

V 10.0

Restricted Substances List & Product Compliance Guideline

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LEGEND / ABBREVIATIONS

| | |
|--------------------------|---|
| AFIRM | The AFIRM Group (Apparel and Footwear International RSL Management Working Group) is a voluntary association of brands who have the aim to reduce the use and impact of harmful substances in the apparel and footwear supply chain. Therefore, the group developed a Restricted Substances List and a Toolkit to reach the aim. The HUGO BOSS Restricted Substances List & Product Compliance is based on the AFIRM RSL. |
| CADS | Cooperation at DSI (Deutsches Schuhinstitut) |
| CAS | Chemical-Abstract-Service; Unique numerical identifiers for chemical elements, compounds, polymers, biological sequences, mixtures and alloys |
| CEN | Comité Européen de Normalisation |
| C.I. | Color Index; Compendium of dyes: In the U.K. the color Index was prepared by the Society of Dyers and Colorists, while in USA it is done by American Association of Textile Chemists and Colorists. |
| DIN | Deutsches Institut für Normung |
| EN | European Norm |
| EPA | (US) Environmental Protection Agency |
| ISO | International Society for Standardization |
| ISO/TS | International Society for Standardization/Technical Specification |
| mg/kg | milligram per kilogram |
| MI | Material Information |
| ppb | parts per billion |
| ppm | parts per million |
| prEN | Draft European Norm |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals |
| Reporting limit | Values equal or higher than this limit have to be documented in the test report |
| RSL | Restricted Substances List |
| SVHC | Substances of Very High Concern |
| Usage ban | Substance must not be used intentionally in any production of the product |
| W22PF | Season: Winter 2022 Pre-Fall |
| w/o | without |
| µg/cm ² | microgram per square centimeter |
| µg/cm ² /week | microgram per square centimeter per week |

RESTRICTED SUBSTANCES FOR PRODUCTS

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---------------------------------|--|--|---|------------------------------|
| ACETOPHENONE AND 2-PHENYL-2-PROPANOL - corresponding to AFIRM | | | | | |
| 98-86-2 | Acetophenone | 50 ppm each | Potential breakdown products in EVA foam when using dicumyl peroxide as a crosslinking agent. | Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60°C | 25 ppm each |
| 617-94-7 | 2-Phenyl-2-Propanol | | | | |
| ALKYLPHENOL (AP) AND ALKYLPHENOLETHOXYLATES (APEOs), INCLUDING ALL ISOMERS - corresponding to AFIRM | | | | | |
| Various | Nonylphenol (NP), 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. | Textiles and leather: EN ISO 21084:2019 Polymers and all other materials: 1 g sample/20 ml THF, sonication for 60 minutes at 70°C analysis according to EN ISO 21084:2019 | 10 ppm sum of NP & OP |
| Various | Octylphenol (OP), mixed isomers | | | | |
| Various | Nonylphenol ethoxylates (NPEOs) | Total: 100 ppm | APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. This limit covers EU legislation restricting NPEOs effective 3 February 2021 and provides advance warning to suppliers. | All materials except leather: EN ISO 18254-1:2016, determination of APEO using LC/MS or LC/MS/MS Leather: Sample preparation and analysis using EN ISO 18218-1:2015 ¹ with quantification based on EN ISO 18254-1:2016 | 20 ppm sum of NPEO & OPEO |
| Various | Octylphenol ethoxylates (OPEOs) | | | | |

¹ To ensure the reproducibility of test results, only the EN ISO 18218-1:2015 shall be applied for analysis.

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---|--|--|---|-----------------|
| AZO-AMINES AND ARYLAMINE SALTS - corresponding to AFIRM | | | | | |
| 92-67-1 | 4-Aminobiphenyl | 20 ppm each | <p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds.</p> <p>Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.</p> | <p>All materials except leather: EN ISO 14362-1:2017</p> <p>Leather: EN ISO 17234-1:2015</p> <p><u>p-Aminoazobenzene:</u> All materials except leather: EN ISO 14362-3:2017</p> <p>Leather: EN ISO 17234-2:2011</p> | 5 ppm each |
| 92-87-5 | Benzidine | | | | |
| 95-69-2 | 4-Chlor-o-toluidine | | | | |
| 91-59-8 | 2-Naphthylamine | | | | |
| 97-56-3 | o-Aminoazotoluene | | | | |
| 99-55-8 | 2-Amino-4-nitrotoluene | | | | |
| 106-47-8 | p-Chloraniline | | | | |
| 615-05-4 | 2,4-Diaminoanisole | | | | |
| 101-77-9 | 4,4'-Diaminodiphenylmethane | | | | |
| 91-94-1 | 3,3'-Dichlorobenzidine | | | | |
| 119-90-4 | 3,3'-Dimethoxybenzidine | | | | |
| 119-93-7 | 3,3'-Dimethylbenzidine | | | | |
| 838-88-0 | 3,3'-dimethyl-4,4'-Diaminodiphenylmethane | | | | |
| 120-71-8 | p-Cresidine | | | | |
| 101-14-4 | 4,4'-Methylen-bis(2-chloraniline) | | | | |
| 101-80-4 | 4,4'-Oxydianiline | | | | |
| 139-65-1 | 4,4'-Thiodianiline | | | | |
| 95-53-4 | o-Toluidine | | | | |
| 95-80-7 | 2,4-Toluyldiamine | | | | |
| 137-17-7 | 2,4,5-Trimethylaniline | | | | |
| 95-68-1 | 2,4 Xylidine | | | | |
| 87-62-7 | 2,6 Xylidine | | | | |
| 90-04-0 | 2-Methoxyaniline (= o-Anisidine) | | | | |
| 60-09-3 | p-Aminoazobenzene | | | | |
| 3165-93-3 | 4-chloro-o-toluidinium chloride | | | | |
| 553-00-4 | 2-Naphthylammoniumacetate | | | | |
| 39156-41-7 | 4-methoxy-m-phenylene diammonium sulphate | | | | |
| 21436-97-5 | 2,4,5-trimethylaniline hydrochloride | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|---|--|--|--|-----------------|
| BISPHENOLS - corresponding to AFIRM | | | | | |
| 80-05-7 | Bisphenol-A (BPA) | 1 ppm | Used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC. Restricted in items intended to come into contact with the mouth. | All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60°C, analysis with LC/MS | 1 ppm each |
| 80-09-1 | Bisphenol S (BPS) | For informational purposes only – testing of polycarbonate materials recommended to assess content levels. | Applicable to items intended to come into contact with the mouth. | | |
| 620-92-8 | Bisphenol F (BPF) | | BPA Alternatives with similar hazards used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC. | | |
| 1478-61-1 | Bisphenol AF (BPAF) | | | | |
| CHLORINATED PARAFFINS - corresponding to AFIRM | | | | | |
| 85535-84-8 | Short-chain chlorinated Paraffins (SCCP) (C10-C13) | 1000 ppm | May be used as softeners, flame retardants or as fat liquoring agents in leather production. Also used as plasticizer in polymer production. | All materials: Combined CADS/ ISO 18219:2015 method V1:06/17 (extraction by ISO 18219 and analysis by GC-NCI-MS) For more information on the standard method, click here | 100 ppm |
| 85535-85-9 | Medium-chain chlorinated Paraffins (MCCP) (C14-C17) | 1000 ppm | | | 100 ppm |
| CHLOROPHENOLS - corresponding to AFIRM | | | | | |
| 15950-66-0 | 2,3,4-Trichlorophenol (TriCP) | 0.5 ppm each | Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP), tetrachlorophenol (TeCP), and trichlorophenols (TriCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing/transporting fabrics. PCP, TeCP and TriCP can also be used as in-can preservatives in print pastes and other chemical mixtures. | All materials: 1 M KOH extraction, 16 hours at 90°C, derivatization and analysis §64 LFGB B 82.02-08 or DIN EN ISO 17070:2015 | 0.5 ppm each |
| 933-78-8 | 2,3,5-Trichlorophenol (TriCP) | | | | |
| 933-75-5 | 2,3,6-Trichlorophenol (TriCP) | | | | |
| 95-95-4 | 2,4,5-Trichlorophenol (TriCP) | | | | |
| 88-06-2 | 2,4,6-Trichlorophenol (TriCP) | | | | |
| 609-19-8 | 3,4,5-Trichlorophenol (TriCP) | | | | |
| 4901-51-3 | 2,3,4,5-Tetrachlorophenol (TeCP) | | | | |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol (TeCP) | | | | |
| 935-95-5 | 2,3,5,6-Tetrachlorophenol (TeCP) | | | | |
| 87-86-5 | Pentachlorophenol (PCP) | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|------------------------------|--|---|---|-----------------|
| CHLORINATED BENZENES AND TOLUENES - corresponding to AFIRM | | | | | |
| 95-49-8 | 2-Chlorotoluene | Total: 1 ppm | Chlorobenzenes and Chlorotoluenes (chlorinated aromatic hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/polyester fibers. They can also be used as solvents. | All materials: EN 17137-2018 | 0.2 ppm each |
| 108-41-8 | 3-Chlorotoluene | | | | |
| 106-43-4 | 4-Chlorotoluene | | | | |
| 32768-54-0 | 2,3-Dichlorotoluene | | | | |
| 95-73-8 | 2,4-Dichlorotoluene | | | | |
| 19398-61-9 | 2,5-Dichlorotoluene | | | | |
| 118-69-4 | 2,6-Dichlorotoluene | | | | |
| 95-75-0 | 3,4-Dichlorotoluene | | | | |
| 2077-46-5 | 2,3,6-Trichlorotoluene | | | | |
| 6639-30-1 | 2,4,5-Trichlorotoluene | | | | |
| 76057-12-0 | 2,3,4,5-Tetrachlorotoluene | | | | |
| 875-40-1 | 2,3,4,6-Tetraclorotoluene | | | | |
| 1006-31-1 | 2,3,5,6-Tetrachlorotoluene | | | | |
| 877-11-2 | Pentachlorotoluene | | | | |
| 541-73-1 | 1,3-Dichlorobenzene | | | | |
| 106-46-7 | 1,4-Dichlorobenzene | | | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | | | |
| 108-70-3 | 1,3,5-Trichlorobenzene | | | | |
| 634-66-2 | 1,2,3,4-Tetrachlorobenzene | | | | |
| 634-90-2 | 1,2,3,5-Tetrachlorobenzene | | | | |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | | | |
| 608-93-5 | Pentachlorobenzene | | | | |
| 118-74-1 | Hexachlorobenzene | | | | |
| 5216-25-1 | P-Chlorobenzotrichloride | | | | |
| 98-07-7 | Benzotrighloride | | | | |
| 100-44-7 | Benzyl Chloride ² | | | | |
| 95-50-1 | 1,2-Dichlorobenzene | 10 ppm | | | 1 ppm |

