

**Laboratory** Regional Laboratory, Textiles Committee, 8 & 9, Thiru Vi Ka Nagar,  
1st Street, College Road, Tirupur, Tamil Nadu

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

**Certificate Number** TC-7676

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**Validity** 06.08.2018 to 05.08.2020

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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.	<b>TEXTILE (WOVEN &amp; NON WOVEN)</b>			
1.	<b>Fibres, Yarn</b>	Moisture content	IS 199:1989 (RA 2010)	Upto 50%
2.	<b>Textiles</b>	Identification of fibres	IS 667:1981 (RA 2010) AATCC 20 :2013	Qualitative
		Quantitative Chemical Analysis of Binary Mixtures	(Silk and wool) IS 9889:1988 (RA 2010) ISO 1833-18:2006	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures	(Cotton + Viscose) IS 1889 (Part 4): 1979 (RA 2010) ISO 1833-5:2006	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures:	(Nylon + Others) IS 6503:1998 (RA 2010) IS 2005:1988 (RA 2013) ISO 1833-7:2017	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures:	(Protein fibre + Others) IS 2006:1988 (RA 2010) ISO 1833-4:2017	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures	(Polyester + Cotton) and (Polyester + Viscose) IS 3416 (Part 1): 1988 (RA 2008) ISO 1833-11:2017	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures:	(Acrylic + Others) IS 3421:1988 (RA 2010) ISO 1833-12:2006	0.1 % to 100 %
		Quantitative Chemical Analysis of Binary Mixtures	(Polyolefin + others) IS 9896:1981 (RA 2008)	0.1 % to 100 %
		Quantitative analysis of mixtures	AATCC 20 A:2014	0.1 % to 100 %
		% Composition by	TC/LAB-TM-15/MSP 5.4	0.1 % to 100 %

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		physical separation	Issue 4 dated 01.08.05 AATCC 20 A:2017	
		Colour fastness to washing	IS / ISO 105 C10:2006 ISO 105 C10:2006 BSEN ISO 105-C10:2007	Qualitative (Grade 1 to 5)
		Colour Fastness to Laundering	ISO 105 C06-2010 BS EN ISO 105 C06:2010 AATCC 61-1A:2013	Qualitative (Grade 1 to 5)
		Colour fastness to dry cleaning	IS 4802:1988 (RA 2010) ISO 105-D01:2010 AATCC 132:2013	Qualitative (Grade 1 to 5)
		Colour fastness to Xenon Arc Lamp	AATCC 16.3 (Option 2): 2014 IS 2454:1985 (RA 2010) ISO 105 B02:2014, BS EN ISO 105 B02: 2014	Grade 1 to 5 Class 1 to 8
		Colour fastness to organic solvents	IS 688:1998 (RA 2009) ISO 105-X05:1994	Qualitative (Grade 1 to 5)
		Colour fastness to rubbing with organic solvent	ISO 105-D02:1993 (RA 2016)	Qualitative (Grade 1 to 5)
		Colour fastness to rubbing / Crocking	IS 766:1988 (RA 2016) AATCC 8 :2016 ISO 105 – X 12 -2017	Qualitative (Grade 1 to 5)
		Colour fastness to perspiration	IS 971:1983 (RA 2009) BSEN ISO 105- E-04 :2013 ISO 105 E04:2013 AATCC 15:2013 DIN EN ISO 105 E04:2013	Qualitative (Grade 1 to 5)
		Colour fastness to Water	IS 767:1988 (RA 2009) ISO 105- E01:2013 AATCC-107:2013 BS EN ISO 105- E01:2013	Qualitative (Grade 1 to 5)
		Colour fastness to Bleaching	IS 762:1988 (RA 2009) ISO 105 N01:1993	Qualitative (Grade 1 to 5)

