lululemon

# October 2025 V10.0 Restricted Substances List (RSL)

This document applies to materials, parts, and other goods supplied for use in lululemon apparel, accessories, footwear, packaging and other products. It supersedes all previous versions.

Always check Global Family or the lululemon sustainability page on our website to ensure you have the most current version of this document.

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# Section 1.0

## Introduction to the Restricted Substances List (RSL)

As part of lululemon athletica inc.'s commitment to protect its guests, workers, and the environment, lululemon has developed a Restricted Substances List (hereafter referred to as the "RSL") to guide vendors, and to ensure legally compliant products. The RSL contains substances that are banned or restricted from lululemon products based on worldwide regulatory standards. In addition, lululemon has voluntarily included certain additional substances in the RSL because they have been identified as hazardous to guests, workers, or the environment. Vendors, including finished goods producers and raw material suppliers, as well as internal corporate teams, should review this document and understand how it applies to their work.

This edition of the lululemon RSL is consistent with the 2025 Apparel and Footwear International RSL Management Group (AFIRM)'s own Restricted Substances List. AFIRM is an organization of global apparel and footwear brands who work together toward harmonizing restricted substance requirements. Alignment with the AFIRM RSL ensures our requirements are best-in-class.

Substances listed in Section 2.0 are restricted or banned from materials, trims, and all componentry that is part of the final product. Substances listed in Section 4.0 are restricted or banned from packaging materials.

To achieve our goal of providing an RSL that is an effective tool for safety and compliance, this document aims to encompass the following principles:

- The RSL is comprehensive and includes relevant substances that are regulated or otherwise known to be harmful to humans and/or the environment
- The RSL will be monitored and updated regularly to incorporate changes in evolving manufacturing chemistry, government regulations, industry best practices, and expanding scientific knowledge
- Wherever appropriate, we seek to harmonize our RSL program with industry leading standards

# Testing Process:

### A. Factory-Sourced Raw Materials:

All factory-sourced trims and raw materials shall meet the requirements set forth in this document ("the RSL Standards").

- Cost: All third-party Core and Supplemental Testing costs required to ensure compliance with the RSL will be the factory's responsibility
- lululemon may randomly audit factory-sourced raw materials for RSL compliance. If any testing is done beyond the Core and Supplemental Testing outlined in the Test Matrix, any testing failures, retesting, reworking, or resourcing costs will be the factory's liability
- RSL testing should be done through lululemon nominated third-party labs only. RSL third-party lab test reports will be valid for ONE season only

### B. Nominated Raw Material Vendors

All trims and raw materials from nominated vendors shall meet the RSL Standards set forth in this document.

- Cost: All third-party Core and Supplemental Testing costs required to ensure compliance with the RSL will be the raw material vendor's responsibility
- lululemon may randomly audit nominated vendors' raw materials for RSL compliance. If any testing is done beyond the Core and Supplemental Testing outlined in the Test Matrix, any testing failures, retesting, reworking, or resourcing costs will be the vendor's liability. If no failures are found, lululemon will bear the third-party testing costs. In addition, any product recalls, quarantine of failed materials, and logistics of collecting and returning failed products will be the responsibility of the vendor
- RSL test reports from lululemon's nominated third party test labs are valid for up to 12 months from the date the test report was issued

# Material Submission:

- All materials submitted for RSL testing must be sent to a lululemon-approved global third-party laboratory (see Global Family for more information) to conduct testing in accordance with lululemon RSL requirements
- Samples must be identical to materials that will go into finished products, and must be taken from the production line. Samples of materials must be wrapped in aluminum foil. Each test sample must be placed in an individually sealed, labeled polybag

# Validity:

- Any change in manufacturing, such as sourcing from a new facility or vendor, or processing changes of raw materials (e.g., chemical inputs, new finishing or treatments, etc.), invalidates previous tests on the changed item and requires new testing. lululemon must be notified of such changes. lululemon reserves the right to request additional Core or Supplemental Testing at any time. The vendor is responsible for third-party testing costs should any failures be found
- To ensure ongoing compliance, vendors must notify lululemon upon a certificate's expiration and provide a new valid certificate for their materials. Failure to do so will result in the vendors being subject to RSL testing by our appointed testing laboratories at the vendor's expense
- In the event of a failure, the lululemon Quality Assurance – Compliance & Testing team will work with the responsible party (e.g., factory or raw material vendor) to document and correct the failure

## Vendor Responsibility:

As a vendor to lululemon, you are personally responsible for understanding the RSL Standards, communicating the requirements to your internal teams, facilities, sub-contractors and suppliers, and delivering only compliant products. You are also responsible for seeking guidance from the lululemon team if you have any questions.

