

Laboratory	TUV Rheinland (India) Pvt. Ltd., Plot No. 328, Udyog Vihar, Phase-IV, Gurgaon, Haryana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	15.04.2015
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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 Detection
I. TEXTILE MATERIALS				
1.	Textile & Textile Auxiliaries	Mass per unit area (Weight)	ISO 3801: 1977/ SASO 1938: 2001/ AS2001.2.13: 1987 BS EN 12127: 1998 EN ISO 12127: 1998 ASTM D3776/ D3776:09A BS 2471: 2005	5 g/m ² to 1000 g/m ²
		Tensile Strength	BS EN ISO 13934-1: 2013 EN ISO 13934-1: 2013	
		Raveled Strip	ISO 13934-1: 2013 ASTMD 5035 : 2011 AS 2001.2.3.1: 2001 SASO 2139: 2003 IS 1969 (Part 1): 2009 IS 1969 (Part 2): 2010	5 N to 4500 N
		Grab	BS EN ISO 13934-2: 2014 EN ISO 13934-2: 2014 ISO 13934-2: 2014 AS 2001.2.3.2: 2001 ASTM D5034-09: 2013	5 N to 4500 N
		Tear strength By Elmendorf Apparatus	BS EN ISO 13937-1: 2000 /EN ISO 13937-1: 2000 /ISO 13937-1: 2000 AS 2001.2.8: 2001 IS 6489 (Part 1): 2011 ASTM D1424: 09(2013)	240 gm to 1360 gm 480 gm to 2720 gm 960 gm to 5440 gm
		Single Rip (Single tear)	BS EN ISO 13937-2: 2000 ISO 13937-2: 2000 ASTM D2261: 2013 IS 6489 (Part 2): 2011	5 N to 4500 N

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	Textile & Textile Auxiliaries	Resistance to Seam Slippage	BS EN ISO 13936-1: 2004 BS EN ISO 13936-2: 2004 ISO 13936-1: 2004 ISO 13936-2: 2004 IS 13936 (Part 1): 2004 IS 13936 (Part 2): 2004 ASTM D 434: 95 BS 3320: 1988	5 N to 4500 N
		Seam Strength	BS EN ISO 13935-1: 2014 BS EN ISO 13935-2: 2014 IS 13935 (Part 1): 1999 IS 13935 (Part 2): 1999/ AS2001.2.20: 2004 ASTM D 1683/D1683M: 11 BSEN ISO 13938-1: 1999	5 N to 4500 N
		Bursting Strength	BS EN ISO 13938-2: 1999 EN ISO 13938-2: 1999 ISO 13938-2: 1999 ASTM D3786/ D3786: 2013	137.5 kPa to 1375 kPa
		Pilling resistance-		
		Pill Box	BS 5811: 1986 BS EN ISO 12945-1: 2001 EN ISO 12945-1: 2000 ISO 12945-1: 2000 BS EN ISO 12945-2: 2000 EN ISO 12945-2: 2000 ISO 12945-2: 2000 ASTM D4970/ D4970: 10\ ASTM D3512/ ASTM D3512: 10 (2014)	Qualitative (1 to 5 Grade)
		By Martindale Tester		
		By Random Tumble pilling Tester		

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	Textile & Textile Auxiliaries	Abrasion Resistance	BS EN ISO 12947-1: 1999 BS EN ISO 12947-2: 1999 EN ISO 12947-2: 1998 ISO 12947-2: 1998 BS EN ISO 12947-3: 1999 EN ISO 12947-3: 1998 BS EN ISO 12947-4: 1999 EN ISO 12947-4: 1998 ISO 12947-4: 1998 ASTMD 4966: 2010 IS 12673 (Part 1): 2013 IS 12673 (Part 2): 2013 IS 12673 (Part 3): 2014 IS 12673 (Part 4): 2014	16 to 999999 Cycles 10 mg to 450 mg Qualitative
		Dimensional Stability to Washing	BS EN ISO 26330: 1994 EN ISO 26330: 1993 ISO 6330: 1984 BS EN ISO 6330: 2001 EN ISO 6330: 2000 ISO 6330: 2000/ AS2001.5.4: 2005 ISO 6330: 2012 BS EN ISO 25077: 1994 EN ISO 25077: 1993 ISO 5077: 2007/ SASO 2140: 2003 IS 15370: 2005 AATCC 135: 2012 AATCC 150: 2012 GB/T 8628: 2013/ GB/T 8629: 2001 / GB/T 8630: 2013	(-)15 % to (+)15 %

