

Laboratory Intertek India Private Limited, No. 607, 608, 6th Floor, Tichel Bio Park,
Phase II, CSIR Road, Taramani, Chennai, Tamil Nadu

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6212 (in lieu of T-3602, T-3603)

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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.	HARZARDOUS & RESTRICTED CHEMICALS			
1.	1. Leather products 2. Textile & Textile products	Detection of certain aromatic amines derived from Azo Colorants (Total 24 Aryl amines as listed) O-Toluidine (95-53-4) 2, 4Xylidine (95-68-1) O -Anisidine(90-04-0) P- Chloroaniline (106-47-8) P -Kresidine (120-71-8) 2,4,5Trimethylaniline (137-17-7) 4 Chlor -O-Toluidine(95-69-2) 2,4Tolyenediamine (95-80-7) 2,4 Diaminoanisole (615-05-4) 2 Naphthalamine (91 - 59 - 8) 2 Aminonitro-4 Toluene (99-55-8) 4 Aminobiphenyl (92-67-1) P-Aminoazobenzene (60-09-03) 4,4 Oxydianiline (101-80-4)	EN ISO 14362-1: 2017 EN ISO 14362-3: 2017 GB/T 19942: 2005 ISO 17234-1: 2015 ISO 17234-2: 2011	5.0mg/kg to 300mg/kg

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		Benzidine (92-87-5) 4,4 Diamino -diphenyl methane (101-77-9) O Amino azo toluene (97-56-3) 4,4 Diamino-3,3 Dimethyl diphenyl amine (838-88-0) 3,3 Dimethyl Benzidine (119-93-7) 4, 4 Thiodianiline (139-65-1) 3,3 Dichlorobenzidine (91- 94 -1) 4, 4 Methylene -Bis-2 Chloroaniline (101-14-4) 3, 3 DimethoxyBenzidine (119-90-4) 2, 6 Xylidine (87-62-7)	EN ISO 14362-1: 2017 EN ISO 14362-3: 2017 GB/T 19942: 2005 ISO 17234-1: 2015 ISO 17234-2: 2011	5.0mg/kg to 300mg/kg
		Determination of chlorinated phenols and ortho phenyl phenol Pentachlorophenol (PCP) 2,3,4,5-Tetrachlorophenol(2,3,4,5-Tecp) 2,3,4,6-Tetrachlorophenol(2,3,4,6-Tecp) 2,3,5,6-Tetrachlorophenol(2,3,5,6-Tecp) 2,3,6-Trichlorophenol (2,3,6-TCP)	DIN EN ISO 17070: 2015 64 LFGB 82.02-8: 2001	0.05mg/kg to 100mg/kg

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		2,4,6-Trichlorophenol(2,4,6-TCP) 2,3,5-Trichlorophenol(2,3,5-TCP) 3,4,5-Trichlorophenol(3,4,5-TCP) Ortho phenyl phenol(OPP)	DIN EN ISO 17070: 2015 64 LFGB B 82.02-8: 2001	0.05 mg/kg to 100 mg/kg
		Determination of selected Organotin compounds Dibutyl Tin(DBT), Tributyl Tin(TBT), Tetrabutyl Tin(TeBT), Monooctyl Tin(MOT), Dioctyl Tin(DOT), Triphenyl Tin(TPhT),	INHOUSE TEST METHOD BASED ON DIN 38407 SOP/CH/TM-08:16/06/2015 DIN EN ISO 17353:2005-11	0.05mg/kg to 1000mg/kg
		Quantitative determination of DMFU content	ISO/TS 16186: 2012	0.1 mg/kg to 500mg/kg
		Chrome VI Chrome VI after aging	ISO 17075-1: 2017 ISO 17075-1: 2017 DIN 53314: 2004 BS EN 420:2003+A1:2009 Clause 4.3.3	3 mg/kg to 100mg/kg 1mg/kg to 100mg/kg
		Lead in Paint/ Surface Coating (paints & other Similar Surface Coating as per regulation 16 CFR 1303: 2008)	CPSC-CH-E1003-09.1: 2011 ASTM E 1613: 2012 ASTM E 1645: 2016)	10mg/kg to 10000mg/kg
		pH Value of Aqueous extract (Leather)	ISO: 4045: 2008 BS EN 420:2003+A1:2009 Clause 4.3.2	1 to 14