In addition to understanding the requirements of the RSL, vendors need to be current with regulations where chemical lists are regularly updated. Such examples are the European Chemicals Agency's (ECHA) SCandidate List of Substances of Very High Concern (SVHC) California's Proposition 65. Substances on the SVHC list trigger specific regulatory obligations for importers, producers and suppliers of any article when a substance exceeds a particular limit. Similarly, California publishes each year a list of substances under Proposition 65 that are known to the state to cause cancer or reproductive toxicity. Businesses that expose individuals to one or more of these chemicals above various thresholds must provide a clear and reasonable warning before the exposure occurs.

Additional information on ECHA's SVHC Candidate list and Californial's Proposition 65 list can be found at:

**https://www.echa.europa.eu/candidate-list-table**

**https://oehha.ca.gov/proposition-65**

If a product does not comply with this RSL, a vendor (a) may not be paid for the order, (b) may be liable for fines, fees, and all other liabilities related thereto, and (c) may lose the right to continue to do business with lululemon. Vendors must send third-party test reports from an approved lab to demonstrate materials comply with the RSL Standards

The "RSL CERTIFICATE OF ACKNOWLEDGEMENT AND AGREEMENT' in Appendix I is one of several documents vendors are required to sign during the vendor onboarding process. Once a vendor has signed the Certificate, they will no longer be required to sign and submit the Certificate to lululemon with each new edition of the lululemon RSL.

Thank you for your partnership, commitment, and actions towards creating a safer environment for our global communities.

# Change Log for the lululemon RSL V10.0

| CAS No. | Substance | Modification | Page |
|---|---|---|---|
| Various | Azo-amines and Arylamine Salts | • Updated test method for leather to EN ISO 17234-1:2024 | 13, 36 |
| Various | Chlorinated Benzenes and Toluenes | • Test method updated to EN 17137:2024 | 16 |
| 556-67-2<br>541-02-6<br>540-97-6 | Octamethylcyclotetrasiloxane (D4)<br>Decamethylcyclopentasiloxane (D5)<br>Dodecamethylcyclohexasiloxane (D6) | • Added new category for Cyclosiloxanes restricted under POPs and REACH as SVHC with limit of 1000 ppm each<br>• Added testing recommendation in Testing Matrix | 17 |
| Various | Brominated and Organophosphorus Substances | • Rename category from “Flame Retardants” to “Brominated and Organophosphorus Substances” since listed chemicals may have multiple uses<br>• Added Triphenyl Phosphate (TPP) with a 500 ppm limit due to addition to the REACH SVHC list | 14 |
| 115-86-6 | Triphenyl Phosphate TPP | | |

