



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

APAR INDUSTRIES LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

THANE

in the field of

ELECTRICAL TESTING

Certificate Number

T-1513

Issue Date

04/11/2008

Valid Until

03/11/2010

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Jaydip Kanango
Convenor

Dr B. Hari Gopal
Director

Dr T. Ramasami
Chairman



NABL

Department of Science & Technology, India

SCOPE OF ACCREDITATION

Laboratory	Apar Industries Limited, Thane		
Accreditation Standard	ISO/IEC 17025:2005		
Field	Electrical Testing	Issue Date	04.11.2008
Certificate Number	T-1513	Valid Until	03.11.2010
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Operation / Limits of Detection
I.	TRANSFORMER OIL / RPO / INDUSTRIAL OILS	1.Density	ASTM D 1298-85 (Reapproved 1990) IS 1448 (P: 16)-90 (Reaffirmed 2002)	0.800 to 0.900 g/cm ³
		2.Viscosity (27 – 100)°C	ASTM D 445 - 96 IS 1448 (P: 25)-76 (Reaffirmed 2002)	(2 – 2000) cSt
		3.Pour Point	ASTM D 97 – 96a IS 1448 (P: 10)-70 (Reaffirmed 2003)	+50°C to -80°C
		4.Flash Point (PMCC)	ASTM D 93 - 97 IS 1448(P: 21)- 92 (Reaffirmed 2003)	90°C to 370°C
		5.Flash Point, (COC)	ASTM D 92 - 97 IS 1448 (P: 66) : 1969	50°C to 400°C
		6.Aniline Point	ASTM D 611 – 82 (Reapproved 1993)	25°C to 170°C
		7.Interfacial tension at 25°C	ASTM D 971- 99a IS 6104: 1971- Reaffirmed 2001	0 to 90 dynes/cm
		8.Total Acid no.	ASTM D 974 - 97 IS 1448(P: 2) – 67 (Reaffirmed 2003)	0.0001 – 10 mg KOH/gm
		9.Corrosive Sulphur	ASTM D 130 - 94 IS 335-93 Annex.B Reaffirmed 2005	Corrosive / Non – Corrosive
		10.Antioxidant	ASTM D2668 – 02 IS 13631:93 (Sec.- I) Reaffirmed 2003	0 - 0.9%

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Operation / Limits of Detection
		11. Water Content	ASTM D 1533 - 00 IS 13567: 1992 (latest)	0 to 9.999 mg
		12. Break Down Voltage	ASTM D 877- 02 IS 6792:1992 (Reaffirmed 2003)	0 to 100 kV
		13. Dielectric Dissipation Factor	ASTM D 924 - 99 IS 6262 :1971 (Reaffirmed 2001)	Upto 2×10^{-1}
		14. Specific Resistance	ASTM D 1169 - 02	1×10^9 to 1×10^{18} ohm.cm
		15. Oxidation Stability		
		a) Neutralization value	ASTM D 3487 ASTM D 2440	*
		b) Sludge	IS 335-93 Annex C Reaffirmed 2005 IEC 60296 IEC 61125, Method A ,C- 2003	
		16. Viscosity Index	ASTM D 2270 IS 1448 (P:56)	0 to 300
		17. Ageing Characteristics	IS 12177 : 1987 (Reaffirmed 2003) Method A	**
		a) Specific Resistance @27°C&90°C	IS 6103 :1971 (Reaffirmed 2001)	
		b) Dielectric Dissipation Factor @90°C	IS 6262 :1971 (Reaffirmed 2001)	
		c) Total Acidity	IS 1448(P:2):1967 (Reaffirmed 2003)	
		d) Total Sludge	Annex A of IS 12177-87 (Reaffirmed 2003)	

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*After oxidation at 100°C/110°C/120°C for 7 days acidity and sludge are measured.

**After ageing at 115°C for 96 hrs resistivity, tan-delta, acidity and sludge are measured.

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