

Garment/ textile testing Capabilities

Chemical testing

Test Item	Testing method
Banned Azo Dyes (24 items)	GB/T 19942; ISO 17234-1/2; GB/T 17592; GB/T 23344; BS EN ISO 14362-1/3; § 64 LFGB B 82.02-9/3/2(V); GB/T 33392
Banned Azo Dyes and Arylamine Salts (28 items)	GB/T 19942; ISO 17234-1/2; GB/T 17592; GB/T 23344; BS EN ISO 14362-1/3; § 64 LFGB B 82.02-9/3/2(V); GB/T 33392
p-phenylenediamine	Extraction with organic solvent, GCMS analysis
Pentachlorophenol (PCP), Pentachlorophenol isomers (TeCP) and Trichlorophenol isomers (TriCP)	ISO 17070; § 64 LFGB B, 82.02-8; GB/T 22808; GB/T 18414.1/2; DD CEN-TS 14494; XP G08-015 2000; UNI 11057; CEN TR14823
Pentachlorophenol (PCP), Pentachlorophenol isomers (TeCP), Trichlorophenol isomers (TriCP), Dichlorophenol isomers (DiCP), and Mono chlorophenol (CP)	ISO 17070; § 64 LFGB B, 82.02-8; GB/T 22808; GB/T 18414.1; GBT 18414.2; DD CEN-TS 14494; XP G08-015 2000; UNI 11057; CEN TR14823
Formaldehyde	BS EN ISO 14184-1; ISO 17226-1; GB/T 2912.1; GB/T 19941; AATCC 112 EN 717-3(wood) IHTM SPOT TEST
Tin organic compounds	DIN SPEC 91179-12; ISO/TS 16179; GB/T 20385; EN 71-3; GB/T 32447; ISO 23161
Tin organic compounds (XRF screening)	In-house method
Polynuclear aromatic hydrocarbons (PAHs)	modified ISO 18287; AfPS GS 2014: 01 PAK; SN/T 1877.2/4; ISO/TS 16190; GB/T 33391
Phthalates	ISO/TS 16181; BS EN 14372; CPSC-CH-C1001-09.3/4; GB/T 20388; GB/T 22048; ISO 14389; BS EN ISO 18856; GB/T 32440; BS ISO 13913; ISO 8124-6
Nonylphenol (NP) / Octyl phenol (OP)	ISO 18857-1; ISO 18218-1; SN/T 1850.1/2; GB/T 23322; ASTM D7485; ISO 18254-1
NPEO / OPEO / NP+OP	ISO 18857-1; ISO 18218-1; SN/T 1850.1/2; GB/T 23322; ASTM D7485; ISO 18254-1
NP+NPEO / OP+OPEO / NPEO+OPEO	ISO 18857-1; ISO 18218-1; SN/T 1850.1/2; GB/T 23322; ASTM D7485; ISO 18254-1
NP+NPEO+OP+OPEO	ISO 18857-1; ISO 18218-1; SN/T 1850.1/2; GB/T 23322; ASTM D7485; ISO 18254-1
Allergenic disperse dyes, Carcinogenic disperse dyes and Dyestuffs-Others	DIN 54231; § 64 LFGB B 82.02-10; EN ISO 16373-2
Polychlorinated biphenyls (PCBs)	BS EN ISO 15318; GB/T 20387
DMF Dimethyl Fumarate	ISO/TS 16186; GB/T 26713; DIN SPEC 53280; SN/T 2446; SN/T 2454
Dimethylformamide (DMFa)	ISO/TS 16189; GB/T 33390; US EPA 3550C
Formamide	ISO/TS 16189; US EPA 3550C
OPP (o-Phenyl Phenol)	ISO 17070; ISO 13365
Flame retardant (Pentabromodiphenyl ether, Octobromodiphenyl ether)	
Flame retardant (PBBs, PBDEs)	BS EN 16377; IEC FDIS 62321-6; ISO 17881-1
Other Organic Flame Retardants	In-house method; ISO 17881-2
Flame Retardants (inorganic items)	ISO 17072-2; DIN EN 16711-1