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	Textile & Textile Auxiliaries	Construction Woven Fabric	ASTM D 3775: 2012 ISO 7211-2: 1984/ DIN EN 1049-2: 1994 BS 5441: 1988	2 to 250 ends & picks / inch
		Knitted Fabric	ASTM D –3887: 2008 SASO 183/GS 1269: 2002	2 to 250 Wales & course per inch
		Water Repellency	AATCC -22: 2010 ISO 4920: 2012	Qualitative (Grade 0 to 5) (Visual)
		Spirality	AATCC –179: 2012 ISO 16322-1: 2005 ISO 16322-2: 2005+Cor1 2007 ISO 16322-3: 2005 IS 16322 (Part 1): 2005 IS 16322 (Part 2): 2005 IS 16322 (Part 3): 2005	1 % to 20 %
		Surface Water Absorption of Terry Fabrics\	ASTMD -4772: 2014	0 to 50 ml
		Stretch and Recovery	ASTMD 2594: 2012/ EN ISO 14704-1: 2005/ ASTM D 3107-07: 2011	Upto 200 %
		Zipper Test	BS 3084: 2006 NF G 91 – 005: 1984	5 N to 1500 N
		Snagging Resistance	ASTMD-3939/D3939M: 13	Qualitative (1 to 5 Grade)
		Flammability	16 CFR 1615/1616	1 inch to 10 inch

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	Textile & Textile Auxiliaries	Domestic oven gloves- Requirements and test method Safe Ironing Temperature Construction Thermal Insulation Dimensions	BS 6526: 1998 Clause 4.2.1 Clause 4.2.2 Clause 4.3 Clause 4.4	$\geq 220^{\circ}\text{C}$ Visual Assessment for deformation Temperature rise : Less than 30°C Minimum dimension Specifications.
2.	Textile & Textile Auxiliaries / Metal & Alloys / Toys	Flammability Apparels (45°AFC) Flammability of Solid Toys Vertical Flammability of Carpets & Rugs	16 CFR 1610: 2012 ASTM D1230- 10 ASTM F 963-11 16 CFR 1500.44: 2012 EN 71-2: 2014 (5.2/5.3/5.4) IS 9873 Part 2: 2012 5.5,5.6 ISO 6940: 2004/ IS 15589: 2005 ISO 6941: 2003/ IS 15590: 2005 IS 15758 (Part 4): 2007 BS EN /ISO 15025: 2002 BS 5722: 1991/ BS 5438: 1989/ EN 14878: 2007/ BS EN 1103: 2005/ BS EN 1101: 1996/ ISO 1101/ EN 1102: 1996 16 CFR 1630 / 31	1 s to 1000 s 1 mm/s to 1000 mm/s 1 mm/s to 1000 mm/s Qualitative Qualitative

