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CAS Number	Chemical Name/Color Index Name	Restriction/Maximum Limit on Final Product or Tested Component	Potential uses in Textile Processing for Apparel & Footwear	Test Method
Acetophenone and 2-Phenyl-2-Propanol				
98-86-2 617-94-7	Acetophenone 2-Phenyl-2-Propanol	50 ppm each	Potential breakdown products in EVA foam when using dicumyl peroxide as a cross-linking agent.	Extraction in acetoneG-C/MS, sonication for 30 minutes at 60 degrees C
Acidic and Alkaline substances				
Various	pH value	Textiles: 4.0–7.5 . Leather: 3.5–7.0	pH value is a characteristic number, ranging from pH 1 to pH 14, which indirectly shows the content of acidic or alkaline substances in a product. pH values less than 7 indicate sources of acidic substances, and values greater than 7 indicate sources of alkaline substances. To avoid irritation or chemical burns to the skin, the pH value of products must be in the range of human skin— approximately pH 5.5. AFIRM recommends the limits cited to comply with all global regulations for all products."	Textiles and Artificial Leather: EN ISO 3071:2006 (KCI Solution) Leather: EN ISO 4045:2018
Alkylphenol (aP) and Alkylphenol Ethoxylates (aPeOs), including all isomers				
Various Various	Nonylphenol (NP), mixed isomers Octylphenol (OP), mixed isomers	Total 100 ppm	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings. APs are used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment. APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely. This limit reflects forthcoming EU legislation and was set to provide suppliers with advanced warning and direction for continuous improvement.	Textiles and Leather: EN ISO 21084:2019 Polymers and all other materials: 1 g sample/ 20 ML THF, sonication for 60 minutes at 70 degrees C, analysis according to EN ISO 21084:2019
Various Various	Octylphenol ethoxylates (OPEOs) Nonylphenol ethoxylates (NPEOs)	Total 100ppm		All materials except leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS Leather: Sample prep and analysis using EN ISO 18218-1:2015 with quantification according to EN ISO 18254-1:2016
Azo-amines and Arylamine Salts				
92-67-1 92-87-5 95-69-2 91-59-8 97-56-3 99-55-8 106-47-8 0615-05-04	4-Aminobiphenyl Benzidine 4-Chloro-o-toluidine 2-Naphthylamine o-Aminoazotoluene 2-Amino-4-nitrotoluene p-Chloraniline 2,4-Diaminoanisole	20 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.	All materials except Leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2015 p-Aminoazobenzene: All materials except Leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011

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Azo-amines and Arylamine Salts (continued)				
101-77-9 91-94-1 119-90-4 119-93-7 838-88-0 120-71-8 101-14-4 101-80-4 139-65-1 95-53-4 95-80-7 137-17-7 95-68-1 87-62-7 90-04-0 60-09-3 3165-93-3 553-00-4 39156-41-7 21436-97-5	4,4'-Diaminodiphenylmethane 3,3'-Dichlorobenzidine 3,3'-Dimethoxybenzidine 3,3'-Dimethylbenzidine 3,3'-dimethyl-4,4'-diaminodiphenylmethane p-Cresidine 4,4'-Methylen-bis(2-chloraniline) 4,4'-Oxydianiline 4,4'-Thiodianiline o-Toluidine 2,4-Toluyldiamine 2,4,5-Trimethylaniline 2,4 Xylidine 2,6 Xylidine 2-Methoxyaniline (= o-Anisidine) p-Aminoazobenzene 4-Chloro-o-toluidinium chloride 2-Naphthylammoniumacetate 4-Methoxy-m-phenylene diammonium sulphate 2,4,5-Trimethylaniline hydrochloride	20 ppm each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.	All materials except Leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2015 p-Aminoazobenzene: All materials except Leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011
Bisphenols				
80-05-7	Bisphenol-A (BPA)	1 ppm	Used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC. Prohibited from use in food and drink containers, and items intended to come into contact with the mouth.	All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60 degrees C, analysis with LC/MS.