² GC-MS with confirmatory LC-MS in the event of a positive detection to avoid false-positive results.

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|--|-------------------------------|--|---|--|-----------------|
| DIMETHYLFUMARATE - corresponding to AFIRM | | | | | |
| 624-49-7 | Dimethylfumarate (DMFu) | 0.1 ppm | DMFu is an anti-mold agent that may be used in sachets in packaging to prevent the buildup of mold, especially during shipping. | Textiles: EN 17130:2019 All other materials: CEN ISO/TS 16186:2012 | 0.05 ppm |
| DYES, FORBIDDEN AND DISPERSE - corresponding to AFIRM | | | | | |
| 2475-45-8 | C.I. Disperse Blue 1 | 50 ppm each | Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g. polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions or of being carcinogenic and are prohibited from use for dyeing of textiles. | All materials: DIN 54231:2005 | 15 ppm each |
| 2475-46-9 | C.I. Disperse Blue 3 | | | | |
| 3179-90-6 | C.I. Disperse Blue 7 | | | | |
| 3860-63-7 | C.I. Disperse Blue 26 | | | | |
| 56524-77-7 | C.I. Disperse Blue 35A | | | | |
| 56524-76-6 | C.I. Disperse Blue 35B | | | | |
| 12222-97-8 | C.I. Disperse Blue 102 | | | | |
| 12223-01-7 | C.I. Disperse Blue 106 | | | | |
| 61951-51-7 | C.I. Disperse Blue 124 | | | | |
| 23355-64-8 | C.I. Disperse Brown 1 | | | | |
| 2581-69-3 | C.I. Disperse Orange 1 | | | | |
| 730-40-5 | C.I. Disperse Orange 3 | | | | |
| 82-28-0 | C.I. Disperse Orange 11 | | | | |
| 12223-33-5 / 13301-61-6 / 51811-42-8 | C.I. Disperse Orange 37/76/59 | | | | |
| 85136-74-9 | C.I. Disperse Orange 149 | | | | |
| 2872-52-8 | C.I. Disperse Red 1 | | | | |
| 2872-48-2 | C.I. Disperse Red 11 | | | | |
| 3179-89-3 | C.I. Disperse Red 17 | | | | |
| 61968-47-6 | C.I. Disperse Red 151 | | | | |
| 119-15-3 | C.I. Disperse Yellow 1 | | | | |
| 2832-40-8 | C.I. Disperse Yellow 3 | | | | |
| 6300-37-4 | C.I. Disperse Yellow 7 | | | | |
| 6373-73-5 | C.I. Disperse Yellow 9 | | | | |
| 6250-23-3 | C.I. Disperse Yellow 23 | | | | |
| 12236-29-2 | C.I. Disperse Yellow 39 | | | | |