Test Item	Testing method
Bisphenol compounds (BPA / BPAF / BPF / BPB / BPS)	In-house method
Phenols (BPA+TBBPA+OPP)	In-house method
Phenols (BPA+TBBPA+OPP+NP+OP)	In-house method
Phenols - Others (NP+ OP+2,6-Dimethylphenol+ p-Phenyl phenol +Tribromphenol+ Phenol)	In house method reference ISO 18218-1; ISO 18254-1
Short-chain Chlorinated Paraffins (SCCP)	ISO 18219
Medium-chain chlorinated (MCCP)	ISO 18219
SCCP+MCCP	ISO 18219
Vinyl Chloride Monomer (VCM)	DIN EN ISO 6401; GB/T 4615
PFOS	CEN TS 15968; DIN SPEC 1038
PFOA	CEN TS 15968; DIN SPEC 1038
PFOS, PFOA	CEN TS 15968; DIN SPEC 1038
PFAS (C6-C14)	EN 17681-1/2; Pr EN ISO 23702-1
PFAS (C2-C14)	EN 17681-1/2; Pr EN ISO 23702-1
Per- and Polyfluoroalkyl Substances (PFAS)	CEN TS 15968; DIN SPEC 1038
Total fluor	EN 14582
Nitrosamines	GB/T 24153
Odour	SNV 195 651; GB 18401; QB/T 1002 sec. 6.2; GB 30585; QB/T 4552
VOC	In house method EN 71-11 Annex A, Use ISO 16000 as reference to do the air sampling from product (condition: 80±1°C 24h±0.5h), trap VOC by adsorption tube and elute with solvent, then analyse the solvent by GC-MS
Acetophenone and 2-phenyl-2-propanol	In house method
Chlorobenzene and Chlortoluene (COCs)	DIN 54232; Extraction with dichloromethane, GCMS analysis; GB/T 20384; EPA 8260B; EPA 8270D
2-Mercaptobenzothiazol (2-MBT)	In house method reference DIN EN ISO 13365
Triclosan	DIN EN ISO 13365
1-Methyl-2-pyrrolidone (NMP)	BS EN ISO 19070
Primary Aromatic Amines (PAA)	BVL L 00.00-6 (EC)
Preserving Agents (5 items)/Biocide	EN ISO 13365; ISO 17070
Monomers (3 items)	Reference to ISO 6401: 2008 by Headspace-GCMS
Soluble Mineral Tanning Agents (4 items) (SMTA)	DIN EN ISO 17072-1
Identification of chlorinated Polymers	In-house method
Pesticides	GB/T 5009.110; GB/T 5009.145; GB/T 5009.19; GB/T 18412.1
Chlorinated Solvents	In house method
PVC Identification (Qualitative)	Screening check by Beilstein test and confirmation by FTIR
Material analysis (Qualitative)	In house method(FTIR ANALYSIS)
Identification of recycled polyethylene terephthalate (PET) fiber	GB/T 39026, In house method
Quinoline	DIN 54231
AOX	HJ/T 83
Glyoxal	DIN EN ISO 11890-2
Azodicarbonamide	In house method