80-09-1 620-62-8 1478-61-1	Bisphenol S (BPS) Bisphenol F (BPF) Bisphenol AF (BPAF)	For informational purposes only. AFIRM recommends testing polycarbonate materials to assess content levels.	Applicable to food and drink containers, and items intended to come in contact with the mouth. BPA alternatives with known or suspected similar hazards are used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC.	
Chlorinated Paraffins				
85535-84-8 85535-85-9	Short-chain chlorinated Paraffins (SCCP) (C10-C13) Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	1000 ppm each	May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production.	All Materials: Combined CADS/ISO 18219: 2015 method V1:06/17 (extraction ISO 18219 and analysis by GC/NCI/MS)
Chlorophenols & Pesticides				
15950-66-0 933-78-8	2,3,4-Trichlorophenol 2,3,5-Trichlorophenol	0.5 ppm each	Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP) and tetrachlorophenol (TeCP), and Trichlorophenols	All Materials: 1 M KOH extraction, 16 hours

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Chlorophenols & Pesticides (continued)				
933-75-5 95-95-4 88-06-2 609-19-8 4901-51-3 58-90-2 935-95-5	2,3,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 3,4,5-Trichlorophenol 2,3,4,5-Tetrachlorophenol (TeCP) 2,3,4,6-Tetrachlorophenol (TeCP) 2,3,5,6-Tetrachlorophenol (TeCP)	0.5 ppm each	Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP) and tetrachlorophenol (TeCP), and Trichlorophenols (TriCP) are sometimes used to prevent mould and kill insects when growing cotton and when storing/transporting fabrics. PCP, TeCP, and TriCP can also be used as preservatives in print pastes.	All Materials: 1 M KOH extraction, 16 hours at 90 degrees C, derivatization and analysis 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015
Chlororganic Carriers				
95-49-8 108-41-8 106-43-4 32768-54-0 95-73-8 19398-61-9 118-69-4 95-75-0 2077-46-5 6639-30-1 76057-12-0 875-40-1 1006-31-1 0877-11-2 541-73-1 106-46-7 87-61-6 120-82-1 108-70-3 634-66-2 634-90-2 95-94-3 118-74-1 5216-25-1 98-07-7 100-44-7 608-93-5	2-Chlorotoluene 3-Chlorotoluene 4-Chlorotoluene 2,3-Dichlorotoluene 2,4-Dichlorotoluene 2,5-Dichlorotoluene 2,6-Dichlorotoluene 3,4-Dichlorotoluene 2,3,6-Trichlorotoluene 2,4,5-Trichlorotoluene 2,3,4,5-Tetrachlorotoluene 2,3,4,6-Tetrachlorotoluene 2,3,5,6-Tetrachlorotoluene Pentachlorotoluene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,3,5-Trichlorobenzene 1,2,3,4-Tetrachlorobenzene 1,2,3,5-Tetrachlorobenzene 1,2,4,5-Tetrachlorobenzene Hexachlorobenzene p-Chlorobenzotrichloride Benzotrichloride Benzyl Chloride Pentabromobenzene	Total: 1 ppm	Chlorobenzenes and chlorotoluenes (chlorinated aromatic hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/ polyester fibres. They can also be used as solvents.	All Materials: EN 17137:2018
95-50-1	1,2-Dichlorobenzene	10 ppm		
Dimethylfumarate				
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent the buildup of mold, especially during shipping.	All Materials: CEN ISO/TS 16186:2012

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Dyes (Forbidden & Disperse)				