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		pH Value of Aqueous extract (Textile)	ISO 3071:2005	1 to 14
2.	1. Leather Products 2. Textile & Textile Products 3. Plastics & other Polymeric Products	Determination of Phthalates 1 Di-isononyl phthalate (DINP); CAS No. 28553-12-0 Di-(2-ethylhexyl) phthalate (DEHP); CAS No. 117-81-7 Di-n-octyl phthalate (DNOP); CAS No. 117-84-0 Di-iso-decyl phthalate (DIDP); CAS No. 26761-40-0 Butyl benzyl phthalate (BBP); CAS NO. 85-68-7 Di-butyl phthalate (DBP); CAS No. 84-72-2 Di-n-hexyl phthalates (DnHP) CAS No. 84-75-3 N-pentyl-isopentyl phthalate (NPIPP) CAS No. 84777-06-0 Bis(2-methoxyethyl) phthalate (DMEP) CAS No. 117-82-8 Di-n-pentyl phthalate (DnPP) CAS No. 131-18-0 Di-isopentyl phthalate (DIPP)	ISO 16181: 2011 CPSC-CH-C1001-09-3: 2010 ISO 16181:2011 CPSC-CH-C1001-09-3:2010 EN ISO 14389: 2014	50mg/kg to 10000mg/kg

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		CAS No. 605-50-5 Di-iso Butyl phthalate (DIBP) CAS No. 84-69-5	ISO 16181: 2011 CPSC-CH-C1001-09-3: 2010 ISO 16181:2011 CPSC-CH-C1001-09-3:2010 EN ISO 14389: 2014	50mg/kg to 10000mg/kg
		Total Lead in Non-metal	CPSC-CH-E1002-08.3: 2012 ASTM E 1613: 2012 ASTM E 1645: 2016	10.0mg/kg to 10000mg/kg
		Formaldehyde content (Leather)	ISO 17226:1: 2008 ISO 17226:2: 2008	5 mg/kg to 1000 mg/kg 10 mg/kg to 1000mg/kg
		Formaldehyde content (Textile)	ISO 14184-1:2011	10 mg/kg to 1000mg/kg
		Polycyclic Aromatic Hydrocarbon 1. Acenaphthene 2. Acenaphthylene 3. Anthracene 4. Benz[a]anthracene 5. Benzo[b]fluoranthene 6. Benzo[k]fluoranthene 7. Benzo [g,h,i]perylene 8. Benzo[a]pyrene 9. Chrysene 10. Dibenz[a,h]anthracene 11. Fluoranthene 12. Fluorene 13. Indeno[1,2,3-c,d]pyrene 14. Naphthalene 15. Phenanthrene 16. Pyrene	ZEK 01.4-08	0.2 mg/kg to 300 mg/kg

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3.	Other-Metal Accessories	Total Lead Content in metal products including Children's metal Jewellery.	CPSC-CH-E-1001-08.3: 2012 ASTM E 1613: 2012 / ASTM E 1645: 2016	10.0mg/kg to 10000mg/kg
		Nickel Spot	FD CR 12471: 2002 PD CR 12471: 2002	Quantitative
4.	Plastics & other polymeric products	Total Cadmium Content in plastic	BS EN 1122: 2001	10.0mg/kg to 10000mg/kg
5.	1.Leather products 2.Textile & Textile Products 3.Toy and Sports equipment 4.Other-Metal Accessories.	Determination of total Heavy metal Antimony, Arsenic, Barium, Cadmium, Chromium, Mercury, Lead, and Selenium con	ISO 17072-2:2011	10.0 mg/kg to 100000mg/kg
6.	1.Leather products 2.Other-Metal Accessories.	Corrosion Resistance	ISO 22775 : 2004 SATRA TM 310: 1992 Method 2	Qualitative (Grade 1 to 5)
II.	LEATHER PRODUCTS			
1.	1.Leather products 2.Textile & Textile Products	Colour Fastness to Crocking (Crockmeter)	SATRA TM 167: 2017 ISO 20433: 2012 ISO 105 X12: 2016 AATCC 8:2016	Qualitative (Grade 1 to 5)
2.	1.Leather products	Colour fastness to Perspiration - (Perspirometer)	ISO 11641: 2012 ISO 17700: 2004 Method C SATRA TM 335: 1994	Qualitative (Grade 1 to 5)
		Colour fastness to Water	ISO 11642: 2012 SATRA TM 335: 1994	Qualitative (Grade 1 to 5)
		Colour Fastness to Water Spotting	ISO 15700: 1998 SATRA TM 185: 1995	Qualitative (Grade 1 to 5)
		Colour Fastness to Rubbing	ISO 11640:2012 ISO 17700: 2004 Method A SATRA TM 173 : 1995	Qualitative (Grade 1 to 5)

