive
Water, ppm	D1533		35	13
Neut. No., mg KOH/g	D974		0.03	<0.01*
PCB Content, ppm	D4059		ND	ND*
Electrical				
Dielectric Breakdown Voltage @ 60 Hz				
Disc Electrodes, kV	D877	30		52.2
VDE Electrodes, kV, (1.02mm) gap	D1816(a)	20		44*
VDE Electrodes, kV, (2.03mm) gap		35		60*
DBV, Impulse, 25C, 25.4 mm gap, kV	D3300	145		>300*
Gassing Tendency, uL/min	D2300		+30	+22*
Power Factor @ 60 Hz, % @25C	D924		0.05	0.002*
@ 100C			0.30	0.079*

* Batch Results

**Oxidation Inhibitor is 2,6-di-t-butyl-p-cresol.
 COA2791140113, supersedes COA2791100709

APPROVED BY:


 CHASE INTERNATIONAL EXPORTS LTD.
 Quality Control

Chase hereby certifies that the above tests were performed in accordance with applicable ASTM test methods.

Authorized Signature

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