2475-45-8 2475-46-9 3179-90-6 3860-63-7 56524-77-7 56524-76-6 12222-97-8 12223-01-07 61951-51-7 23355-64-8 2581-69-3 730-40-5 82-28-0 12223-33-5 13301-61-6 51811-42-8 85136-74-9 2872-52-8 2872-48-2 3179-89-3 61968-47-6 119-15-3 2832-40-8 6300-37-4 6373-73-5 6250-23-3 12236-29-2 54824-37-2 54077-16-6 3761-53-3 569-61-9 569-64-2 2437-29-8 10309-95-2 548-62-9 632-99-5 2580-56-5 1937-37-7 2602-46-2 573-58-0 16071-86-6 60-11-7 6786-83-0 561-41-1	C.I. Disperse Blue 1 C.I. Disperse Blue 3 C.I. Disperse Blue 7 C.I. Disperse Blue 26 C.I. Disperse Blue 35A C.I. Disperse Blue 35B C.I. Disperse Blue 102 C.I. Disperse Blue 106 C.I. Disperse Blue 124 C.I. Disperse Brown 1 C.I. Disperse Orange 1 C.I. Disperse Orange 3 C.I. Disperse Orange 11 C.I. Disperse Orange 37/76/59 C.I. Disperse Orange 37/76/59 C.I. Disperse Orange 37/76/59 C.I. Disperse Orange 149 C.I. Disperse Red 1 C.I. Disperse Red 11 C.I. Disperse Red 17 C.I. Disperse Red 151 C.I. Disperse Yellow 1 C.I. Disperse Yellow 3 C.I. Disperse Yellow 7 C.I. Disperse Yellow 9 C.I. Disperse Yellow 23 C.I. Disperse Yellow 39 C.I. Disperse Yellow 49 C.I. Disperse Yellow 56 C.I. Acid Red 26 C.I. Basic Red 9 C.I. Basic Green 4 C.I. Basic Green 4 C.I. Basic Green 4 C.I. Basic Violet 3 C.I. Basic Violet 14 C.I. Basic Blue 26 C.I. Direct Black 38 C.I. Direct Blue 6 C.I. Direct Red 28 C.I. Direct Brown 95 4-Dimethylaminoazobenzene (Solvent Yellow 2) C.I. Solvent Blue 4 4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol	50 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fibre system of synthetic or manufactured fibres and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fibre (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.	All Materials: DIN 54231:2005

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Dyes, Navy Blue				
118685-33-9 Not allocated	Component 1: C39H23ClCrN7O12S.2Na Component 2: C46H30CrN10O20S2.3Na	50 ppm each	Navy blue colorants are regulated and prohibited from use for dyeing of textiles. Index: 611-070-00-2	All Materials: DIN 54231:2005
Flame Retardants				
84852-53-9 32534-81-9 32536-52-0 1163-19-5 Various 79-94-7 59536-65-1 3194-55-6 3296-90-0 13674-87-8 25155-23-1 126-72-7 545-55-1 115-96-8 5412-25-9	Decabromodiphenyl ethane (DBDPE) Penta-bromodiphenyl ether (pentaBDE) Octa-bromodiphenyl ether (octaBDE) Decabromodiphenyl ether (DecaBDE) All other Polybrominated diphenyl ethers (PBDEs) Tetrabromobisphenol A (TBBP A) Polybrominated biphenyls (PBBs) Hexabromocyclododecane (HBCDD) 2,2-bis(bromomethyl)-1,3-propanediol (BBMP) Tris(1,3-dichloro-2-propyl) phosphate (TDCPP) Trixylyl phosphate (TXP) Tris (2,3-dibromopropyl) phosphate (TRIS) Tris (1-aziridiny)-phosphine oxide (TEPA) Tris(2-chloroethyl) phosphate (TCEP) Bis (2,3-dibromopropyl) phosphate	10 ppm each	Flame-retardant chemicals, including the entire class of Organohalogen flame retardants, should no longer be used.	All Materials: EN ISO 17881-1:2016 All Materials: EN ISO 17881-2:2016
Fluorinated Greenhouse Gases				
Various	See regulation (EC) No 842/2006 for a complete list	0.1 ppm each	Prohibited from use. May be used as foam blowing agents, solvents, fire retardants, and aerosol propellants.	Sample preparation:Purge and trap – thermal desorption or SPME Measurement: GC/MS
Formaldehyde				
50-00-0	Formaldehyde	Adults and Children: 75 ppm Babies: 16 ppm	Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins. Although very rare in Apparel and Footwear, composite wood materials (such as particle board and plywood) must comply with existing California and forthcoming U.S. formaldehyde emission requirements (40 CFR 770). Suppliers are advised to refer to brand-specific requirements for these materials.	All materials except Leather: JIS L 1041-1983 A (Japan Law 112) or EN ISO 14184-1:2011 Leather: prEN ISO 17226-2:2017 with prEN ISO 17226-1:2017 confirmation method in case of interferences. Alternatively, prEN ISO 17226-1:2017 can be used on its own.