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|--|---|--|---|---|-----------------|
| DYES, FORBIDDEN AND DISPERSE continued - corresponding to AFIRM | | | | | |
| 54824-37-2 | C.I. Disperse Yellow 49 | 50 ppm each | Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g. polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions or of being carcinogenic and are prohibited from use for dyeing of textiles. | All materials: DIN 54231:2005 | 15 ppm each |
| 54077-16-6 | C.I. Disperse Yellow 56 | | | | |
| 3761-53-3 | C.I. Acid Red 26 | | | | |
| 569-61-9 | C.I. Basic Red 9 | | | | |
| 569-64-2 / 2437-29-8 / 10309-95-2 | C.I. Basic Green 4 | | | | |
| 548-62-9 | C.I. Basic Violet 3 | | | | |
| 632-99-5 | C.I. Basic Violet 14 | | | | |
| 2580-56-5 | C.I. Basic Blue 26 | | | | |
| 1937-37-7 | C.I. Direct Black 38 | | | | |
| 2602-46-2 | C.I. Direct Blue 6 | | | | |
| 573-58-0 | C.I. Direct Red 28 | | | | |
| 16071-86-6 | C.I. Direct Brown 95 | | | | |
| 60-11-7 | 4-Dimethylaminoazobenzene (Solvent Yellow 2) | | | | |
| 6786-83-0 | C.I. Solvent Blue 4 | | | | |
| 561-41-1 | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol | | | | |
| DYES, NAVY BLUE - corresponding to AFIRM | | | | | |
| 118685-33-9 | Component 1: C ₃₉ H ₂₃ ClCrN ₇ O ₁₂ S ₂ Na | 50 ppm each | Navy blue colorants are regulated and are prohibited from use for dyeing of textiles. (Index 611-070-00-2) | All materials: DIN 54231:2005 | 15 ppm each |
| Not allocated | Component 2: C ₄₆ H ₃₀ CrN ₁₀ O ₂₀ S ₂ 3Na | | | | |
| FLAME-RETARDANTS - corresponding to AFIRM | | | | | |
| 84852-53-9 | Decabromodiphenyl ethane (DBDPE) | 10 ppm each | With very limited exceptions, flame-retardant chemicals, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production. Listed here are examples of flame-retardant substances used historically across the apparel and footwear industry. It is not intended to be a complete list. | All materials: EN ISO 17881-1:2016 | 5 ppm each |
| 32534-81-9 | Pentabromodiphenyl ether (PentaBDE) | | | | |
| 32536-52-0 | Octabromodiphenyl ether (OctaBDE) | | | | |
| 1163-19-5 | Decabromodiphenyl ether (DecaBDE) | | | | |
| various | All other Polybrominated diphenyl ether (PBDE) | | | | |
| 79-94-7 | Tetrabromobisphenol A (TBBP A) | | | | |
| 59536-65-1 | Polybromobiphenyls (PBB) | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---|--|---|--|-----------------|
| FLAME-RETARDANTS; continued - corresponding to AFIRM | | | | | |
| 3194-55-6 | Hexabromocyclododecane (HBCDD) | 10 ppm each | With very limited exceptions, flame-retardant chemicals, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production. The examples of flame-retardant substances listed here have been used historically across the footwear and apparel industry | All materials: EN ISO 17881-2:2016 | 5 ppm each |
| 3296-90-0 | 2,2-bis(bromomethyl)-1,3-propanediol (BBMP) | | | | |
| 13674-87-8 | Tris(1,3-dichloro-isopropyl) phosphate (TDCPP) | | | | |
| 25155-23-1 | Trixylyl phosphate (TXP) | | | | |
| 126-72-7 | Tris(2,3-dibromopropyl) phosphate (TRIS) | | | | |
| 545-55-1 | Tris(1-aziridinyl)phosphine oxide (TEPA) | | | | |
| 115-96-8 | Tris(2-chloroethyl)phosphate (TCEP) | | | | |
| 5412-25-9 | Bis(2,3-dibromopropyl) phosphate (BDBPP) | | | | |
| FLUORINATED GREENHOUSE GASES - corresponding to AFIRM | | | | | |
| Various | See Regulation (EC) No 517/2014 for a complete list: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32014R0517 | 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 | 0.1 ppm each |
| FORMALDEHYDE - corresponding to AFIRM | | | | | |
| 50-00-0 | Formaldehyde | Adults and children: 75 ppm Babies: 16 ppm | Used in textiles as an anti-creasing and anti-shrinking agent, often also in polymeric resins. Although very rare in apparel & footwear, composite wood materials, e.g. particle board and plywood, must comply with existing California forthcoming US formaldehyde emission requirements (40 CFR 770). | All materials except leather: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011 Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2019 confirmation method in case of interferences. Alternatively, EN ISO 17226-1:2019 can be used on its own. | 16 ppm |

