

	Test Method	Requirement	Reference Restriction
Acetophenone	Extraction in acetone, sonication for 30 min. 60 degree, analysis with GC/MS	50 mg/kg (Each)	NA
2-Phenyl-2-propanol		50 mg/kg (Each)	NA
pH value	Textile and artificial leather: EN ISO 3071:2020 Leather: ISO 4045:2018	Textile: 4.0 - 7.5 Leather: 3.5 - 7.0	NA
Alkylphenol (AP)	Textiles and Leather: EN ISO 21084:2019 Polymers and all other materials: Extraction with THF, sonication at 70C for 60min, analysis by EN ISO 21084:2019	100 mg/kg (Sum)	NA
Alkylphenol Ethoxylates (APEOs)	All materials except leather: EN ISO 18254-1:2016 with determination of APEO, analysis with LC/MS or LC/MS/MS; Leather: EN ISO 18218-1:2015 with quantification according to EN ISO 18254-1:2016	100 mg/kg (Sum)	EU REACH Annex XVII Textile Articles (intended to be washed): NPEO: 100 mg/kg
Azo-amines and Arylamine salts	Textile: ISO 14362-1:2017; ISO 14362-3:2017, analysis with GC/MS or LC/DAD; Leather: ISO 17234-1:2015; ISO 17234-2:2011, analysis with GC/MS or LC/DAD	20 mg/kg (Each)	EU REACH Annex XVII Azo-amines: 30 mg/kg Arylamine salts: Textile articles in skin contact / Footwear: 30 mg/kg
Bisphenols	Extraction with THF, sonication at 60C for 60min, analysis with LC/MS	Bisphenol A: 1 mg/kg other Bisphenols: information only	NA
Short-chain chlorinated Paraffins (SCCP, C10-C13)	CADS or ISO 18219:2015, analysis with GC-NCI-MS	1000 mg/kg	EU POPs 1500 mg/kg
Medium-chain chlorinated Paraffins (MCCP, C14-C17)		1000 mg/kg	NA
Chlorophenols (PCP, TeCP, TriCP)	Extraction with 1M KOH, 16 hours at 90 degree, derivatization and analysis by 64 LFGB B 82.02-8 or DIN EN ISO 17070:2015	0.5 mg/kg (Each)	EU POPs PCP: 5 mg/kg
Chlorinated Benzenes and Toluenes	EN 17137:2018, analysis with GC-MS	1 mg/kg (Sum) (Except 1,2-Dichlorobenzene) 1,2-Dichlorobenzene: 10 mg/kg	EU REACH Annex XVII Textile articles in skin contact / Footwear: α,α,α,4-tetrachlorotoluene / α,α,α-trichlorotoluene / α-chlorotoluene: 1 mg/kg
Dimethylfumarate (DMFu) (Material treated with anti-moulding agent)	Textiles: EN 17130:2019; All other materials: CEN ISO/TS 16186:2012	0.1 mg/kg	EU REACH Annex XVII 0.1 mg/kg
Dyes, Forbidden and Disperse	DIN 54231:2005, analysis with LC-MS	50 mg/kg (Each)	EU REACH Annex XVII Textile articles in skin contact / Footwear: Disperse Blue 1 / Basic Red 9 / Basic Violet 3: 50 mg/kg
Dyes, Navy Blue	DIN 54231:2005, analysis with LC-MS	50 mg/kg (Each)	NA
Flame Retardants (Material treated with flame retarding agent)	EN ISO 17881-1:2016 EN ISO 17881-2:2016	10 mg/kg (Each)	EU REACH Annex XVII / EU POPs PBB / TRIS / TEPA: Not detected HBCDD: 100 mg/kg OctaBDE: 1000 mg/kg PentaBDE / TetraBDE / HexaBDE / HeptaBDE / DecaBDE: 500 mg/kg (sum)
Fluorinated Greenhouse Gases	Thermal desorption / SPME, analysis by GC/MS	0.1 mg/kg (each)	NA
Formaldehyde	All materials except leather: JIS L 1041 / ISO 14184-1; Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2019 confirmation, alternatively EN ISO 17226-1:2019 can be used on its own	Baby: 16 mg/kg Adult and Children: 75 mg/kg	EU REACH Annex XVII Textile articles in skin contact / Footwear: 75 mg/kg (300 for Jackets / Coats / Upholstery until 1 Nov 2023)
Chromium VI (Cr VI)	EN ISO 17075-1 with aging, EN ISO 17075-2 with aging for confirmation (Aging condition: ISO 10195 Method A2)	Leather: 3 mg/kg	EU REACH Annex XVII 3 mg/kg
Heavy Metals - Extractable			
Antimony (Sb)		30 mg/kg	
Arsenic (As)		0.2 mg/kg	



Testing requirement against AFIRM Restricted Substances List Version 06 - 2021 with individual price