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		(Hypochlorite)		
		Colour fastness to Sea water	IS 690:1988 (RA 2009) ISO 105 E02 :2013	Qualitative (Grade 1 to 5)
		Colour fastness to artificial saliva	DIN 53160-1:2010	Qualitative (Grade 1 to 5)
		pH of aqueous extract	IS 1390:1983 (RA 2009) ISO 3071:2005 AATCC 81:2016	1 to 14
		Dimensional Changes for soaking in water	IS 2977:1989 (RA 2010) (other than wool woven & knitted)	(-)50 % to 50 %
		Dimensional Changes to Home Laundering	AATCC 135 :2015 ISO 3759 :2011, BS EN 25077: 1994 DIN EN ISO 6330 :2012, ISO 5077 : 2007	Upto 50%
		Skewness change in fabric and garments	AATCC-179;2017 ISO 16322 : 2005	Upto 20 %
		Smoothness appearance	AATCC 124:2014	Qualitative (Grade 1 to 5)
		Barium Activity	IS 1689:1973 (RA 2013) AATCC 89:2017	100 to 180
<b>II.</b>	<b>HAZARDOUS &amp; RESTRICTED CHEMICALS</b>			
<b>1.</b>	<b>Textiles &amp; Accessories</b>	Presence of Poly Vinyl Chloride	In House Method TC /LAB/TM 16/MSP 5.4 Issue No. 4, Dt. 01.08.2005	Qualitative
<b>2.</b>	<b>Textile Accessories (Like Zips, Buttons Eyelets)</b>	Screening test for Nickel Release	PD CR 12471:2002	Qualitative
<b>3.</b>	<b>Textiles</b>	Free & hydrolyzed Formaldehyde	ISO 14184-1 -2011 BS EN ISO 14184-1-2011	16 mg/kg to 3500 mg/kg

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**MECHANICAL TESTING**

<b>I. TEXTILE MATERIALS</b>				
<b>1.</b>	<b>Yarn</b>	Linear density	IS 1315:1977 (RA 2010) ISO 2060:1994 ASTM D 1907M:2012	5 to 590 tex 1 <sup>S</sup> Ne to 120 <sup>S</sup> Ne
		Lea Strength	IS 1671:1977 (RA 2014) ASTM D 1578:2016	80 N to 2200 N (20 lb to 485 lb)
		Twist	IS 832 (Part 1 & Part 2): 2011 ASTM D 1422:2013 ASTM D 1423:2016 ISO 2061:2015	400TPM to 2300 TPM (10 TPI to 60 TPI)
		Unevenness of Textile strands-Capacitance method (U%)	ASTM D 1425-M :2014 ISO 16549:2004	1 to 29
		Imperfections per unit Length	ISO 16549:2004	0 to 9999/km.
		Grading spun yarns for appearance	ASTM D 2255-M:2009(2013)	Grade A <sup>+</sup> to Below D Index 60 to 130
		i) Balance of twist ii) Single thread strength of sewing thread	ASTM D 204:2002(2016)e1	i) 0 to 50 ii) 1 N to 30 N 10 gf to 3 kgf
<b>2.</b>	<b>Yarn &amp; Chords</b>	Breaking Load and elongation at break of single thread	IS 1670:1991 (RA 2012) ASTM D: 2256-M:2010 ISO 2062:2009	1 N to 90 N 100 gf to 9 kgf 2 % to 50 %
<b>3.</b>	<b>Yarn from Fabric</b>	Twist of yarn removed from fabric	IS 832 (Part 1&2):2011 ISO 7211-4-1984	400TPM to 2300 TPM (10TPI to 60 TPI)
<b>4.</b>	<b>Fabric/ Garments and Apparel/ Made up</b>	Threads per unit length in woven fabrics	IS 1963:2004 (RA 2008) ASTM D: 3775 :2017 ISO 7211-2 -1984 BSEN 1049-2-1994	39/dm to 1000 /dm