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|---|---------------|--|--|---|---|
| HEAVY METALS (Non-Jewelry) - corresponding to AFIRM (except Cr VI reporting limit) | | | | | |
| 7440-36-0 | Antimony (Sb) | <u>Extractable</u> : 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 17072-1:2019 | <u>Extractable</u> : 3 ppm |
| 7440-38-2 | Arsenic (As) | <u>Extractable</u> : 0.2 ppm <u>Total</u> : 100 ppm | Arsenic and its compounds can be used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics. | <u>Extractable</u> : All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 <u>Total</u> : All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019 | <u>Extractable</u> : 0.1 ppm <u>Total</u> : 10 ppm |
| 7440-39-3 | Barium (Ba) | <u>Extractable</u> : 1000 ppm | Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish and leather tanning. | All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 | <u>Extractable</u> : 100 ppm |
| 7440-43-9 | Cadmium (Cd) | <u>Extractable</u> : 0.1 ppm <u>Total</u> : 40 ppm | Cadmium compounds may be used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints. | <u>Extractable</u> : All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 <u>Total</u> : All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019 | <u>Extractable</u> : 0.05 ppm <u>Total</u> : 5 ppm |
| 7440-47-3 | Chromium (Cr) | <u>Extractable</u> : Textiles: 2 ppm Leather footwear for babies; Coatings/paints for babies: 60 ppm | Chromium compounds can be used as dyeing additives, dye-fixing agents, colorfastness after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning. | All materials except leather: DIN EN 16711-2:2016 Leather: EN ISO 17072-1:2019 | <u>Extractable</u> : 0.5 ppm |
| 18540-29-9 | Chromium VI | <u>Extractable</u> : Leather: 3 ppm Textiles: 1 ppm | 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). | All materials except leather: 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. Ageing test: ISO 10195:2018 Method A2 is used at brand discretion | <u>Extractable</u> : Leather: 2 ppm Textile 0.5 ppm |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---------------|--|--|--|--|
| HEAVY METALS (non Jewelry), continued - corresponding to AFIRM (except Cr VI reporting limit) | | | | | |
| 7440-48-4 | Cobalt (Co) | <u>Extractable:</u> Adults: 4 ppm Children/babies: 1 ppm | Cobalt and its compounds can be used in alloys, pigments, dyestuff and the production of plastic buttons. Copper is exempt from restriction limit in metal parts. | All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 | 0.5 ppm |
| 7440-50-8 | Copper (Cu) | <u>Extractable:</u> Adults: 50 ppm Children/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 17072-1:2019 | 5 ppm |
| 7439-92-1 | Lead (Pb) | <u>Extractable:</u> Adults and children: 1 ppm Babies: 0.2 ppm <u>Total:</u> 90 ppm | May be associated with alloys, plastics, paints, inks, pigments, surface coatings and metal components. | <u>Extractable:</u> All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 <u>Total:</u> Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coating: CPSC-CH-E1003-09.1 | <u>Extractable:</u> 0.1 ppm <u>Total:</u> 10 ppm |
| 7439-97-6 | Mercury (Hg) | <u>Extractable:</u> 0.02 ppm <u>Total:</u> 0.5 ppm | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They could also occur in paints. | <u>Extractable:</u> All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 <u>Total:</u> All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019 | <u>Extractable:</u> 0.02 ppm <u>Total:</u> 0.1 ppm |
| 7440-02-0 | Nickel (Ni) | <u>Extractable:</u> 1 ppm <u>Release (metal parts):</u> Prolonged skin contact: 0.5 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. | <u>Extractable:</u> All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 <u>Release (metal parts):</u> EN 12472:2005+A1:2009 and EN 1811:2011+A1:2015 <u>Release (Eyewear Frames):</u> EN16128:2015 | <u>Extractable:</u> 0.1 ppm <u>Release:</u> 0.5 µg/cm ² /week |
| 7782-49-2 | Selenium (Se) | <u>Extractable:</u> 500 ppm | May be found in synthetic fibers, paints, inks, plastics and metal trims. | All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019 | <u>Extractable:</u> 50 ppm |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---------------|--|--|---|--|
| HEAVY METALS (Jewelry) - corresponding to AFIRM | | | | | |
| 7440-36-0 | Antimony (Sb) | Paints & Coatings: <u>Extractable</u> : 60 ppm | Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments and alloys. | ASTM F2923:2020 ³ | <u>Extractable</u> : 5 ppm |
| 7440-38-2 | Arsenic (As) | Paints & Coatings: <u>Extractable</u> : 25 ppm | Arsenic and its compounds can be used in preservatives, pesticides and defoliant for cotton, synthetic fibers, paints, inks, trims and plastics. | ASTM F2923: 2020 ³ | <u>Extractable</u> : 5 ppm |
| 7440-39-3 | Barium (Ba) | Paints & Coatings: <u>Extractable</u> : 1000 ppm | Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish and leather tanning. | ASTM F2923: 2020 ³ | <u>Extractable</u> : 100 ppm |
| 7440-43-9 | Cadmium (Cd) | Substrates, Paints & Coatings: <u>Extractable</u> : Adults: 75 ppm <u>Total</u> : Children 40 ppm | Cadmium compounds may be used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints. | ASTM F2923: 2020 ³ | <u>Extractable</u> : 5 ppm <u>Total</u> : 5 ppm |
| 7440-47-3 | Chromium (Cr) | Paints & Coatings: <u>Extractable</u> : 60 ppm | Chromium compounds can be used as dyeing additives, dye-fixing agents, colorfastness after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning. | ASTM F2923: 2020 ³ | <u>Extractable</u> : 5 ppm |
| 7439-92-1 | Lead (Pb) | Substrates, Paints & Coatings: <u>Total</u> : 90 ppm | May be associated with alloys, plastics, paints, inks, pigments, surface coatings and metal components. | ASTM F2923: 2020 ³ | <u>Total</u> : 10 ppm |
| 7439-97-6 | Mercury (Hg) | Paints & Coatings: <u>Extractable</u> : 60 ppm | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They could also occur in paints. | ASTM F2923:2020 ³ | <u>Extractable</u> : 5 ppm |
| 7440-02-0 | Nickel (Ni) | <u>Release</u> (metal parts): Prolonged skin contact 0.5 µg/cm ² /week Pierced part: 0.2 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. | EN 12472:2005+A1:2009 ³ and EN 1811:2011 ³ +A1:2015 ³ | <u>Release</u> : Prolonged skin contact: 0.5 µg/cm ² /week Pierced part: 0.2 µg/cm ² /week |
| 7782-49-2 | Selenium (Se) | Paints & Coatings: <u>Extractable</u> : 500 ppm | May be found in synthetic fibers, paints, inks, plastics and metal trims. | ASTM F2923:2020 ³ | <u>Extractable</u> : 50 ppm |

³ Sample preparation: Wax areas not intended for skin-contact: EN 1811:2011+A1:2015.