Heavy Metals (Non-Jewelry) Extractable & Total Content				
7440-36-0	Antimony (Sb)	Extractable: 30 ppm	Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments, and alloys.	All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017

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Heavy Metals (Non-Jewelry) Extractable & Total Content (continued)				
7440-38-2	Arsenic (As)	Extractable: 0.2 ppm Total: 100 ppm	Arsenic and its compounds can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics.	Extractable: All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: All materials except Leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017
7440-39-3	Barium (Ba)	Extractable: 1000 ppm	Barium and its compounds can be used in pigments for inks, plastics, and surface coatings, as well as in dyeing, mordants, filler in plastics, textile finishes, and leather tanning.	All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017
7440-43-9	Cadmium (Cd)	Leather: Prohibited Extractable: 0.1 ppm Total: 40 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints.	Extractable: All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: All materials except Leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017
7440-47-3	Chromium (Cr)	Extractable: Textiles: 2 ppm Leather footwear for babies: 60 ppm	Chromium compounds can be used as dyeing additives; dye-fixing agents; color-fastness after- treatments; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning.	Textiles: DIN EN 16711-2:2016 Leather: EN ISO 17072-1:2017
18540-29-9	Chromium VI	Not detected. Requirement: <3 ppm Babies: Not detected (0.5 ppm leachable)	Though typically associated with leather tanning, Chromium VI also may be used in the "after-chroming" process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).	Textiles: DIN EN 16711-2:2016 with EN ISO 17075-1:2017 if Cr is detected Leather: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference. Alternatively, EN ISO 17075-2:2017 may be used on its own. Ageing test: ISO 10195:2018 Method A2 is used at brand discretion.
7440-48-4	Cobalt (Co)	Extractable: Adults: 4 ppm Children and babies: 1 ppm	Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons.	All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017
7440-50-8	Copper (Cu)	Extractable: Adults: 50 ppm Children and babies: 25 ppm	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.	All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017

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Heavy Metals (Non-Jewelry) Extractable & Total Content (continued)				
7439-92-1	Lead (Pb)	Extractable: Adults and children: 1 ppm Babies: 0.2 ppm Total: 90 ppm	May be associated with plastics, paints, inks, pigments and surface coatings.	Extractable: All materials except Leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coatings: CPSIA Section 101.16 CFR 1303
7439-97-6	Mercury (Hg)	Extractable: 0.02 ppm Total: 0.5 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017
7440-02-0	Nickel (Ni)	Extractable: 1 ppm Release (metal parts): Prolonged skin contact: 0.5 µg/cm ² /week Pierced part: 0.2 µg/cm ² /week Eyewear frames: 0.5 µg/cm ² /week	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Release: EN 12472:2005+ A1:2009 and EN 1811:2011+ A1:2015 Release (eyewear frames): EN 16128:2015
7782-49-2	Selenium (Se)	Extractable: 500 ppm	May be found in synthetic fibres, paints, inks, plastics and metal trims.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017
Monomers				
100-42-5	Styrene	500 ppm	Styrene is a precursor for polymerization and may be present in various Styrene copolymers like plastic buttons.	Extraction in Methanol GC/MS, sonication at 60 degrees C for 60 minutes
75-01-4	Vinyl Chloride	1 ppm	Vinyl Chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops, and synthetic leather.	EN ISO 6401:2008

