

<b>Laboratory</b>	<b>Regional Laboratory, Textile Committee, P. Balu Road, Prabhadevi Chowk, Prabhadevi, Mumbai, Maharashtra</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>08.12.2014</b>
<b>Certificate Number</b>	<b>T-0288</b>	<b>Valid Until</b>	<b>07.12.2016</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>1 of 4</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
<b>I.</b>	<b>TEXTILE &amp; RELATED PRODUCTS</b>			
<b>1.</b>	<b>Wool Fibre</b>	Wool fibre diameter	IS 744:2000 (R 2010)	10 micron to 100 micron
<b>2.</b>	<b>Cotton Fibre</b>	HVI and ICC mode Micronaire, Length, Length uniformity, Strength, Elongation. Short fibre Index Colour	ASTM D: 5867-2012	Upto 8 Upto 40 mm Upto 60 % Upto 50 g/tex Upto 10 % Upto 20 11-1 to 85-4
		Maturity of cotton fibre by Sodium Hydroxide swelling method	IS 236: 1968 (R 2010)	25 % to 100 %
		Lint and trash content of cotton	IS 4871:1968 (R 2008)	1 % to 20 %
<b>2.</b>	<b>Yarn</b>	Linear density of yarns spun on cotton system	IS 1315:1977 (R 2008)	1 <sup>s</sup> to 130 <sup>s</sup>
		Yarn strength parameters of yarns spun on cotton system	IS 1671:1977 (R 2004)	20 N to 8000 N
		Twist in yarn Part 1: Direct counting method	IS 832 (Part 1):2011 ASTM D: 1422-2013 ISO 2061-1995	1 TPM to 2360 TPM
		Part 2: Untwist/Re-twist method for single spun yarn	IS 832 (Part 2):2011 ASTM D: 1423-2002 (R 2008)	
		Unevenness of Textile strand using capacitance method	ISO 16549:2004(E)	1 % to 40 %

<b>Laboratory</b>	<b>Regional Laboratory, Textile Committee, P. Balu Road, Prabhadevi Chowk, Prabhadevi, Mumbai, Maharashtra</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>08.12.2014</b>
<b>Certificate Number</b>	<b>T-0288</b>	<b>Valid Until</b>	<b>07.12.2016</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>2 of 4</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
	<b>Yarn</b>	Imperfections per unit Length	ISO 16549:2004(E)	1 to 9999/1000 m
<b>3.</b>	<b>Yarn &amp; Chords</b>	Breaking Load and elongation at break of single thread	IS 1670:1991(R 2007) ASTM D: 2256-97 ISO: 2062-1993	Strength: 20 cN to 80 N Elongation:1 % to 50 %
<b>4.</b>	<b>Fabric/RMG /Made up</b>	Threads per unit length in woven fabrics	IS 1963:1981 (R 2004) ASTM D: 3775- 2012 ISO 7211-2 - 1984 BSEN 1049-2-1994	100 /dm to 1000/ dm
		Twist of yarn removed from fabric	IS 832:1985 (R 2010) ASTM D: 1422-2013 ISO 7211-4 -1984	1 TPI to 2360 TPI
		Breaking strength / force and elongation of textile fabrics	IS 1969 (Part 1) :2010 IS 1969 (Part 2) :2010 ASTM D: 5034-2009 (Grab) (R 2013) ASTM D: 5035-2011 (Strip) (R 2008) ISO 13934-1-2013 (Strip) ISO 13934-2-2014 (Grab)	Strength: 20 N to 8000N Elongation: 1% to 50%
		Linear density of Thread removed from fabric	TC/ LAB TM-02	5 Tex to 600 Tex (1s to 120 <sup>s</sup> ) 10 D to 1000 D
		Mass per unit length and mass per unit area of fabric	TC/ LAB TM-03 IS 1964-2001(R 2010) ISO 3801-1977 BSEN 12127-1998 ASTM D: 3776-09 (R 2013)	10 to 6000 g/m <sup>2</sup>
		Length and width of woven fabric	IS 1954:1990 (R 2007) ASTM D: 3773- 2010	Width: 1 cm to 2.5 m

<b>Laboratory</b>	<b>Regional Laboratory, Textile Committee, P. Balu Road, Prabhadevi Chowk, Prabhadevi, Mumbai, Maharashtra</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>08.12.2014</b>
<b>Certificate Number</b>	<b>T-0288</b>	<b>Valid Until</b>	<b>07.12.2016</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>3 of 4</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
	<b>Fabric/RMG /Made up</b>	Fabric propensity to surface fuzzing and to pilling (Pilling Box method)	BSEN ISO-12945-1-2001 ISO-12945-1-2000 IS 10971 – 1 : 2011	Qualitative (Grade 1 to 5)
		Abrasion Resistance of textile fabric (Martindale method)	ASTM D: 4966 – 2012 ISO 12947- 1-1998 ISO 12947- 2-1998 ISO 12947- 3-1998 ISO 12947- 4-1998	1.10 to 99999 movements 2.Weight loss upto 50% 3. Colour Change Grade 1 to 5
		Tearing strength of fabric by tongue (single rib)	ASTM D 2261 – 2013	5 N to 80 N
		Tearing Strength of fabric by falling pendulum (Elmendorf)	ASTM D 1424 – 2009 (RA 2013) ISO: 13937 –1-2000	3 N to 50 N
		Stiffness of fabrics	IS 6490-1971 (RA 2008)	1 cm to 8 cm bending
		Recovery from creasing of textile by measuring the angle of recovery	IS 4681-1981 (RA 2004)	20 ° to 180 °
		Flammability and flame resistance to textile fabrics (Inclined)	IS 11871-1986 (RA 2004) (Method B)	1s to 300 s
		Flammability and flame resistance to textile fabrics (Vertical)	IS 11871-1986 (RA 2004) (Method A)	Burning length: 0 to 31.5 cm After flame & After glow: 1s to 300 s

**Laboratory** Regional Laboratory, Textile Committee, P. Balu Road,  
 Prabhadevi Chowk, Prabhadevi, Mumbai, Maharashtra  
**Accreditation Standard** ISO/IEC 17025: 2005  
**Discipline** Mechanical Testing **Issue Date** 08.12.2014  
**Certificate Number** T-0288 **Valid Until** 07.12.2016  
**Last Amended on** - **Page** 4 of 4

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	<b>Fabric/RMG /Made up</b>	Slippage resistance of yarns at a seam in woven fabrics - Part 1: Fixed seam opening method Part 2: Fixed load method	ISO 13936-1: 2004  ISO 13936-2: 2004	10 N to 8000 N

~~-X-X-X-X-X-X-X-X-X-X-X-X-~~