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|--|--|--|---|-----------------|
| MONOMERS - corresponding to AFIRM | | | | | |
| 100-42-5 | Styrene, free | 500 ppm | Styrene is a precursor for polymerization and may be present in various styrene-copolymers like plastic buttons. Free styrene is restricted, not total styrene. | Extraction in Methanol GC/MS, sonication for 60 minutes at 60°C | 50 ppm |
| 75-01-4 | Vinyl Chloride | 1 ppm | Vinyl Chloride is a precursor for polymerization and may be present in various PVC material like prints, coatings, flip flops and synthetic leather. | EN ISO 6401:2008 | 1 ppm |
| N-NITROSAMINES - corresponding to AFIRM | | | | | |
| 62-75-9 | N-nitrosodimethylamine (NDMA) | 0.5 ppm each | Can be formed as by-product in the production of rubber. | GB/T 24153-2009: determination using GC/MC with LC/MS/MS verification if positive. Alternatively, LC/MS/MS may be performed on its own. EN 19577:2019 | 0.5 ppm each |
| 55-18-5 | N-nitrosodiethylamine (NDEA) | | | | |
| 621-64-7 | N-nitrosodipropylamine (NDPA) | | | | |
| 924-16-3 | N-nitrosodibutylamine (NDBA) | | | | |
| 100-75-4 | N-nitrosopiperidine (NPIP) | | | | |
| 930-55-2 | N-nitrosopyrrolidine (NPYR) | | | | |
| 59-89-2 | N-nitrosomorpholine (NMOR) | | | | |
| 614-00-6 | N-nitroso N-methyl N-phenylamine (NMPHA) | | | | |
| 612-64-6 | N-nitroso N-ethyl N-phenylamine (NEPhA) | | | | |
| ORGANOTIN COMPOUNDS - corresponding to AFIRM | | | | | |
| Various | Dibutyltin (DBT) | 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 or EN ISO 22744-1:2020 | 0.1 ppm each |
| Various | Diocetyl tin (DOT) | | | | |
| Various | Monobutyltin (MBT) | | | | |
| Various | Tricyclohexyltin (TCyHT) | | | | |
| Various | Trimethyltin (TMT) | | | | |
| Various | Triocetyl tin (TOT) | | | | |
| Various | Tripropyltin (TPT) | | | | |
| Various | Tributyltin (TBT) | 0.5 ppm each | | | |
| Various | Triphenyltin (TPhT) | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|--|--|--|---|---|
| ORTHO-PHENYLPHENOL - corresponding to AFIRM | | | | | |
| 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 °C, derivatization and analysis §64 LFGB B 82.02-08 or DIN EN ISO 17070:2015 | 100 ppm |
| OZONE-DEPLETING SUBSTANCES - corresponding to AFIRM | | | | | |
| Various | See Regulation (EC) No 1005/2009 for a complete list: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:286:0001:0030:EN:PDF | 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 °C for 45 minutes | 5 ppm |
| PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFCs) - limits corresponding to AFIRM (except the limit of PFOS for coated leather) | | | | | |
| Perfluorooctane Sulfonate (PFOS) and related substances | | | | | |
| 1763-23-1 | Perfluorooctanesulfonate (PFOS) | 1 µg/m ² total (1000 ppm each if coated leather as per definition from Directive 94/11/EC) | 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. In addition to this list, all PFOA related substances are prohibited from use. | All materials: EN ISO 23702-1 | 1 µg/m ² (100 ppm each if coated leather as per definition from Directive 94/11/EC) |
| 2795-39-3 | Perfluorooctanesulfonic acid, potassium salt (PFOS-K) | | | | |
| 29457-72-5 | Perfluorooctanesulfonic acid, lithium salt (PFOS-Li) | | | | |
| 29081-56-9 | Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄) | | | | |
| 70225-14-8 | Perfluorooctane sulfonate, diethanolamine salt (PFOS-NH(OH) ₂) | | | | |
| 56773-42-3 | Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄) | | | | |
| 4151-50-2 | N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA) | | | | |
| 31506-32-8 | N-Methylperfluoro-1-octanesulfonamide (N-Me-FSOA) | | | | |
| 1691-99-2 | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE) | | | | |
| 24448-09-7 | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE) | | | | |
| 307-35-7 | Perfluoro-1-octanesulfonyl fluoride (POSF) | | | | |
| 754-91-6 | Perfluorooctane sulfonamide (PFOSA) | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|--|--|---|--|-----------------|
| PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFCs), continued - limits corresponding to AFIRM | | | | | |
| Perfluorooctanoic Acid (PFOA) and its salts | | 25 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). All PFOA related substances are prohibited from use. | All materials: EN ISO 23702-1 | 25 ppb total |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | | | | |
| 335-95-5 | Sodium perfluorooctanoate (PFOA-Na) | | | | |
| 2395-00-8 | Potassium perfluorooctanoate (PFOA-K) | | | | |
| 335-93-3 | Silver perfluorooctanoate (PFOA-Ag) | | | | |
| 335-66-0 | Perfluorooctanoyl fluoride (PFOA-F) | | | | |
| 3825-26-1 | Ammonium pentadecafluorooctanoate (APFO) | | | | |
| PFOA-related substances | | 1000 ppb total | | | 1000 ppb total |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS) | | | | |
| 376-27-2 | Methyl perfluorooctanoate (Me-PFOA) | | | | |
| 3108-24-5 | Ethyl perfluorooctanoate (Et-PFOA) | | | | |
| 678-39-7 | 2-Perfluorooctylethanol (8:2 FTOH) | | | | |
| 27905-45-9 | 1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA) | | | | |
| 1996-88-9 | 1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA) | | | | |
| PESTICIDES/ HERBICIDES, AGRICULTURAL - corresponding to AFIRM | | | | | |
| 93-72-1 | 2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP | 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 | 0.5 ppm each |
| 93-76-5 | 2,4,5-trichlorophenoxyacetic acid, its salts and compounds; 2,4,5-T | | | | |
| 94-75-7 | 2,4-dichlorophenoxy-acetic acid, its salts and compounds; 2,4-D | | | | |
| 309-00-2 | Aldrine | | | | |
| 86-50-0 | Azinophosmethyl | | | | |
| 2642-71-9 | Azinophosethyl | | | | |
| 4824-78-6 | Bromophos-ethyl | | | | |
| 2425-06-1 | Captafol | | | | |
| 63-25-2 | Carbaryl | | | | |
| 510-15-6 | Chlorbenzilat | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|---|--|---|--|-----------------|
| PESTICIDES/ HERBICIDES, AGRICULTURAL, continued - corresponding to AFIRM | | | | | |
| 57-74-9 | Chlordane | 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 | 0.5 ppm each |
| 6164-98-3 | Chlordimeform | | | | |
| 470-90-6 | Chlorfenvinphos | | | | |
| 1897-45-6 | Chlorthalonil | | | | |
| 56-72-4 | Coumaphos | | | | |
| 68359-37-5 | Cyfluthrin | | | | |
| 91465-08-6 | Cyhalothrin | | | | |
| 52315-07-8 | Cypermethrin | | | | |
| 78-48-8 | S,S,S-Tributyl phosphorotrithioate (Tribufos) | | | | |
| 52918-63-5 | Deltamethrin | | | | |
| 53-19-0 | o,p-Dichlorodiphenyl-dichloroethane (o,p-DDD) | | | | |
| 72-54-8 | p,p-Dichlorodiphenyl-dichloroethane (p,p-DDD) | | | | |
| 3424-82-6 | o,p-Dichlorodiphenyl-dichloroethylene (o,p-DDE) | | | | |
| 72-55-9 | p,p-Dichlorodiphenyl-dichloroethylene (p,p-DDE) | | | | |
| 789-02-6 | o,p-Dichlorodiphenyl-trichloroethane (o,p-DDT) | | | | |
| 50-29-3 | p,p-Dichlorodiphenyl-trichloroethane (p,p-DDT) | | | | |
| 333-41-5 | Diazinone | | | | |
| 1085-98-9 | Dichlofluanide | | | | |
| 120-36-5 | Dichloroprop | | | | |
| 115-32-2 | Dicofol | | | | |
| 141-66-2 | Dicrotophos | | | | |
| 60-57-1 | Dieldrine | | | | |
| 60-51-5 | Dimethoate | | | | |
| 88-85-7 | Dinoseb, its salts and acetate | | | | |
| 63405-99-2 | DTTB (4,6-Dichloro-7 (2,4,5-trichloro-phenoxy) - 2- Trifluoro methyl benz imidazole) | | | | |
| 115-29-7 | Endosulfan | | | | |
| 959-98-8 | Endosulfan I (alpha) | | | | |
| 33213-65-9 | Endosulfan II (beta) | | | | |
| 72-20-8 | Endrine | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|--|--|---|--|-----------------|
| PESTICIDES/ HERBICIDES, AGRICULTURAL, continued - corresponding to AFIRM | | | | | |
| 66230-04-4 | Esfenvalerate | 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 | 0.5 ppm each |
| 106-93-4 | Ethylenedibromid | | | | |
| 56-38-2 | Ethylparathione; Parathion | | | | |
| 51630-58-1 | Fenvalerate | | | | |
| 1336-36-3 | Halogenated biphenyls, including Polychlorinatedbiphenyl (PCB) | | | | |
| Various | Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs) | | | | |
| 76-44-8 | Heptachlor | | | | |
| 1024-57-3 | Heptachloroepoxide | | | | |
| 319-84-6 | a-Hexachlorocyclohexane with and without Lindane | | | | |
| 319-85-7 | b-Hexachlorocyclohexane with and without Lindane | | | | |
| 319-86-8 | g-Hexachlorocyclohexane with and without Lindane | | | | |
| 118-74-1 | Hexachlorobenzene | | | | |
| 465-73-6 | Isodrine | | | | |
| 4234-79-1 | Kelevane | | | | |
| 143-50-0 | Kepone | | | | |
| 58-89-9 | Lindane | | | | |
| 121-75-5 | Malathione | | | | |
| 94-74-6 | MCPA | | | | |
| 94-81-5 | MCPB | | | | |
| 93-65-2 | Mecoprop | | | | |
| 10265-92-6 | Metamidophos | | | | |
| 72-43-5 | Methoxychlor | | | | |
| 2385-85-5 | Mirex | | | | |
| 6923-22-4 | Monocrotophos | | | | |
| 298-00-0 | Parathion-methyl | | | | |
| 1825-21-4 | Pentachloroanisole | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|--|--|--|---|-----------------|
| PESTICIDES/ HERBICIDES, AGRICULTURAL, continued - corresponding to AFIRM | | | | | |
| 7786-34-7 | Phosdrin/Mevinphos | 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 | 0.5 ppm each |
| 72-56-0 | Perthane | | | | |
| 31218-83-4 | Propethamphos | | | | |
| 41198-08-7 | Profenophos | | | | |
| 13593-03-8 | Quinalphos | | | | |
| 82-68-8 | Quintozene | | | | |
| 8001-50-1 | Strobane | | | | |
| 297-78-9 | Telodrine | | | | |
| 8001-35-2 | Toxaphene | | | | |
| 731-27-1 | Tolyfluanide | | | | |
| 1582-09-8 | Trifluarline | | | | |
| PHthalATES - corresponding to AFIRM | | | | | |
| 28553-12-0 | Di-Iso-nonylphthalate (DINP) | 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 The REACH substances of very high concern (SVHC) candidate list is updated frequently. Suppliers should assume that this RSL includes all Phthalates on the SVHC list — whether itemized here or not – since the list is updated frequently. | Sample preparation for all materials: CPSC-CH-C1001-09.4 Measurement: Textile: 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 | 50 ppm each |
| 117-84-0 | Di-n-octylphthalate (DNOP) | | | | |
| 117-81-7 | Di(2-ethylhexyl)-phthalate (DEHP) | | | | |
| 26761-40-0 | Diisodecylphthalate (DIDP) | | | | |
| 85-68-7 | Butylbenzylphthalate (BBP) | | | | |
| 84-74-2 | Dibutylphthalate (DBP) | | | | |
| 84-69-5 | Diisobutylphthalate (DIBP) | | | | |
| 84-75-3 | Di-n-hexylphthalate (DnHP) | | | | |
| 84-66-2 | Diethylphthalate (DEP) | | | | |
| 131-11-3 | Dimethylphthalate (DMP) | | | | |
| 131-18-0 | di-n-pentyl phthalate (DPENP) | | | | |
| 84-61-7 | dicyclohexyl phthalate (DCHP) | | | | |
| 71888-89-6 | 1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | | | | |
| 117-82-8 | Bis(2-methoxyethyl) phthalate | | | | |
| 605-50-5 | Diisopentyl phthalate (DIPP) | | | | |
| 131-16-8 | Dipropyl phthalate (DPRP) | | | | |
| 27554-26-3 | Diisooctyl phthalate (DIOP) | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit | |
|---|---|--|--|---|--------------------------------|--------------|
| PHTHALATES continued - corresponding to AFIRM | | | | | | |
| 68515-50-4 | Di-hexylphthalate, branched and linear (DHxP) | 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 button Plastic sleeveings Polymeric coatings The REACH substances of very high concern (SVHC) candidate list is updated frequently. Suppliers should assume that this RSL includes all Phthalates on the SVHC list – whether itemized here or not – since the list is updated frequently. | Sample preparation for all materials: CPSC-CH-C1001-09.4 Measurement: Textile: 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 | 50 ppm each | |
| 71850-09-4 | Diisohexyl phthalate (DIHxP) | | | | | |
| 68515-42-4 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNU) | | | | | |
| 84777-06-0 | 1,2-benzenedicarboxylic acid Dipentyl ester, branched and linear | | | | | |
| 68648-93-1 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters | | | | | |
| 68515-51-5 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters | | | | | |
| 776297-69-9 | n-pentyl-isopentylphthalate (nPIPP) | | | | | |
| POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) - corresponding to AFIRM | | | | | | |
| 83-32-9 | Acenaphthene | No individual restriction | Total: 10 ppm | 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 2019 | 0.2 ppm each |
| 208-96-8 | Acenaphthylene | | | | | |
| 120-12-7 | Anthracene | | | | | |
| 191-24-2 | Benzo(g,h,i)perylene | | | | | |
| 86-73-7 | Fluorene | | | | | |
| 206-44-0 | Fluoranthene | | | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | | | | | |
| 91-20-3 | Naphthalene* | | | | | |
| 85-01-8 | Phenanthrene | | | | | |
| 129-00-0 | Pyrene | | | | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|------------------------------|--|------------------|---|--|-----------------|
| POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) - corresponding to AFIRM | | | | | | |
| 56-55-3 | Benzo(a)anthracene | 1 ppm each Childcare articles: 0.5 ppm each | Total: 10 ppm | 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 2019 | 0.2 ppm each |
| 50-32-8 | Benzo(a)pyrene | | | | | |
| 205-99-2 | Benzo(b)fluoranthene | | | | | |
| 192-97-2 | Benzo(e)pyrene | | | | | |
| 205-82-3 | Benzo(j)fluoranthene | | | | | |
| 207-08-9 | Benzo(k)fluoranthene | | | | | |
| 218-01-9 | Chrysene | | | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | | | | | |
| QUINOLINE - corresponding to AFIRM | | | | | | |
| 91-22-5 | Quinoline | 50 ppm | | Found as an impurity in polyester and some dyestuffs. Quinoline can be included with disperse dye testing as the same method is used for both. | All materials: DIN 54231:2005 with methanol extraction at 70 °C | 10 ppm |
| SOLVENTS (RESIDUAL) - corresponding to AFIRM | | | | | | |
| 68-12-2 | Dimethylformamide (DMFa) | 500 ppm | | Solvent used in plastics, rubber, and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable. | Textiles: EN 17131:2019 All other materials: DIN CEN ISO/TS 16189:2013 | 50 ppm each |
| 75-12-7 | Formamide | 1000 ppm each | | Byproduct in the production of EVA foams used in products such as baby mats. | | |
| 127-19-5 | Dimethylacetamide (DMAC) | | | Solvent used in the production of elastane fibers and sometimes as substitute for DMFa. | | |
| 872-50-4 | N-Methyl-2-pyrrolidone (NMP) | | | Industrial solvent utilized in production of water-based polyurethanes and other polymeric materials. May also be used for surface treatment of textiles, resins, and metal coated plastics or as a paint stripper. | | |