# Continued Change Log for the lululemon RSL V10.0

| CAS No. | Substance | Modification | Page |
|---|---|---|---|
| Various | Fluorinated Greenhouse Gases | • Change legal reference to Regulation (EU) 2024/573 | 19 |
| Various | Heavy Metals (Jewelry) | • Updated test method to ASTM F963-23 as referenced in ASTM F2923:2020 for all metals except nickel | 22 |
| Various | Ozone-depleting Substances | • Change legal reference to Regulation (EU) 2024/590 | 24 |
| Various | Per- and Polyfluoroalkyl Substances (PFAS) | • Divided PFOS restriction into “PFOS and its salts” and “PFOS-related substances” with new limits<br>• Included PFHxA and its salts and PFHxA-related substance restrictions | 26, 38, 50 |
| 53306-54-0 | Bis(2-propylheptyl) phthalate (DPHP) | • Added new orthophthalate DPHP with an information reporting requirement | 27 |
| 3896-11-5 | UV 326 | • Added UV Absorber UV 326 with a 1000 ppm limit due to its inclusion on REACH SVHC list<br>• Added date for method ISO 24040:2022. | 28 |
| Various | Volatile Organic Compounds (VOCs) | • VOC substances moved to Appendix IV<br>• Updated section to include existing VOCS from previous RSL versions<br>• Added 10 existing RSL substances from other RSL sections that are also VOC and remain unchanged in their original categories<br>• Added 22 new VOCs based on hazard trait and ability to test with a single analysis. | 30, 52 |
| Various | Bisphenols | • Reduced BPB, BPF, and BPS allowable limits in packaging material from 1000 ppm to 200 ppm each | 37 |
| 25973-55-1 | UV 328 | • UV 328 restricted under EU POP Annex 1 with limit of 100 ppm | 29 |

# Section 2.0

## Restricted Substances List for Apparel, Accessories, and Footwear

# Raw Materials and Finished Product RSL

Substances listed in this section are banned or restricted in the use of any material and/or component that is part of a lululemon product.

**Definition of Ages**

The age range to define “babies,” “children,” and “adults” can vary from country to country. Based on legislation, the age ranges listed in the table below satisfy the most restrictive global requirements.

| | Age Range |
|---|---|
| Babies | 0 to 36 months |
| Children | 36 months to 14 years |
| Adults | 14 years and older |

**Definition of Reporting Limits**

Reporting limits are values at or above the Practical Quantification Limit (PQL). The PQL represents the lowest level at which accurate, precise, and robust data can be reported. lululemon’s RSL reporting limits should be widely achievable by laboratories across the global analytical testing industry as well as allow for combined (composite) testing where applicable.

Laboratories should report values for substances that are detected above reporting limits for the purpose of data capture. By reporting these values, instead of a simple PASS/FAIL, information can be captured by the supply chain regarding the presence of substances below the RSL limit. The reporting limits also allow data to be harmonized between various testing laboratories.

