

Laboratory **Senior Quality Assurance Establishment (General Stores),
5, Commissariat Road, P.O. Hastings, Kolkata, West Bengal**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7614 (in lieu of T-0042 & T-0018)**

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Validity **25.07.2018 to 24.07.2020**

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	TEXTILE (WOVEN & NON WOVEN)			
A.	Jute & Textile			
1.	Yarn & Chords, Cloth plain, Weave P & C, Duck Cotton, Canvas Cotton, Water proof Fabrics, Cloth Wool, Cotton bandage, Cotton gauge, Calico Cotton	pH Value	IS 1390:1983 (RA 2004)	1 to 14
		Determination of Scouring Loss in Textile Material	IS 1383:1977 RA 2004	0.1% to 25%
		Oil Content	IS 2969:-1974 (1 ST Rev) (RA 2004)	0.1% to 25 %
		Water Soluble Matter Content	IS 3456:1966 (RA 2004)	0.1% to 10 %
		Ash Content	IS 199:1989 (3 rd Rev) (RA 2004)	0.1% to 20 %
		Chromium & Iron Content	IS 4655:1968 (RA 2004)	0.5% to 10% 0.01% to 0.7%
2.	Blended Textile Fabrics	Chemical Analysis of binary mixture of polyester with cellulose fibre	IS 3416(Part-1):1988 (RA 2003)	1 to 100%
		Chemical Analysis of binary mixture of protein with non protein fibre	IS 2006:1988 (RA 2004) (2 nd rev)	1 to 100%
3.	Any fabric. Like:Jute Items Blended fabric Synthetic fibre, Sewing thread Dyed, Rpo Dyed, Cord/ Laces Nylon Dyed	Colour Fastness to Washing	IS/ISO 105(Part-C10):2006	(Qualitative) 1 to 5 Rating Visual Test

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4.	Cotton & Other Cellulose Fiber	Identification of Dyes	IS 4472 Part-I 1967 (RA 2006) IND/TC/2069(b) Appendix-B	Qualitative
5.	Cloth/ Rope/ Twine/ Lines Jute, Hemp, Sisal, Manila. Synthetic Fibres e.g. Polythene, Polypropylene, Nylon, Polyester	Identification of Material	IS 667:1981(RA 2003)	Qualitative
II.	LEATHER			
1.	Leather Samples: (Boots, Shoes)		IS 582:1970(RA 2009)	
		Total Ash	LC-3	0.5 % to 15 %
		Solvent Extractable Matter	LC-4	0.2% to 20 %
		pH & difference figure of water soluble matter	LC-18	1 to 14
	i)Vegetable Tanned Leather	Degree of Tannage	LC-21	1 to 90
		Sulphated Ash Content	LC-7	0.1% to 10 %
	ii)Chrome Tanned Leather	Hide Substance	LC-5	10 % to 80 %
		Water soluble matter	LC-6	1 % to 35 %
		Chromium Content	LC-10	0.5 % to 10 %
III.	METALS & ALLOYS			
1.	Non ferrous: Metals	Copper Content	IS 3685:1966 (RA 2012) IS 4027 (Part I):1987 (RA 2012) IS 440:1964 (RA 2012)	1% to 99.80%

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		Lead Content	IS 3685:1966 (RA 2012) IS 4027 (Part I):1987 (RA 2012)	0.1% to 5 %
		Tin Content	IS 3685:1966 (RA 2012) IS 4027 (Part 5):1987 (RA 2012)	0.1 % to 15%
		Iron Content	IS 3685:1966 (RA 2012) IS 4027 (Part 8):1991 (RA 2012)	0.02% to 2 %
IV.	RUBBER & RUBBER PRODUCTS			
1.	Rubber & Rubber Products	Identification	IS 3400 Part 22:84 (RA 2008)	Qualitative
		Rubber Hydrocarbon Content	IS 6110:83 (RA 2012)	1% to 96 %
		Acetone Extractable Matter Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008)	0.5 % to 25 %
		Free Sulphur Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008)	0.05 % to 5 %
		Carbon Black Content	IS 6110-83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008)	1.0 % to 50 %
		Resistance to Xylene	IS 5915:70 (RA 2012)	Qualitative
		Resistance to Acid & Alkali	IS 6110:83 (RA 2012)	Qualitative
		Rubber Polymer Content	IS 3400 Part 22:84 (RA 2008) IS 5915:70 (RA 2012)	1% to 96 %
		Filler Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008) IS 5915:1970 (RA 2012)	0.5% to 50%