| CAS No. | Substance | Limits Raw Material & Finished Product | Potential Uses Processing for Apparel & Footwear | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|--------------------------------|---|--|--|-----------------|
| UV ABSORBERS / STABILIZERS - corresponding to AFIRM | | | | | |
| 3846-71-7 | UV 320 | 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) | 300 ppm each |
| 3864-99-1 | UV 327 | | | | |
| 25973-55-1 | UV 328 | | | | |
| 36437-37-3 | UV 350 | | | | |
| 2440-22-4 | Drometrizole | For informational purposes only. AFIRM recommends testing to assess content levels. | Used as UV-absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber, polyurethane. | | |
| VOLATILE ORGANIC COMPOUNDS (VOCs) - corresponding to AFIRM | | | | | |
| 71-43-2 | Benzene | 5 ppm | These VOCs should not be used in textile auxiliary chemical preparations. They are also 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 °C. | 5 ppm |
| 75-15-0 | Carbon Disulfide | Total: 1000 ppm | | | |
| 56-23-5 | Carbon tetrachloride | | | | |
| 67-66-3 | Chloroform | | | | |
| 108-94-1 | Cyclohexanone | | | | |
| 71-55-6 | 1,1,1- Trichloroethane | | | | |
| 107-06-2 | 1,2-Dichloroethane | | | | |
| 75-35-4 | 1,1-Dichloroethylene | | | | |
| 100-41-4 | Ethylbenzene | | | | |
| 76-01-7 | Pentachloroethane | | | | |
| 630-20-6 | 1,1,1,2- Tetrachloroethane | | | | |
| 79-34-5 | 1,1,1,2,2- Tetrachloroethane | | | | |
| 127-18-4 | Tetrachloroethylene (PER) | | | | |
| 108-88-3 | Toluene | | | | |
| 79-00-5 | 1,1,2- Trichloroethane | | | | |
| 79-01-6 | Trichloroethylene | | | | |
| 1330-20-7 | Xylenes (meta-, ortho-, para-) | | | | |
| 108-38-3 | | | | | |
| 95-47-6 | | | | | |
| 106-42-3 | | | | | |