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Acetophenone and 2-Phenyl-2-Propanol** | | | | | |
| 98-86-2 | Acetophenone | 50 ppm each | Potential breakdown products in EVA foam when using certain cross-linking agents, including Dicumyl Peroxide. | Extraction in acetone or methanol<br>GC/MS, sonication for 30 minutes at 60 degrees C | 25 ppm each |
| 617-94-7 | 2-Phenyl-2-Propanol | | | | |
| **Alkylphenols (APs) Alkylphenol Ethoxylates (APEOs) including all isomers** | | | | | |
| Various | Nonylphenol (NP), mixed isomers | Total APs: 10 ppm<br><br>Total APs + APEOs: 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.<br><br>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.<br><br>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. | Textiles and Leather: EN ISO 21084:2019<br><br>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<br><br>Down (China Market Only: GB/T 14272-2021 with GB/T 23322-2018 for LC/MS) | Total of NP & OP:<br>3 ppm |
| Various | Octylphenol (OP), mixed isomers | | | | |
| Various | Nonylphenol ethoxylates (NPEOs) | | | All materials except Leather:<br><br>EN ISO 18254-1:2016 with determination of APEO using LC/ MS or LC/MS/MS<br><br>Leather: Sample prep and analysis using EN ISO 18218-1:2023 with quantification according to EN ISO 18254-1:2016<br><br>Down (China Market Only: GB/T 14272-2021 with GB/T 23322-2018 for LC/MS) | Total of NPEO & OPEO:<br>20 ppm |
| Various | Octylphenol ethoxylates (OPEOs) | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Azo-amines and Arylamine Salts** | | | | | |
| 92-67-1 | 4-Aminobiphenyl | 20 ppm each | Azo dyes and pigments are colourants 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.<br><br>Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles. | All materials except Leather:<br>EN ISO 14362-1:2017<br><br>Leather:<br>EN ISO 17234-1:2024<br><br>p-Aminoazobenzene:<br>All materials except Leather:<br>EN ISO 14362-3:2017<br><br>Leather:<br>EN ISO 17234-2:2011 | 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 | | | | |
| 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-Toluylendiamine | | | | |
| 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<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Bisphenols** | | | | | |
| 80-05-7 | Bisphenol-A (BPA) | 1 ppm | BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC.<br>BPS may be used as a substitute for BPA for some specific uses, including in thermal receipt paper.<br>BPS and BPF can be found in polyamide dye-fixing agents and in sulfone- and phenol- based leather synthetic tanning agents.<br>BPA and BPS can be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams.<br>BPA, BPS, and BPB are included on the REACH SVHC list. Additional restrictions on the entire class of bisphenols are expected, with a revised restriction proposal forthcoming in the European Union. | All other materials:<br>Leather: EN ISO 11936:2023<br>1g sample/20 ml THF, sonication for 60 minutes at 60° C, then add methanol or acetonitrile for precipitation prior to analysis with LC/MS<br>Note for textiles:<br>For precipitation, draw the extract to another container and add methanol or acetonitrile. This keeps the extraction process consistent | Leather: 10 ppm each<br>All other materials:<br>0.1 ppm for individual samples 1 ppm for composite samples |
| 80-09-1 | Bisphenol-S (BPS) | 100 ppm each | | | |
| 77-40-7 | Bisphenol-B (BPB) | | | | |
| 620-92-8 | Bisphenol-F (BPF) | | | | |
| **Brominated and Organophosphorus Substances (Formerly Flame Retardants)** | | | | | |
| 84852-53-9 | Decabromodiphenyl ethane (DBDPE) | 10 ppm each | With very limited exceptions, flame-retardant substances, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production.<br>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. Other flame retardants not applicable to this industry are regulated worldwide by the Stockholm Convention and the Aarhus Protocol, which have been implemented in the European Union under the Persistent Organic Pollutants (POPs) Regulation.<br>The 10 ppm limit is established to account for incidental impurities, by-products, and contaminants. Flame retardants should not be used for any other purpose (e.g., as softeners or plasticizers). | 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 ethers (PBDEs) | | | | |
| 79-94-7 | Tetrabromobisphenol A (TBBP A) | | | | |
| 59536-65-1 | Polybromobiphenyls (PBB) | | | | |
| 3194-55-6 | Hexabromocyclododecane (HBCDD) | | | | |
| 3296-90-0 | 2,2-bis(bromomethyl)-1,3- propanediol (BBMP) | | | | |
| 13674-87-8 | Tris(1,3-dichloro-isopropyl) phosphate (TDCPP) | | | All materials: EN ISO 17881- 2:2016 | |
| 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) | | | | |
| 115-86-6 | Triphenyl possphate (TPP) | 500 ppm | May be used as a flame retardant, an antioxidant for polyurethane, or as an alternative plasticizer to orthophthalates. TPP is a substance of very high concern (SVHC) under REACH). | All materials: EN ISO 17881-2:2016 | 50 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Chlorinated Paraffins** | | | | | |
| 85535-84-8 | Short-chain Chlorinated Paraffins (SCCPs) (C10-C13) | 1000 ppm | May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production. | Leather:<br>ISO 18219-1:2021 (SCCP)<br>ISO 18219-2:2021 (MCCP)<br><br>Textiles and all other materials:<br>ISO 22818:2021 (SCCP + MCCP) | 100 ppm |