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		Acetone & Chloroform Extractable Matter Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008) IS 5915:1970 (RA 2012)	1 % to 25%
		Alcoholic KOH Extractable Matter Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008) IS 5915:1970 (RA 2012)	0.5 % to 10 %
		Combined Sulphur Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008) IS 5915:1970 (RA 2012)	0.1 % to 10 %
		Nitrogen as Glue Content	IS 6110:83 (RA 2012)/ IS 3400 Part 22:84 (RA 2008)	0.5 % to 25 %
V.	PAINTS & ENAMEL			
1.	Red Oxide Zinc Chrome Primer	Drying Time	IS 101 (Part-3/S-1):86 (RA 2012) (a) Surface Dry (b) Hard Dry (c) Tack Free Dry	Subjective Test
2.	Olive Green, Air Drying	Colour	IS 5:2007 (RA 2012)	Qualitative
3.	Olive Green	Mass in Kg/10 l	IS 101 (Part-1/S-7):87 (RA 2009)	5.0 to 25.0 Kg/10 l
4.	Enamel Interior	Scratch Hardness	IS 101 (Part-5/S-2):88 (RA 2009)	Qualitative
		Efflux Time/Consistency	IS 101 (Part-1/S-5):1989 (RA 2009)	20 s to 300 s
		Wet Opacity	IS 101 (Part-4/S-1):1988 (RA 2009) (Cl-4; by Cryptometer)	50 to 1250 m ² /10 l

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VI.	DRUGS			
1.	Tab Ethophylline & Theophylline	i) Uniformity of Weight	Indian Pharmacopoeia-2018	1 mg to 150 g
		ii) Disintegration	Indian Pharmacopoeia-2018	1 min to 60 min
		iii) Identification	In House	Qualitative
2.	Tab Glibenclamide 5 mg IP	i) Disintegration	Indian Pharmacopoeia-2018	1 min to 60 min
		ii) Related Substances by TLC	Indian Pharmacopoeia-2018	Qualitative
3.	Tab Sulphamethazole & Trimethoprim IP	i) Uniformity of Weight	Indian Pharmacopoeia-2018	1 mg to 150 g
		ii) Disintegration	Indian Pharmacopoeia-2018	1 min to 60 min
		iii) Identification C by TLC	Indian Pharmacopoeia-2018	Qualitative
VII.	PETROLEUM PRODUCTS			
1.	Antifreeze Coolant	Pour Point/Freezing point	IS 5759:2006	(-) 70°C to 0 °C
		Kinematic Viscosity at 37.8°C	IS 1448(Part-25):1976 1 st rev (RA 2007)	2.47 cSt to 145.07 cSt
		Foaming Tendency	IS 5759:2006	Qualitative
		Refractive Index at 20°C	JSS:6850-30:2000	1.30 to 1.70
		Sulphate	IS 5759:2006	Qualitative
2.	Grease	Drop Point °C	IS 1448 Part-52:1971 (RA 2007)	40°C to 250 °C
		Free Acidity as Oleic Acid (% by Mass)	IS 1448 Part-53:1979 (RA 2007)	0.05% to 1.00 %
		Free Alkalinity as Ca(OH) ₂ (% by Mass)	IS 1448 Part-53:1979 (RA 2007)	0.03% to 0.50 %

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		Glycerol Content (% by Mass)	IS 507:1993 (RA 2011) ASTM-D128-83	Upto 1 %
		Copper Strip Corrosion	IS 1448 Part-51:1963 (RA 2008)	Qualitative
		Heat Stability	IS 1448 Part-62:1974 (RA 2008)	Qualitative
		Oil Separation/Thermal Stability of Grease.	IS 1448 Part-89:1979 (RA 2007)	Upto 8 %
		% Evaporation Loss	IS 1448 Part-61:1974 (RA 2008)	0.013 % to 10 %
		Penetration	IS 1448 Part-60:1994 (RA 2011)	1 to 399
3.	Fuels	Specific Gravity	(IS 1448 (Part-16):2014)	0.600g to 0.999 g
		Silver Strip Corrosion	IP-227	Upto 4
		Water Reaction	IS 1448 Part-42:1977 (RA 2011)	Qualitative
		Flash Point (Abel)	IS 1448 Part-20:1998 (RA 2008)	Upto 70 °C
		Distillation	IS 1448 Part-18:1991 (RA 2011)	40 ⁰ C to 399 ⁰ C
		Smoke Point	IS 1448 Part-31:1968 (RA 2008)	Upto 50 mm
		C.S. Corrosion	IS 1448 Part-15:2004 (RA 2011)	1a to 4c
4.	Lube Oil	Phosphorous	IS 1448-Part-.54:79 (RA 2007)	0.006 % to 1 %
		Flash Point (COC)	(IS 1448 (Part-69):2013) ; ISO 2592:2000	100°C to 300 °C
		Kinematics Viscosity (KV)	IS 1448 Part-25:1976 (RA 2007)	2.59cSt to 145.03 cSt
		Viscosity Index	(IS 1448 (Part-56):2013); ISO 2909:2002	Qualitative