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3.	Textile & Textile Auxiliaires/ Toys and Children Product	Sharp point & Sharp Edges	ASTM F 963 –11(4.7 &4.9) 16 CFR 1500.48: 2012 16 CFR 1500.49: 2012 EN 71 (Part 1): 2014 (4.7) EN 71 (Part 1): 2014(4.8) IS 9873 (Part 1): 2012 (5.8,5.9, 5.24)	Qualitative
		Small Parts (Chocking Hazards)	16 CFR 1501: 2012 EN 71 (Part 1): 2014 (8.2) IS 9873 (Part 1): 2012 (5.2, 5.24)	Qualitative
		Test for Simulating use and Abuse of Toys and other Articles Intended for use by Children (Torque & Tension Test) Children of 18 Months of Age or less Children over 18 Months but not over 36 Months Age Children over 36 Months but not over 96 Months Age	16 CFR 1500.51: 2012, 16 CFR 1500.52: 2012 16 CFR 1500.53: 2012 ASTM F963-11 (Section 8.5 to 8.10) EN 71 (Part 1): 2014 (8.3 to 8.11) IS 9873 (Part 1): 2012 (5.24.6.4)	Qualitative
4.	Textile & Textile Auxiliaires / Children Product	Drawstrings or Ties on Children Outerwear	16 CFR 1120 BS EN ISO 14682 : 2014	Qualitative
5.	Footwear Metallic Accessories	Corrosion Resistance	ISO 22775: 2004 Method 2	Qualitative Assessment
6.	Footwear	Seam Strength in Upper and lining Materials	BS 5131 (Part 5): 1980 Section 5.13	0.5 N/mm to 40 N/mm

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	Footwear	Strength of Buckle Fastening Assemblies	BS 5131 (Part 5): 1981 Section 5.11	5 N to 1000 N
		Sole Bond Peeling Strength	BS 5131 (Part 5): 1978 Section 5.4 BS EN ISO 20344: 2011 BS EN ISO 17708: 2003	0.2 N/mm to 20 N/mm
		Strength Of Toe Post	SATRA TM 118: 1992	5 N to 500 N
7.	Footwear / Sole materials	Out Soles-Flex resistance (Bennewart)	ISO 17707: 2005 EN ISO 17707: 2005 BS EN ISO 17707: 2005	100 Flexes to 30000 Flexes Visual assessment for Longest Crack
II.	PLASTICS, RUBBER & LEATHER			
1.	Plastics, Rubber			
a.	Footwear (Rubber)	Abrasion resistance (Rotating Cylindrical drum device)	ISO 4649: 2010 BS ISO 4649: 2010	0.1 mm ³ to 500 mm ³
2.	Leather	Tensile Strength	ISO 3376: 2011 BSEN ISO 20344: 2011 Clause 6.4 ISO 17706: 2003	5 N to 4500 N
		Tear Strength	BSEN ISO 20344 : 2011 Clause 6.3	5 N to 4500 N
		Single Edge Tear Double Edge Tester	ISO 17696: 2004 ISO 3377-1: 2011 ISO 3377-2: 2002	
		Thickness	BS EN ISO 2589: 2002 ISO 2589: 2002	0.5 mm to 1.0 mm

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	Leather	Adhesion of Finish	ISO 11644: 2009 BS EN ISO 11644: 2009	(0.5 N to 50 N)/ 10 mm
		Abrasion Resistance (Martindale)	BS EN 13520: 2002	Visual Assessment For break down
3.	Personal Protective Equipment - Gloves	Protective gloves against mechanical risks Requirements	EN 388 : 2003 Section 4	Upto 8000 cycles Level 1 to 5
		Abrasion Resistance	EN 388 : 2003 Section 6.1	Cut Resistance Index
		Cut resistance	EN 388 : 2003 Section 6.2	Upto 20
		Tear resistance	EN 388 : 2003 Section 6.3	Upto 75 N Level 1 to 5
		Puncture resistance	EN 388 : 2003 Section 6.4	Upto 150 N Level 1 to 5
4.	Protective Gloves	General Requirements and Test Methods	EN 420: 2003 +Amd. 1: 2009 Section 4	
		Size and Measurement	EN 420: 2003 +Amd. 1: 2009 Section 6.1	1 mm to 600 mm
		Gloved Finger dexterity	EN 420: 2003 +Amd. 1: 2009 Section 6.2	Qualitative (Visual Observation)
		Water Vapour Transmission/absorption	EN420: 2003+Amd. 1: 2009 Section 6.3 & 6.4	0.5 g/cm ² .h to 50 g/cm ² .h

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