	Test Method	Requirement	Reference Restriction	
Barium (Ba)	All materials except Leather: DIN EN 16711-2:2016; Leather: DIN EN ISO 17072-1:2019; Cr VI: Textile: DIN EN 16711-2 with ISO 17075-1:2017 if Cr is detected	1000 mg/kg	EU REACH Annex XVII Textile articles in skin contact / Footwear: Arsenic / Cadmium / Chromium VI / Lead: 1 mg/kg	
Cadmium (Cd)		0.1 mg/kg		
Chromium (Cr)		Textile: 2 mg/kg Leather for Baby Footwear: 60 mg/kg Coating/ paints for babies: 60 mg/kg		
Chromium VI (Cr VI) (Non-leather)		Textile: 1 mg/kg		
Cobalt (Co)		Children / babies: 1 mg/kg Adults: 4 mg/kg		
Copper (Cu)		Children / babies: 25 mg/kg Adults: 50 mg/kg		
Lead (Pb)		Baby: 0.2 mg/kg Adult and Children: 1 mg/kg		
Mercury (Hg)		0.02 mg/kg		
Nickel (Ni)		1 mg/kg		
Selenium (Se)		500 mg/kg		
Nickel Release (Direct & Prolong Skin Contact)	EN 12472:2020, EN 1811:2011 + A1:2015 Analysis with AAS, ICP-OES or ICP-MS	Prolonged skin contact: 0.5 ug/cm2/week Pierced part: 0.2 ug/cm2/week Eyewear frames: 0.5 ug/cm2/week	EU REACH Annex XVII Direct and prolong contact with skin: 0.5 ug/cm2/week Body piercing: 0.2 ug/cm2/week	
Heavy Metals - Total digestion				
Arsenic (As)	All materials except leather: EN 16711-1 Leather: DIN EN ISO 17072-2:2019 Analysis with AAS, ICP-OES or ICP-MS	100 mg/kg	NA	
Cadmium (Cd)		40 mg/kg	EU REACH Annex XVII Coating: 1000 mg/kg Plastic: 100 mg/kg	
Mercury (Hg)		0.5 mg/kg	NA	
Lead (Pb)		Metal: CPSC-CH-E1001-08.3 Non-metal: CPSC-CH-E1002-08.3 Surface coating: CPSC-CH-E1003-09.1 Analysis with AAS, ICP-OES or ICP-MS	90 mg/kg	EU REACH Annex XVII 500 mg/kg
Monomer - Styrene		Methanol extraction at 60 degrees C, analysis with GC-MS	500 mg/kg	NA
Monomer - Vinyl Chloride	ISO 6401	1 mg/kg	NA	
N-Nitrosamine	GB/T 24153:2009, analysis with GC-MS and confirmation by LC-MS-MS EN ISO 19577:2019	0.5 mg/kg (Each)	NA	
Organotin Compounds	CEN ISO/TS 16179 or EN ISO 22744-1:2020, analysis with GC-MS	DBT / DOT / Mbt / TCyT / TMT / TOT / TPT: 1 mg/kg (Each) TBT / TPHT: 0.5 mg/kg (Each)	EU REACH Annex XVII DBT / DOT: 0.1% by weight of Tin Tri-substituted organostannic compounds: 0.1% by weight of Tin	
Ortho-phenylphenol	Extraction with 1M KOH, 16 hours at 90C, derivatization and analysis by 64 LFGB B 82.02-8 or DIN EN ISO 17070:2015	1000 mg/kg	NA	



Testing requirement against AFIRM Restricted Substances List Version 06 - 2021 with individual price

	Test Method	Requirement	Reference Restriction
Ozone Depleting Substances (Refer EC No. 1005/2009)	Headspace 120C for 45 min, analysis with GC/MS	5 mg/kg	NA
Per- and Polyfluorinated Chemicals (PFCs) (Material treated with water/oil/stain repelling agent)	All materials: ISO 23702-1:2018, analysis with LC/MS	PFOS: 1 ug/m ² PFOA: 25 ppb PFOA-related substance:1000 ppb (sum)	EU POPs PFOS: 1 ug/m ² (textile / coated materials); 1000 mg/kg (plastic) PFOA: 0.025 mg/kg PFOA-related substances: 1 mg/kg
Pesticides, Agricultural	ISO 15193 / DIN 38407 F2 or EPA 8081 / EPA 8151A or BVL L 00.00-34:2010-09	0.5 mg/kg (Each)	NA
Phthalates	CPSC-CH-C1001-09.4	500 mg/kg (Each) 1000 mg/kg (Sum)	EU REACH Annex XVII Childcare article can be placed in mouth: DINP / DIDP / DNOP: 1000 mg/kg (total) All articles: DEHP / DBP / BBP / DIBP: 1000 mg/kg (each or total) Textile articles in skin contact / Footwear: DEHP / DBP / BBP / DIBP / DIHP / DMEP / DiPP / DnPP / DnHP / DCHP / DIOP: 1000 mg/kg (each or total)
Polycyclic Aromatic Hydrocarbons (PAHs)	AfPS GS 2019:01 PAK, analysis with GC-MS	10 mg/kg (Sum) REACH PAH: Child Care Article: 0.5 mg/kg (Each) Others: 1 mg/kg (Each)	EU REACH Annex XVII 8 PAHs: 0.5 mg/kg (childcare articles); 1 mg/kg (others)
Quinoline	DIN 54231:2005, analysis with LC-MS	50 mg/kg	EU REACH Annex XVII Textile articles in skin contact / Footwear: Quinoline: 50 mg/kg
Solvents (DMFa)	Textiles: EN 17131:2019 All other materials: DIN CEN ISO/TS 16189:2013	500 mg/kg	EU REACH Annex XVII Textile articles in skin contact / Footwear: DMFa / DMAC / NMP: 3000 mg/kg
Solvents (DMAC and NMP)		1000 mg/kg (each)	
Solvents (Formamide)		1000 mg/kg	
UV inhibitor / Stabilizers	In house method - Extraction with THF, analysis with GC-MS	1000 mg/kg (each) (Drometrizole): information only	NA
Volatile Organic Compounds (VOCs)	For general VOC screening: GC-MS headspace 120 degrees C, 45 min	Benzene: 5 mg/kg Others: 1000 mg/kg (Sum)	EU REACH Annex XVII Textile articles in skin contact / Footwear: Benzene: 5 mg/kg