

Laboratory	Aroma Laboratories (India) Pvt. Ltd., 20A, Channamal Park, Punjabi Bagh (East), New Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	08.06.2015
Certificate Number	T-1915	Valid Until	07.06.2017
Last Amended on	-	Page	1 of 5

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. TEXTILE MATERIALS				
1.	Textile & related products (Textile Yarn, Fabric & Garments)	Breaking Strength (Revelled Strip)	IS 1969 (Part 1): 2009 IS 7016 (Part 2): 1981 (RA 2008)	40 N to 4500 N (4 kg to 450 kg) 40 N to 9500 N (4 kg to 950 kg)
		Linear Density of Yarn	IS 1315: 1977 (RA 2010), Amd. 1	5 tex to 1000 tex
		Threads/unit length of woven fabric	IS 1963: 1981 (RA 2004)	5 /dm to 1000 /dm
		Count of yarn removed from fabrics	IS 3442: 1980 (RA 2008), Amd. 1	5 tex to 1000 tex
		Weight per unit area & Weight per unit length	IS 1964: 2001 (RA 2010) IS 7016 (Part 1): 1982 (RA 2008), Clause 4.2	10 g/m ² to 1000 g/m ²
		Dimensional Stability	IS 2977: 1989 (RA 2010), Amd. 1	(-)10 % to (+)20 %
		Bursting Strength of fabric	IS 1966 (Part 1): 2009	1 kg/cm ² to 20 kg/cm ²
		Water Repellency Test (Spray Test)	IS 390: 1975 (RA 2013)	Qualitative (Rating: 0 to 100)
		Pilling Resistance Test	IS 10971: 1984 (RA 2010), Amendment No. 1	Qualitative (Rating: 1 to 5)
		Crease Recovery Angle Test	IS 4681: 1981 (RA 2008)	15° to 280°
		Water Proofness Test	IS 7016 (Part 7): 2009 ISO 1420: 2001	5 cm to 100 cm
		Tear Strength	IS 7016 (Part 3): 1981 (RA 2008), Amendment No. 1, Method 'B' IS 6489: 1993 (RA 2008) ISO 9290: 1990	320 g to 5400 g

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Last Amended on	-	Page	2 of 5

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	Textile & related products (Textile Yarn, Fabric & Garments)	Cone Test	IS 2089: 1977 (RA 2012), Amendment Nos. 1 & 2 (Clause 3.3.7.2 & 6.3) IS 7941: 1976 (RA 2010) IS 6803: 1972 (RA 2012) (Clause 3.2.6.3)	Qualitative (0 to 400) ml
		Length & Width of woven fabric	IS 1954: 1990 (RA 2007)	5 cm to 200 cm
		Resistance to Cold	IS 5915: 1970 (RA 2012), Amendment Nos. 1 & 2 (Clause 4.3.9) IS 6110: 1983 (RA 2012), Amendment Nos. 1, 2 & 3 (Clause 5.2.4) DMSRDE/TEX-3(P)/2001/1, Appendix A	Qualitative (-) 5°C to (-) 40°C
		Autoclaving Test of Single texture rubberised waterproof fabric	IS 5915: 1970 (RA 2012), Amendment Nos. 1 & 2 (Clause 4.3.8), Appendix B	Qualitative
II.	PLASTICS, RUBBER & LEATHER			
1.	Vulcanized Rubber & Allied products	Tensile Strength	IS 3400 (Part 1): 2012 ISO 37: 2011	(2 to 40) MPa or N/mm ² (20 to 400) kg/cm ²
		Elongation at Break		10 % to 1500 %
		Shore-A Hardness	IS 3400 (Part 23): 2002 (RA 2012) ISO 7619: 1997 ASTM D 2240: 05 (2010)	30 to 100
		IRHD Hardness	IS 3400 (Part 2): 2014, Method N ISO 48: 2010	30° to 100°

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Last Amended on	-	Page	3 of 5