RESTRICTED SUBSTANCES FOR PACKAGING

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|---|---------------------------------|-------------------------------|---|---|------------------------------|
| ALKYLPHENOLS (APS) ALKYLPHENOL ETHOXYLATES (APEOS) INCLUDING ALL ISOMERS | | | | | |
| Various | Nonylphenol (NP), mixed isomers | Total: 100 ppm | <p>APEOS are used as surfactants in the production of plastics, elastomers, paper, and textiles. These chemicals can be found in many processes involving foaming, emulsification, solubilization, or dispersion. APEOs can be used in paper pulping, lubrication oils, and plastic polymer stabilization.</p> <p>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.</p> <p>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 aligns with forthcoming EU legislation applicable to textiles and was set to provide suppliers direction for continuous improvement.</p> | <p>Textiles and Leather: EN ISO 21084:2019 with determination of LC/MS or LC/MS/MS</p> <p>Polymers and all other materials: 1 g sample/20 mL THF, sonication for 60 minutes at 70 °C, analysis according to EN ISO 21084:2019</p> | Sum of NP & OP 10 ppm |
| Various | Octylphenol (OP), mixed isomers | | | | |
| Various | Nonylphenol ethoxylates (NPEOs) | Total: 100 ppm | | <p>All materials except Leather: EN ISO 18254-1:2016, determination of APEO using LC/MS or LC/MS/MS</p> <p>Leather: EN ISO 18218-1:2015</p> | Sum of NPEO & OPEO 20 ppm |
| Various | Octylphenol ethoxylates (OPEOs) | | | | |
| AZO-AMINES AND ARYLAMINE SALTS | | | | | |
| 92-67-1 | 4-Aminobiphenyl | 20 ppm each | <p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds.</p> <p>Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.</p> | <p>All materials except Leather: EN ISO 14362-1:2017</p> <p>Leather: EN ISO 17234-1:2015</p> <p>p-Aminoazobenzene:</p> <p>All materials except Leather: EN ISO 14362-3:2017</p> <p>Leather: EN ISO 17234-2:2011</p> | 5 ppm each |
| 92-87-5 | Benzidine | | | | |
| 95-69-2 | 4-Chloro-o-toluidine | | | | |
| 91-59-8 | 2-Naphthylamine | | | | |
| 97-56-3 | o-Aminoazotoluene | | | | |
| 99-55-8 | 2-Amino-4-nitrotoluene | | | | |
| 106-47-8 | p-Chloraniline | | | | |
| 615-05-4 | 2,4-Diaminoanisole | | | | |
| 101-77-9 | 4,4'-Diaminodiphenylmethane | | | | |
| 91-94-1 | 3,3'-Dichlorobenzidine | | | | |
| 119-90-4 | 3,3'-Dimethoxybenzidine | | | | |
| 119-93-7 | 3,3'-Dimethylbenzidine | | | | |

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|---|---|---|--|-----------------|
| AZO-AMINES AND ARYLAMINE SALTS, continued | | | | | |
| 838-88-0 | 3,3'-dimethyl-4,4'-Diaminodiphenylmethane | 20 ppm each | <p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds.</p> <p>Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.</p> | <p>All materials except Leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2015</p> <p>p-Aminoazobenzene: All materials except Leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011</p> | 5 ppm each |
| 120-71-8 | p-Cresidine | | | | |
| 101-14-4 | 4,4'-Methylen-bis(2-chloraniline) | | | | |
| 101-80-4 | 4,4'-Oxydianiline | | | | |
| 139-65-1 | 4,4'-Thiodianiline | | | | |
| 95-53-4 | o-Toluidine | | | | |
| 95-80-7 | 2,4-Toluyldiamine | | | | |
| 137-17-7 | 2,4,5-Trimethylaniline | | | | |
| 95-68-1 | 2,4 Xylidine | | | | |
| 87-62-7 | 2,6 Xylidine | | | | |
| 90-04-0 | 2-Methoxyaniline (= o-Anisidine) | | | | |
| 60-09-3 | p-Aminoazobenzene | | | | |
| 3165-93-3 | 4-Chloro-o-toluidinium chloride | | | | |
| 553-00-4 | 2-Naphthylammoniumacetate | | | | |
| 39156-41-7 | 4-Methoxy-m-phenylene diammonium sulphate | | | | |
| 21436-97-5 | 2,4,5-Trimethylaniline hydrochloride | | | | |
| BISPHENO-A (BPA) | | | | | |
| 80-05-7 | Bisphenol-A (BPA) | 1 ppm | Used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC. It is often used as a coating in thermal receipt paper as a developer. | All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60 °C, analysis with LC/MS | 1 ppm |
| 80-09-1 | Bisphenol-S (BPS) | For informational purposes only – testing of polycarbonate materials recommended to assess content levels | BPA alternatives with known or suspected similar hazards are used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC. | All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 70 60 °C, analysis with LC/MS | 1 ppm each |
| 620-92-8 | Bisphenol-F (BPF) | | | | |
| 1478-61-1 | Bisphenol-AF (BPAF) | | | | |
| BUTYLATED HYDROXYTOLUENE (BHT) | | | | | |
| 128-37-0 | Dibutylhydroxytoluene (BHT) | 25 ppm | Used as an additive in plastics as an antioxidant to prevent aging. Can cause phenolic yellowing of textiles. | All materials: ASTM D4275 | 5 ppm |

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|-------------------------------------|-------------------------|-------------------------------|--|--|-----------------|
| 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 | 0.05 ppm |
| FORMALDEHYDE | | | | | |
| 50-00-0 | Formaldehyde | 150 ppm | <p>Formaldehyde can be found in polymeric resins, binders, and fixing agents for dyes and pigments, including those with fluorescent effects. It is also used as a catalyst in certain printing, adhesives, and heat transfers. Formaldehyde can be used in antimicrobial applications for odor control.</p> <p>Formaldehyde found in packaging can off-gas directly onto product.</p> <p>Composite wood materials (e.g., particle board and plywood) must comply with California and U.S. formaldehyde emission requirements (40 CFR 770). Though formaldehyde legislation does not specifically apply to packaging, suppliers are advised to refer to brand-specific requirements for these materials.</p> | <p>Wood: EN 717-3</p> <p>Paper: EN 645 and EN 1541</p> <p>Textiles; Finishing, Dyes & Coatings: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011</p> <p>Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2019 confirmation method in case of interferences. Alternatively, EN ISO 17226-1:2019 can be used on its own.</p> | 16 ppm |
| HEAVY METALS (Total Content) | | | | | |
| 7440-43-9 | Cadmium (Cd) | 100 ppm (Sum) | Cadmium compounds are used as pigments (especially in red, orange, yellow and green) and in paints. It can also be used as a stabilizer for PVC. | All materials: Total heavy metals (Cd, Cr, Pb & Hg): EN ISO 16711-1 If total of four heavy metals exceeds 100 ppm and Cr contributes to the sum, test for CrVI. | 5 ppm |
| 7439-92-1 | Lead (Pb) | | May be associated with plastics, paints, inks, pigments, and surface coatings. | | 10 ppm |
| 7439-97-6 | Mercury (Hg) | | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints. | | 5 ppm |
| 18540-29-9 | Chromium VI | | Though typically associated with leather tanning, Chromium VI also may be used in pigments, chrome plating of metals, and wood preservatives. | <p>Metal: IEC 62321-7-1:2015 The testing laboratory will convert the test result into ppm.</p> <p>Natural Leather and Natural Materials: 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.</p> <p>All other materials: IEC 62321-7-2:2015</p> | 3 ppm |