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N-Nitrosamines				
62-75-9 55-18-5 621-64-7 924-16-3 100-75-4 930-55-2 59-89-2 614-00-6 612-64-6	N-nitrosodimethylamine (NDMA) N-nitrosodiethylamine (NDEA) N-nitrosodipropylamine (NDPA) N-nitrosodibutylamine (NDBA) N-nitrosopiperidine (NPIP) N-nitrosopyrrolidine (NPYR) N-nitrosomorpholine (NMOR) N-nitroso N-methyl N-phenylamine (NMPHA) N-nitroso N-ethyl N-phenylamine (NEPhA)	0.5 ppm each	Can be formed as by-product in the production of rubber.	GB/T 24153-2009: determination using GC/MS, with LC/MS/MS verification if positive. Alternatively, LC/MS/MS may be performed on its own. prEN 19577:2017
Organotin Compounds				
Various Various Various Various Various Various Various	Dibutyltin (DBT) Dioctyltin (DOT) Monobutyltin (MBT) Tricyclohexyltin (TCyHT) Trimethyltin (TMT) Trioctyltin (TOT) Tripropyltin (TPT)	1 ppm each	Class of chemicals combining tin and organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material.	All Materials: CEN ISO/TS 16179:2012
Various Various	Tributyltin (TBT) Triphenyltin (TPhT)	0.5 ppm each		
Ortho-phenylphenol				
90-43-7	Ortho-phenylphenol (OPP)	1000 ppm	OPP can be used for its preservative properties in leather or as a carrier in dyeing processes.	All materials: 1 M KOH extraction, 16 hours at 90 degrees C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015
Ozone Depleting Substances				
Various	See Regulation (EC) No 1005/2009 for a complete list.	5 ppm	Prohibited from use. Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry-cleaning agent.	All materials: GC/MS headspace 120 degrees C for 45 minutes
Perfluorinated and Polyfluorinated Chemicals (PFCs)				
Various Various Various	Perfluorooctane Sulfonate (PFOS) and related substances Perfluorooctanoic Acid (PFOA) and its salts PFOA-related substances	1 µg/m2 1 µg/m2 25 ppb total 1000 ppb total	PFOA and PFOS may be present as unintended byproducts in long-chain and short-chain commercial water-, oil-, and stain-repellent agents. PFOA may also be used in polymers like Polytetrafluoroethylene (PTFE). The area-based limit for PFOA will be superseded by Commission Regulation (EU) 2017/1000 and removed in 2023.	All Materials: EN ISO 23702-1

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Pesticides, agricultural				
Various	See Appendix A for a complete list.	0.5 ppm each	May be found in natural fibers, primarily cotton.	All materials: ISO 15913/DIN 38407 F2 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09
Phthalates				
28553-12-0 117-84-0 117-81-7 26761-40-0 85-68-7 84-74-2 84-69-5 84-75-3 84-66-2 0131-11-3 131-18-0 84-61-7 71888-89-6 117-82-8 605-50-5 131-16-8 27554-26-3 68515-50-4 68515-42-4 84777-06-0	Di-Iso-nonylphthalate (DINP) Di-n-octylphthalate (DNOP) Di(2-ethylhexyl)-phthalate (DEHP) Diisodecylphthalate (DIDP) Butylbenzylphthalate (BBP) Dibutylphthalate (DBP) Diisobutylphthalate (DIBP) Di-n-hexylphthalate (DnHP) Diethylphthalate (DEP) Dimethylphthalate (DMP) Di-n-pentyl phthalate (DPENP) Dicyclohexyl phthalate (DCHP) 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich Bis(2-methoxyethyl) phthalate Diisopentyl phthalate (DIPP) Dipropyl phthalate (DPRP) Diisooctyl phthalate (DIOP) Diisohexyl phthalate (DIHP) 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) 1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear	500 ppm each Total: 1000 ppm	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature. Phthalates can be found in: • Flexible plastic components (e.g., PVC) • Print pastes • Adhesives • Plastic buttons • Plastic sleeveings • Polymeric coatings Find more information about additional Phthalates on the REACH substances of very high concern (SVHC) candidate list, which is updated frequently.	Sample preparation for all materials: CPSC-CH-C1001-09.4 Measurement: Textiles: GC-MS, EN ISO 14389:2014 (7.1 Calculation based on weight of print only; 7.2 Calculation based on weight of print and textile if print cannot be removed). All materials except textiles: GC/MS