Test Item	Testing method
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DMBK)	
Melamin	In house method
UV-Stabilizers	In house method
Chromium VI leather	EN ISO 17075-1,2; GB/T 22807
Chromium VI after aging leather	EN ISO 17075-1,2 after 24h aging
Cadmium (Cd)	BS EN 1122; IEC 62321; DIN EN 16711-1; DIN EN 14602; EN ISO 17072-2; DIN EN 13346 (Microwave);
Nickel quick test	BS PD CR 12471
Nickel release	BS EN 1811 for non-coated metal BS EN 12472 and BS EN 1811 for coated metal
Soluble heavy metals (single element)	In-house method
Soluble heavy metals	DIN EN ISO 17072-1; DIN EN ISO 105-E04; DIN EN 16711-2; GB/T 17593.1/2/3/4
Soluble heavy metals	EN 71-3; ASTM F 963
pH Value	BS EN ISO 3071; GB/T 7573; AATCC 81; DIN EN ISO 4045; QB/T 2724
Lead, total (XRF)	In-house method
Lead, total	CPSC-CH-E1001-08.2 for metal; CPSC-CH-E1002-08.2 for non-metal component; CPSC-CH-E1003-09.1 for coating; ISO 17072-2; DIN EN 13346 (Microwave); DIN EN 16711-1; DIN EN 14602
Heavy metal, total (single element, XRF)	In-house method
Heavy metal, total (single element, Digestion)	In-house method
Packaging waste (Pb, Cd, Hg, CrVI)	In house method
RoHS	IEC 62321 Ed.1.0
Package price of RoHS (6 items)	IEC 62321 Ed.1.0
Package price of RoHS (10 items)	IEC 62321 Ed.1.0
Substance of Very High Concern (SVHC)	In-house method

Physical Testing

Test Item	Testing method
Colour Fastness to Washing	ISO 105 C10, GB/T 3921, ISO 105 C06, GB/T 12490
Colour fastness to rubbing: Organic solvents	ISO 105 D02, GB/T 5712
Colour Fastness to Water	AATCC 107, ISO 105 E01, GB/T 5713
Colour Fastness to Sea-water	AATCC 106, ISO 105 E02, GB/T 5714
Colour Fastness to Chlorinated water (Swimming-pool water)	ISO 105 E03, GB/T 8433
Colour Fastness to Perspiration	AATCC 15, ISO 105 E04, GB/T 3922 DIN 53160-2
Colour fastness to spotting: Acid	ISO 105 E05, GB/T 5715, AATCC 6
Colour fastness to spotting: Alkali	ISO 105 E06, GB/T 5716, AATCC 6
Colour fastness to spotting: Water	ISO 105 E07, GB/T 5717, AATCC 104
Colour fastness to organic solvents	ISO 105 X05, GB/T 7074
Colour migration into PVC coating	ISO 105 X10, GB/T 36971
Colour Fastness to Rubbing	AATCC 8, ISO 105 X12, GB/T 3920, AATCC TM8, SATRA TM 167
Colour Fastness to Phenolic yellowing	ISO 105 X18, GB/T 29778