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		Sulphated Ash	IS 1448 Part-4 2008	Upto 10 %
		Acidity mg KOH/g	IS 1448 Part-2:2007	Upto 1.0 %
		Sap Value as mg KOH/g of sample	(IS 1448 (Part-55/Sec-1): 2004 (RA 2011)	0.1 to 200
5.	Lip Salve	Drying Time	IS 1153:2000 (RA 2011)	Qualitative
		Adhesion & Stickiness		
		Solubility in Chloroform	IND/SL/7180 May'2009	Qualitative
		Lanolin	Appendix A of IND/SL/7180 May'2009	Qualitative
		Saponification Value	Appendix B of IND/SL/7180 May'2009	1 to 50
		Temp. effect at 35°C ± 2°C	Appendix C of IND/SL/7180 May'2009.	Qualitative
		Nature of the Film and Application at i)-30°C ii) 35°C	Appendix D of IND/SL/7180 May'2009	Qualitative
		Acid Value	Appendix E of IND/SL/7180 May'2009	0.12 to 10
		Consistency	Appendix F of IND/SL/7180 May'2009	Qualitative

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MECHANICAL TESTING

I.	TEXTILE MATERIALS			
A.	Jute & Textile Fabric			
1.	Yarn & Chord, Lines, Twines, Ropes	Construction	IS 1720:1978 (RA 2002); JSS 1080-02-1977	1 to 400 No.
		Diameter	IS 7071(Part-1 to 3):1984 (RA 2004) JSS 1080-02-1977	0.5 to 290 mm Dia
		Pitch	IS 7071(Part-1 to 3):1984 (RA 2004)	0.5 to 290 mm Dia 4/m to 1200/m
		Direction of Twist, Lay	IS 832(Part-II):2011	Qualitative Test
		Balance of twist	IS 2196:1985 (RA 2003)	1 to 30
		Length per Kg	IS 570:1964 (RA 2000)	100 m/Kg to 55,000 m/Kg
		Linear Density	IS 3442:1980 (RA 2004) IS 1912:1984 (RA 2001)	3 tex to 100 tex
		Turn per metre	IS 832:1985 (RA 1999) IS 832(Part-1):2011; IS 832(Part-2):2011	4/m to 1200/m
		Breaking Load & EB%	IS 1670:1991 (RA 2012) IS 7071(Part-IV):1986 (RA 2004), IS 1720:1978 (RA 2002)	0.1 Kg to 16 Kg for yarn 40 N to 3,900 N for others
2.	Textile Fabric and Coated Fabric	Breaking Load	IS 7016 Part 2:1981, (RA 2008)	300N to 3000 N
		No of threads/Unit length, No of stitches	IS 1963:1981 (RA 2004) (Method A & B)	10/cm to 100/cm
		Length & Width	IS 1954-1990 (RA 2012)	0.5 cm to 20 m

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		Mass/m ²	IS 2387-1969 (RA 2008) IS 1964-2001 (RA 2006)	20 g/m ² to 1000 g/m ²
		Shrinkage relaxation	IS 2977-1989 (RA 2005)	(-) 20 to (+) 20%
		Thickness	IND/TC/2123(b) IS 7702-1975 (RA 2012) (IS 7702:2012)	0.04 to 10 mm
II.	MECHANICAL PROPERTIES OF METALS			
1.	Ferrous Metal	Hardness(Rockwell)	IS 1586(Part-1):2012 ISO 6508-1:2005	20 to 100 HRB 20 to 70 HRC
2.	Ferrous Metal Nails, Rivets Non Ferrous Metal Nails, Rivets	i) Length ii) Diameter iii) Head Height	IS 723-1972(RA 2001) 2 nd (RA 1996) IS 2998-1982 (RA 2008)	i) 0.7 to 250mm ii) 0.2 to 20 mm iii) 0.7 to 24 mm
3.	Timber product	Moisture Content	IS 11215-1991 (RA 2005) (Oven dry method)	1% to 30 %
III.	RUBBER & RUBBER PRODUCTS			
1.	Rubber & Rubber Products	Density Compression test	IS 3400 (Part-9) 2014 IS 3400 (Part-10) 77 (RA 2008)	1.0 gm/cm ³ to 2.5 gm/cm ³ 3% to 80%
		Rubber Hardness Shore A deg	IS 3400 (Part-23) 2002 (RA 2012)	10° to 90° Shore A deg
		Adhesion Strength	IS 3400(Part-5):1986 (RA 2008)	15 N to 4000 N
		Accelerated Ageing by Heating Test	IS 3400(Part-4):2012	40 °C to 225 °C
		Tensile Strength before & after Ageing	IS 3400(Part-1):2012 IS 7016(Part-2):1981 (RA 2008)	50 N to 4000 N Breaking Load

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