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--|--|-------------------------------|---|--|--------------------------|
| ORGANOTIN COMPOUNDS | | | | | |
| Various | Dibutyltin (DBT) | 1 ppm each | Class of chemicals combining tin and organics such as butyl and phenyl groups. 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 packaging, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material. | All materials: EN ISO 22744-1:2020 | 0.1 ppm each |
| Various | Dioctyltin (DOT) | | | | |
| Various | Monobutyltin (MBT) | | | | |
| Various | Tricyclohexyltin (TCyHT) | | | | |
| Various | Trimethyltin (TMT) | | | | |
| Various | Trioctyltin (TOT) | | | | |
| Various | Tripropyltin (TPT) | 0.5 ppm each | | | |
| Various | Tributyltin (TBT) | | | | |
| Various | Triphenyltin (TPhT) | | | | |
| PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFCs) | | | | | |
| Perfluorooctane Sulfonate (PFOS) and related substances | | | | | |
| 1763-23-1 | Perfluorooctanesulfonate (PFOS) | 1 µg/m ² 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. In addition to this list, all PFOA related substances are prohibited from use. | All materials: EN ISO 23702-1 | 1 µg/m ² each |
| 2795-39-3 | Perfluorooctanesulfonic acid, potassium salt (PFOS-K) | | | | |
| 29457-72-5 | Perfluorooctanesulfonic acid, lithium salt (PFOS-Li) | | | | |
| 29081-56-9 | Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄) | | | | |
| 70225-14-8 | Perfluorooctane sulfonate, diethanolamine salt (PFOS-NH(OH) ₂) | | | | |
| 56773-42-3 | Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄) | | | | |
| 4151-50-2 | N-Ethylperfluoro-1-octanesulfonamide (N-Et-FSOA) | | | | |
| 31506-32-8 | N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA) | | | | |
| 1691-99-2 | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE) | | | | |

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit | | | | | | |
|--|---|-------------------------------|---|---|--------------------------|--|--------------|--|----------------|--|--|
| PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFCs) | | | | | | | | | | | |
| Perfluorooctane Sulfonate (PFOS) and related substances | | | | | | | | | | | |
| 24448-09-7 | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE) | 1 µg/m ² total | <p>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.</p> <p>In addition to this list, all PFOA related substances are prohibited from use.</p> | All materials: EN ISO 23702-1 | 1 µg/m ² each | | | | | | |
| 307-35-7 | Perfluoro-1-octanesulfonyl fluoride (POSF) | | | | | | | | | | |
| 754-91-6 | Perfluorooctane sulfonamide (PFOSA) | | | | | | | | | | |
| Perfluorooctanoic Acid (PFOA) and its salts | | | | | | | | | | | |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | 25 ppb total | | | | | 25 ppb total | | | | |
| 335-95-5 | Sodium perfluorooctanoate (PFOA-Na) | | | | | | | | | | |
| 2395-00-8 | Potassium perfluorooctanoate (PFOA-K) | | | | | | | | | | |
| 335-93-3 | Silver perfluorooctanoate (PFOA-Ag) | | | | | | | | | | |
| 335-66-0 | Perfluorooctanoyl fluoride (PFOA-F) | | | | | | | | | | |
| 3825-26-1 | Ammonium pentadecafluorooctanoate (APFO) | 1000 ppb total | | | | | | | 1000 ppb total | | |
| PFOA-related substances | | | | | | | | | | | |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS) | | | | | | | | | | |
| 376-27-2 | Methyl perfluorooctanoate (Me-PFOA) | | | | | | | | | | |
| 3108-24-5 | Ethyl perfluorooctanoate (Et-PFOA) | | | | | | | | | | |
| 678-39-7 | 2-Perfluorooctylethanol (8:2 FTOH) | | | | | | | | | | |
| 27905-45-9 | 1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA) | 1000 ppb total | | | 1000 ppb total | | | | | | |
| 1996-88-9 | 1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA) | | | | | | | | | | |

| CAS No. | Substance | Limits Component Materials | Potential Uses Processing for Packaging Material | Suitable Test Method Sample Preparation & Measurement | Reporting Limit |
|--------------------------|--|----------------------------------|---|---|-----------------|
| PHTHALATES | | | | | |
| 28553-12-0 | Di-Iso-nonylphthalate (DINP) | 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 moulding of plastic by decreasing its melting temperature. Phthalates can be found in: Flexible plastic components (e.g., PVC) Print pastes Adhesives Plastic buttons Plastic sleeves Polymeric coatings This list includes all Phthalates on the REACH substances of very high concern (SvHC) candidate list, whether listed here or not, as the SvHC list is updated frequently. | All materials: CPSC-CH-C1001-09.4, analysis by GC/MS | 50 ppm each |
| 117-84-0 | Di-n-octylphthalate (DNOP) | | | | |
| 117-81-7 | Di(2-ethylhexyl)-phthalate (DEHP) | | | | |
| 26761-40-0 | Diisodecylphthalate (DIDP) | | | | |
| 85-68-7 | Butylbenzylphthalate (BBP) | | | | |
| 84-74-2 | Dibutylphthalate (DBP) | | | | |
| 84-69-5 | Diisobutylphthalate (DIBP) | | | | |
| 84-75-3 | Di-n-hexylphthalate (DnHP) | | | | |
| 84-66-2 | Diethylphthalate (DEP) | | | | |
| 131-11-3 | Dimethylphthalate (DMP) | | | | |
| 131-18-0 | di-n-pentyl phthalate (DPENP) | | | | |
| 84-61-7 | Dicyclohexyl phthalate (DCHP) | | | | |
| 71888-89-6 | 1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | | | | |
| 117-82-8 | Bis(2-methoxyethyl) phthalate | | | | |
| 605-50-5 | Diisopentyl phthalate (DIPP) | | | | |
| 131-16-8 | Dipropyl phthalate (DPRP) | | | | |
| 27554-26-3 | Diisooctyl phthalate (DIOP) | | | | |
| 68515-50-4 | Di-hexylphthalate, branched and linear (DHxP) | | | | |
| 71850-09-4 | Diisohexyl phthalate (DIHxP) | | | | |
| 68515-42-4 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | | | | |
| 84777-06-0 | 1,2-benzenedicarboxylic acid Dipentyl ester, branched and linear | | | | |
| 68648-93-1 68515-51-5 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters | | | | |
| 776297-69-9 | n-pentyl-isopentylphthalate (nPIPP) | | | | |