Polycyclic Aromatic Hydrocarbons (PAHs)				
83-32-9 208-96-8 0120-12-7 191-24-2 86-73-7 206-44-0 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(g,h,i)perylene Fluorene Fluoranthene Indeno(1,2,3-cd)pyrene Naphthalene** Phenanthrene Pyrene	No individual restriction	PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing **Naphthalene: Dispersing agents for textile dyes may contain high residual naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor-quality Naphthalene Sulphonate Formaldehyde condensation products).	All materials: AFPS GS 2014
56-55-3 50-32-8	Benzo(a)anthracene Benzo(a)pyrene	1 ppm each Child care articles: 0.5 ppm each		

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Polycyclic Aromatic Hydrocarbons (PAHs) (continued)				
56-55-3 50-32-8 205-99-2 192-97-2 205-82-3 0207-08-09 0218-01-09	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo[e]pyrene Benzo[j]fluoranthene Benzo(k)fluoranthene Chrysene	1 ppm each Child care articles: 0.5 ppm each	PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing **Naphthalene: Dispersing agents for textile dyes may contain high residual naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor- quality Naphthalene Sulphonate Formaldehyde condensation products).	All materials: AFPS GS 2014
53-70-3	Dibenzo(a,h)anthracene	Total: 10 ppm		
Quinoline				
91-22-5	Quinoline	50 ppm	Found as an impurity in polyester and some dyestuffs.t	All materials: DIN 54231: 2005 with methanol extraction at 70 degrees C
UV Absorbers / Stabilizers				
3846-71-7 3864-99-1 25973-55-1 36437-37-3	UV 320 UV 327 UV 328 UV 350	1000 ppm each	PU foam materials such as open cell foams for padding. Used as UV-absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber, polyurethane.	DIN EN 62321-6:2016-05 (Extraction in THF, analysis by GC/MS)
2440-22-4	Drometrizole	For informational purposes only. AFRIM recommends testing to assess content levels.	Used as UV Absorbers for Plastics (PVC, PET, PC, PA, ABS, and other Polymers), Rubber, and Polyurethane.	
Volatile Organic Compounds (VOCs)				
71-43-2	Benzene	5 ppm	These VOCs should not be used in textile auxiliary chemical preparations. They are associated with solvent- based processes such as solvent- based polyurethane coatings and glues/adhesives. They should not be used for any kind of facility cleaning or spot cleaning.	For general VOC screening: GC/MS headspace 45 minutes at 120 degrees C
75-15-0 56-23-5 67-66-3 108-94-1 0107-06-02 75-35-4 100-41-4 76-01-7 630-20-6 79-34-5	Carbon Disulfide Carbon Tetrachloride Chloroform Cyclohexanone 1,2-Dichloroethane 1,1-Dichloroethylene Ethylbenzene Pentachloroethane 1,1,1,2- Tetrachloroethane 1,1,2,2- Tetrachloroethane	Total: 1000 ppm		

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CAS Number	Chemical Name/Color Index Name	Restriction/Maximum Limit on Final Product or Tested Component	Potential uses in Textile Processing for Apparel & Footwear	Test Method
Volatile Organic Compunds (VOCs) (continued)				
127-18-4 108-88-3 71-55-6 79-00-5 79-01-6 1330-20-7 108-38-3 95-47-6 106-42-3	Tetrachloroethylene (PERC) Toluene 1,1,1- Trichloroethane 1,1,2- Trichloroethane Trichloroethylene Xylenes (meta-, ortho-, para-) Xylenes (meta-, ortho-, para-) Xylenes (meta-, ortho-, para-) Xylenes (meta-, ortho-, para-)	Total: 1000 ppm	These VOCs should not be used in textile auxiliary chemical preparations. They are associated with solvent- based processes such as solvent- based polyurethane coatings and glues/adhesives. They should not be used for any kind of facility cleaning or spot cleaning.	For general VOC screening: GC/MS headspace 45 minutes at 120 degrees C