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		Breaking Load and elongation - Grab	IS 1969-2:2010 ISO 139-2:1999 ISO 13934-2 -2014 ASTM D 5034:2009 (2013)	100 N to 2000 N 2 % to 50 %
		Breaking Load and elongation - Strip	IS 1969-1:2009/ ISO 13934-1:1999 ISO 13934-1: 2013 ASTM D: 5035 :2011(2015)	100 N to 2000 N 2 % to 50 %
		Linear density of yarns removed from fabric	TC/ LAB TM-02/MSP 5.4 Issue 4 dated 01.08.2005	5 Tex to 590 Tex 1 <sup>s</sup> Ne to 120 <sup>s</sup> Ne
		Mass per unit area/unit length of fabrics (Weighing Method)	TC/ LAB TM-03/MSP 5.4 Issue 4 dated 01.08.2005 IS 1964 :2001-Method A (RA 2010) ISO 3801:1977-Method 5 BSEN 12127:1998 Clause 8.3 ASTM D 3776-M: 2017 Option C	25 gsm to 1000 gsm
		Length and width of woven fabrics Length Width	IS 1954 : 1990 (RA 2007) ASTM D: 3773-M: 2014 ASTM D: 3774: 2016	Upto 100 m Upto 300 cm
		Abrasion Resistance (Martindale method)	ASTM D: 4966 : 2012 (Option 01, 2 3) ISO 12947- 2 -2016 (Specimen breakdown) ISO 12947- 3 -1999 (Mass loss) ISO 12947- 4 -1998 (Appearance change)	1000 to 99999 rubs Mass loss 0.3 % to 40.0 % Qualitative (Grade 1 to 5)
		Pilling Resistance and other Related Surface Changes –Martindale Tester	ASTM D: 4970-M:2016	Qualitative (Grade 1 to 5)

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		Fabric propensity to surface fuzzing and to pilling (Modified Martindale Method)	EN ISO 12945-2-2000	Qualitative (Grade 1 to 5)
		Fabric propensity to surface fuzzing and to pilling (Pilling box method)	BS EN ISO 12945-1-2001 ISO 12945-1-2000	Qualitative (Grade 1 to 5)
		Pilling Resistance of Fabrics	IS 10971:2011	Qualitative (Grade 1 to 5)
		Pilling Resistance and other Related Surface Changes –Random Tumble Pilling Tester	ASTM D 3512-M:2010	Qualitative (Grade 1 to 5)
		Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant Rate of Extension Tensile Testing Machine)	ASTM D 2261:2013	50N to 900 N 1 kgf to 9 kgf
		Tear Force using Ballistic Pendulum Method (Elmendorf)	IS 6489-1:2011 ISO 13937-1-2000 ISO: 13937-1-2000	1.6N to 58 N 0.16kgf to 5.8kgf
		Tearing Strength of Fabrics by Falling Pendulum (Elmendorf – Type) Apparatus	ASTM D 1424 :2009(2013)	1.6N to 58 N 0.16kgf to 5.8kgf
		Tearing Strength of Fabrics by Trapezoid Procedure	ASTM D 5587:2015	10N to 90 N 1 kgf to 9 kgf
		Tear Force of wing-shaped test specimens (Single tear method)	ISO 13937-3-2000	10N to 90 N 1 kgf to 9 kgf

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		The resistance of tearing of woven fabrics by the wing-rip technique	BS 4303:1968	10N to 90 N 1 kgf to 9 kgf
		Slippage resistance of yarns at a seam in woven fabrics	BS 3320:1988 ISO 13936-1:2004 (Fixed seam opening method) ISO 13936-2:2004 (Fixed load method) ISO 13935-2:2014	10 N to 200 N 1 kgf to 20 kgf
		Maximum force to seam rupture using the grab method	ISO 13935-2:2014	10 N to 200 N 1 kgf to 20 kgf
		Flammability (Inclined)	IS 11871:1986 (RA 2004)	Upto 300 s

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