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	Vulcanized Rubber & Allied products	Density	IS 3400 (Part 9): 2014, Method A ISO 2781: 2008	0.5 g/cc to 3 g/cc
		Adhesion of Rubber to textile fabric	IS 3400 (Part 5): 1986 (RA 2008), Amendment No. 1	0.2 kg to 7 kg
		Accelerated Ageing Test	IS 3400 (Part 4): 2012 ISO 188: 2011	Qualitative
		Abrasion Resistance (Non-rotating Test Piece) Abrasion loss (Relative Volume Loss) Abrasion Resistance index	IS 3400 (Part 3): 1987 (RA 2008)	30 mm ³ to 400 mm ³
			ISO 4649: 2002, Method A	25 % to 250 %
		Tear Strength (Angular Test Piece)	IS 3400 (Part 17): 1974 (RA 2008)	(10 to 100) kg/cm thickness
		Compression Set at Constant Strain	IS 3400 (Part 10): 1977 (RA 2008)	5 % to 70 %
		Resistance to liquids	IS 3400 (Part 6): 2012 ISO 1817: 2011	(-) 10 % to (+) 150 %
		Resistance to acid & alkali	IS 5915: 1970 (RA 2012), Amendment Nos. 1 & 2	Qualitative
		Resistance to Xylole	IS 6110: 1983 (RA 2012), Amendment Nos. 1, 2 & 3 (Clause 5.3.5)	Qualitative
	Resistance to Cold	IS 7016 (Part 10): 1997 (RA 2008) ISO 4675: 1990 IND/TC/3841 (b): 2003	(-) 5°C to (-) 40°C	

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Last Amended on	-	Page	4 of 5

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2.	PPE-Footwear	Thickness	IS 3400 (Part 1): 2012 ISO 37: 2011 IS 15298 (Part 1): 2011 (Clause 8.1.2) ISO 20344: 2004	0.5 mm to 25 mm
		Flexing Resistance, Cut growth at the end of 30,000 flex cycles (Bennewart Flexing)	IS 15298 (Part 1): 2011 (Clause 8.4.2) ISO 20344: 2004	1 mm to 50 mm
		Insulation against heat / Heat insulation of sole complex	IS 15298 (Part 1): 2011 (Clause 5.12) ISO 20344: 2004	1 °C to 50 °C
		Hydrolysis Test, Cut growth at the end of 1,50,000 Flex cycles (at -5°C)	IS 15298 (Part 1): 2011 (Clause 8.5) ISO 20344: 2004 ISO 5423: 1992, Annexure C & E	1 mm to 25 mm Upto 1000%
		Tear Strength by Trouser Test Piece Method	IS 15298 (Part 1): 2011 (Clause 8.2) ISO 20344: 2004 ISO 34-1: 2010, Method A	(2 to 30) kN/m thickness
		Upper/Outsole Bond Strength and Interlayer Bond Strength (except Type - A)	IS 15298 (Part 1): 2011 (Clause 5.2.3.1) ISO 20344: 2004	(1 to 50) N/mm width
3.	Leather & Leather Products	Thickness	LP-1 of IS 5914: 1970 (RA 2009), Amendment No. 1	0.1 mm to 10 mm
		Apparent Density	LP-5 of IS 5914: 1970 (RA 2009), Amendment No. 1	0.1 g/cc to 2.0 g/cc

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Last Amended on - **Page** 5 of 5

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	Leather & Leather Products	Tensile Strength & Elongation at break	LP-6 of IS 5914: 1970 (RA 2009), Amendment No. 1	2 MPa to 50 MPa (20 to 500) kg/cm ² 5 % to 100 %
		Double Hole Stitch Tear Strength	LP-8 of IS 5914: 1970 (RA 2009), Amendment No. 1	(5 to 400) kg/cm thickness
		Tongue Tear Strength (Initial Maximum)	LP-9 of IS 5914: 1970 (RA 2009), Amendment No. 1	(5 to 250) kg/cm thickness
		Absorption of water (Gravimetric Method)	LP-11 of IS 5914: 1970 (RA 2009), Amendment No. 1	5 % to 100 %
		Resistance to Cracking	LP-13 of IS 5914: 1970 (RA 2009), Amendment No. 1	Mandrel No.: 1 to 8
		Flexing Endurance	LP-19 of IS 5914: 1970 (RA 2009), Amendment No. 1	(100 to 1,50,000) cycles
		Tearing Strength	LP-7 of IS 5914: 1970 (RA 2009), Amendment No. 1	(1 to 350) kg/cm thickness

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