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MECHANICAL TESTING

I.	LEATHER AND LEATHER PRODUCTS			
1.	1.Finished Leather 2.Footwears 3.Leather Products 4.Others-Synthetic Materials	Thickness	ISO 2589:2016 SATRA TM1: 2013	0.1mm to 10mm
		Tensile strength & Elongation/Breaking Strength	ISO 3376:2011 SATRA TM 43: 2000 SATRA TM 29:2017 Breaking strength and Elongation	Strength: 1N/mm ² to 150 N/mm ² Elongation: 10% to 500% Strength: 1N/mm to 150 N/mm Elongation: 10% to 500%
		Single edge tear strength/Double edge tear strength	ISO 3377 – 1 :2011 single edge SATRA TM 30:2017 single edge ISO 3377 – 2 : 2016 double edge SATRA TM 162:2017double edge	1N to 500N
		Distension and Bursting Strength	SATRA TM 24:2017	Upto 30 mm 1N to 800N
		Adhesion of Finish	ISO 11644 : 2009	1N/10mm to 80N/10mm
		Needle Perforations	SATRA TM 33:2010	1N/mm to 500N/mm
		Flexing Resistance –	ISO 5402-1:2017 SATRA TM 55:1999	Qualitative
		Vamp Flexing Resistance	ISO 5402-2:2015 SATRA TM 25:1992(2016)	Qualitative
		De mattia Flexing	ISO 7854:1995 Method A	Qualitative

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2.	1.Finished Leather 2. Footwears 3. Leather Products 4. Industrial Products 5. Others-Synthetic Materials	Water Resistance – (Bally Penetrometer)	ISO 20344:2011, Clause 6.13	1% to 200%
		Water Vapour Permeability	ISO 14268:2012 SATRA TM 172:1993 ISO 20344 : 2011 ISO 20345 : 2011 ISO 20346 : 2014 ISO 20347 : 2012	0.1 mg/cm ² /hr to 30 mg/cm ² /hr
		Water Vapour Absorption - (Absorption Tester)	SATRA TM 178:2001 ISO 17229:2016 ISO 20344 : 2011 ISO 20345 : 2011 ISO 20346 : 2014 ISO 20347 : 2012	0.1 mg/cm ² to 200 mg/cm ²
		Water Vapour Coefficient / Number	ISO 14268:2012 ISO 20344 : 2011 ISO 20345 : 2011 ISO 20346 : 2014 ISO 20347 : 2012	0.1mg/cm ² to 200mg/cm ²
		Abrasion resistance - (Martindale Abrasive tester)	SATRA TM 31:2014	Qualitative
3.	1.Finished Leather	Break/Pipiness – (Break pipiness Tester)	BS 5131 Section 3.5:1978 SATRA TM 36:1999	Qualitative Grade 1 to 8
		Flexibility and adhesion of Finish on Leather	ASTM D6182-00(2015)	Qualitative
		Abrasion Resistance – Upper Lining and sock	BS EN 13520:2002	Qualitative
4.	1.Others-Coated Leather Materials	Resistance of finish films on upper leather to peeling and delamination	SATRA TM 148:1997	Qualitative