Test Item		Testing method
Colour Fastness to Saliva		DIN 53160-1
		GB/T 18886
Colour Fastness to Dye Transfer		AATCC 163
Colour fastness to dye transfer in storage		GB/T 32008
Colour fastness to transfer in joints		GB/T 31127
Counts of Yarn		ISO 7211-5, GB/T 29256.5, EN 14970
Crimp of yarn		ISO 7211-3, GB/T 29256.3
Abrasion Resistance (Martindale)		ASTM D4966-12, ISO 12947-2/3/4, GB/T21196.2/3/4
Stitch density (knit fabric)		ASTM D3887-96, BS 5441
Threads per unit length (woven)		ASTM D3775-17, ISO7211-2, EN 1049-2, GB/T 4668, EN 14971
weave diagram		ISO 7211-1, GB/T 29256.1, FZ/T 01090
Fabric Weight		ISO 3801, BS 2471, EN 12127, GB/T 4669, FZ/T 20008, FZ/T 60003, ISO 9073-1, FZ/T 70010, ASTM D3776/D3776M-20, ASTM D3887-96
Fabric Width		ASTM D3774-18, ISO 22198, GB/T 4666, EN1773, ASTM D3887-96(R2008) Section 10
Bowed and skewed in fabric		ASTM D3882-08(R2020), BS 2819, GB/T 14801
Dimensional stability to washing		GB/T 8628, GB/T 8629, GB/T 8630, ISO 3759, ISO 5077, ISO 6330, FZ/T 20009, FZ/T 70009
		AATCC 135, AATCC 150
Spirality		ISO 16322-1/2/3, GB/T 23319.1/2/3, FZ/T 20011
Colour Fastness to Dry-cleaning		AATCC 132, ISO 105D01, GB/T 5711
Colour Fastness to Hot pressing		AATCC 133, ISO 105X11, GB/T 6152
Colour Fastness to Bleaching: Hypochlorite		ISO 105 N01, GB/T 7069
		AATCC 188
Colour Fastness to Non-chlorine bleach		AATCC 172 / ISO 105 C09 / GB/T 23343
Colour Fastness to Light		AATCC 16, ISO 105B02, GB/T 8427
Colour Fastness to Perspiration & Light		AATCC 125, ISO 105 B07, GB/T 14576
Pilling Resistance	Martindale Method	ASTM D4970/D4970M-16, ISO 12945-2, GB/T 4802.2
	Pilling Box Method	ISO 12945-1, GB/T4802.3
	Circular Locus Method	GB/T 4802.1
Tensile Strength	Grab Method	ASTM D5034-21, ISO 13934-2, GB/T 3923.2
	Strip Method	ASTM D5035-11, ISO 13934-1, GB/T 3923.1
Seam Properties	Seam Slippage	FZ/T 20019, ASTM D1683/D1683M-22, ISO 13936-1/2, GB/T 13772.1/2
	Seam Strength	FZ/T 01031, ISO 13935-1/2, GB/T 13773.1/2
Tear Strength	Elmendorf method	ASTM D1424-21, ISO 13937-1, GB/T 3917.1
	Trouser-shaped method	ASTM D2261-13, ISO 13937-2, GB/T 3917.2
	Tongue	ISO 13937-4, GB/T 3917.4, ISO 9073-4
	Trapezoid	ASTM D5587-15, GB/T 3937.3
	Wing-rip	ISO 13937-3, GB/T 3917.5
Bursting Strength	Diaphragm Bursting	ASTM D3786/D3786M-18, ISO 13938-1, GB/T 7742.1
	Ball Bursting	ASTM D3787, GB/T 19976
Bond strength of laminated fabric		ASTM D2724-07, FZ/T 01085, FZ/T 80007.1

Test Item	Testing method
Bonding Strength	AATCC 136, ASTM D2724, FZ/T 01085, FZ/T 80007.1
Stretch & recovery	FZ/T 01034, FZ/T 70005, FZ/T 70006, BS 4952, BS EN14704-1, ASTM D4964
Dimensional stability to drycleaning	FZ/T80007.2, FZ/T80007.3, GB/T 19981.1, GB/T 19981.2
Appearance after washing	AATCC 124, ISO 7768, GB/T 13769, AATCC 88B, ISO 7770, GB/T 13771, AATCC 88C, ISO 15487, ISO 7769, GB/T 13770, AATCC 143
Wet wash resistance test	FZ/T 01084, FZ/T 80007.2
Twist or skewness change after washing	GB/T 23319.1/2/3, ISO 16322-1/2/3, FZ/T 20011, AATCC 179
Garment inspection	FZ/T 01053, GB/T 8685, ISO 3758
Water resistance – Spray method	AATCC 22, ISO 4920, GB/T 4745
Water resistance – Hydrostatic pressure method	AATCC 127, ISO 811, GB/T 4744
Flammability Test	16CFR 1610
	EN71 part 2
	16CFR 1610(免测)
Ball bursting	ISO 3303-1
Air permeability	DIN EN ISO 9237
Fibre content	ISO 1833.1/2/4/6/7/11/12/20, GB/T 2910.1/2/4/6/7/11/12/20, AATCC 20/20A, FZ/T 01057.1/2/3/4, ISO/TR 11827, FZ/T 01095
Care Instruction	GB/T 5296.4