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5.	1.Others-Soling Materials, Rubber Materials, PU Sole Materials, and Leather Sole	Tensile Strength - Sole	ISO 37:2011 SATRA TM 137:1995	Strength : 1 to 150 N/mm ² Elongation:10 to 1000%
		Tear Strength - Sole	ISO 34-1 :2015 SATRA TM 218:1999	1 N/mm to 100N/mm
		Split Tear strength – sole	SATRA TM 65:2015	1 N/mm to 20N/mm
		Sole stitch Tear Strength	SATRA TM 5:2000	1 N/mm to 100N/mm
		Sole Abrasion Resistance – (Drum Method)	ISO 4649:2010 SATRA TM 174:2016	1 mm ³ to 900 mm ³
			SATRA TM 193:2004	0.1mm/krev to 100mm/krev
		Flexing Resistance – Sole	SATRA TM 161:2004 DIN 53543:1979	0.1mm to 150mm
			SATRA TM 133:1993	Qualitative
			BS 5131sec 2.1:1991 SATRA TM 60:1992	0.01 to 10mm/kc
		Density (Density Balance)	ISO 2781 :2008 (Method - A) SATRA TM 134:2010	0.1 mg/mm ³ to 5 mg/mm ³
		Shore A Hardness	SATRA TM 205:2016	10 to 90 shore A
		Compression set - (Compression Set Apparatus)	SATRA TM 64:1996	1% to 100%
		Sole Bond Peeling Strength/Bond Strength	BS 5131 Section 5.4 : 1978 ISO 17708:2003 SATRA TM 411:1992	1N/mm to 20N/mm
		Whole Shoe Bond Strength	SATRA TM 281:2002 SATRA TM 401:2000	1N/mm to 20N/mm
Attachment of strap to sole strength	SATRA TM 120:2001	1N to 800N		
Toe Post Strength	SATRA TM 118:1992	1N to 100N		
Heel Attachment Strength	BS EN ISO 12785:2000 SATRA TM 113:1996	1N to 1200N		

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6.	1. Footweares 2. Others-Sandal Products materials	Top Piece Attachment Strength	SATRA TM 108:1992	1N to 500N
		Breaking force and Extension at whole shoe toplines	SATRA TM 143:1995	1N to 1000N
		Ageing	BS EN 12749 : 1999	Qualitative
		Fatigue test for Shoe heels - (Heel Fatigue)	ISO 19956 : 2004 SATRA TM 21:2017	Qualitative
		Adhesion of Stuck-On and Moulded-On Soles – Toe (Sole adhesion tester)	SATRA TM 404:1992 BS 5131 Section 5.1:1990	1kgf to 100 kgf
		Whole Shoe Flexing	SATRA TM 92:2016	Qualitative
		Whole Shoe Water Penetration	SATRA TM 77:2017	Qualitative
		Seam Strength	BS 5131 Section 5.13 :1980 SATRA TM 180:2016	1N/mm to 100N/mm
7.	1. Footweares 2. Others-Footweares Materials and Belt Materials	Strength of Strap & Buckle Attachment / Strength of Buckle Fastening Assemblies	SATRA TM 181:2017 BS 5131 Section 5.11 : 1981 SATRA TM 151:1999	1N to 1000N
		Attachment strength/ buckle/ straps/ trims/bows	SATRA TM 117:1992	1N to 1000N
		Lace Breaking Strength	BS 5131 Sec.3.7 : 1991 SATRA TM 94:1993 ISO 2023 Annex C :1994	1N to 1000N
		Breaking Force of Buckle- Three point bending test	SATRA TM 141:1994	1N to 1000N
		Knot slippage test	SATRA TM 195:2004	1N to 700N
		Breaking Strength for Threads	SATRA TM 74:1994	1N to 200N
		Breaking Strength of Tapes and Bindings	SATRA TM 106:1994	1N to 500N

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		Pin holding strength of Insole materials	SATRA TM 11:1993	1N to 200N
8.	1. Footwears 2. Others-Footwears Materials, Belt Materials and Zipper Materials	Tensile properties of insole materials (Method 2)	SATRA TM 2:1995	1N/mm to 100N/mm
		Transverse tensile strength of sheet material	SATRA TM 80:1992	1kpa to 2000kpa
		Peel strength before and after repeated closing	SATRA TM 123:1992	0.1N/mm to 10N/mm
		Shear strength before and after repeated closing	SATRA TM 123:1992	1kpa to 300kpa
		Lace Tag attachment strength	SATRA TM 175:1995	1N to 500N
		Attachment strength of eyelet	SATRA TM 150:1999	1N to 500N
		Eyelet facing strength	SATRA TM 149:1999	1N to 500N
		Security of heel pins	SATRA TM 96 : 1995 (Method 2)	1N to 500N
		Strength of slide fastener puller	SATRA TM 52:2002	1N to 1000N
		Attachment strength of slide fastener end stops	SATRA TM 53:1992	1N to 500N
		Slider locking strength of slide fasteners	SATRA TM 226:1999	1N to 500N
9.	Footwears	Tab Strength	SATRA TM 165:1992	1N to 1000N