| 85535-85-9 | Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17) | 1000 ppm | | | 100 ppm |
| **Chlorophenols** | | | | | |
| 15950-66-0 | 2,3,4-Trichlorophenol (TriCP) | 0.5 ppm each | Chlorophenols are polychlorinated compounds used as preservatives or pesticides.<br><br>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: EN 17134-2:2023 | 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) and its salts and esters | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Chlorinated Benzenes and Toluenes** | | | | | |
| 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.<br>Cross-contamination from anti-moth agents and poly shipping bags may cause failures.<br>Important: The Gulf Cooperation Council (GCC) maintains a limit of 1 ppm for 1,2-Dichlorobenzene in textiles. | All materials: EN 17137:2024 | 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-Tetrachlorotoluene | | | | |
| 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 | Benzotrichloride | | | | |
| 100-44-7 | Benzyl Chloride | | | | |
| 95-50-1 | 1,2-Dichlorobenzene | 10 ppm | | | 1 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Cyclosiloxanes** | | | | | |
| 556-67-2 | Octamethylcyclotetrasiloxane (D4) | 1000 ppm each | May be present in silicone pads and as contaminants in formulations that contain silicone, like silicone softeners and those used for prints. They are SVHCs and will be restricted from use in solvents used for dry cleaning of textiles, leather, and fur in the EU beginning 06 June 2026 with derogations. | All materials: Ultrasonic extraction with nonchlorinated organic solvent for 30 min at 40°C then GC/MS | 50 ppm each |
| 541-02-6 | Decamethylcyclopentasiloxane (D5) | | | | |
| 540-97-6 | Dodecamethylcyclohexasiloxane (D6) | | | | |
| **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: ISO 16186:2021 | 0.05 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **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: ISO 16186:2021 | 0.05 ppm |
| **Dyes (Forbidden and Disperse)** | | | | | |
| 2475-45-8 | C.I. Disperse Blue 1 | 30 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).<br><br>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles. | All materials: DIN 54231:2022 | 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 | C.I. Disperse Orange 37/76/59 | | | | |
| 13301-61-6 | | | | | |
| 51811-42-8 | | | | | |
| 85136-74-9 | C.I. Disperse Orange 149 | | | | |
| 2872-52-8 | C.I. Disperse Red 1 | | | | |
| 2872-48-2 | C.I. Disperse Red 11 | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Dyes, continued** | | | | | |
| 3179-89-3 | C.I. Disperse Red 17 | 30 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).<br><br>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles. | All materials: DIN 54231:2022 | 15 ppm each |
| 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 | | | | |
| 54824-37-2 | C.I. Disperse Yellow 49 | | | | |
| 6858-49-7 | | | | | |
| 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 | C.I. Basic Green 4 | | | | |
| 2437-29-8 | | | | | |
| 10309-95-2 | | | | | |
| 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 | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Dyes, Navy Blue** | | | | | |
| 118685-33-9 | Component 1:<br>C39H23ClCrN7O12S.2Na | 30 ppm each | Navy blue colourants are regulated and prohibited from use for dyeing of textiles.<br>Index 611-070-00-2 | All materials: DIN 54231:2022 | 15 ppm each |
| Not allocated | Component 2:<br>C46H30CrN10O20S2.3Na | | | | |
| **Fluorinated Greenhouse Gases** | | | | | |
| Various | See Regulation (EU) 2024/573 for a complete list. | 0.1 ppm each | Prohibited from use.<br>May be used as foam blowing agents, solvents, fire retardants, and aerosol propellants. | Sample preparation:<br>Purge and trap — thermal desorption or SPME<br>Measurement: GC/MS | 0.1 ppm each |
| **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).<br><br>Important: United Arab Emirates Cabinet Resolution No. (54) restricts Formaldehyde in children's textiles to 20 ppm.<br><br>Indonesia Ministerial Regulation No. 18 limits Formaldehyde to “not detected” (16 ppm) in the following products: towels, bedding, and handkerchiefs. | All materials except Leather:<br>JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011<br><br>Leather:<br>EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences.<br>Alternatively, EN ISO 17226-1:2021 can be used on its own. | 16 ppm |
| **Heavy Metals (Non-Jewelry) Extractable and 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<br>Leather: DIN EN ISO 17072-1:2019 | Extractable: 3 ppm |
| 7440-38-2 | Arsenic (As) | Extractable: 0.2 ppm<br>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:<br>All materials except Leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br><br>Total:<br>All materials except Leather: DIN EN 16711-1:2016<br>Leather: DIN EN ISO 17072-2:2019 | Extractable: 0.1 ppm<br>Total: 10 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Heavy Metals (Non-Jewelry), continued** | | | | | |
| 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<br>Leather: DIN EN ISO 17072-1:2019 | Extractable: 100 ppm |
| 7440-43-9 | Cadmium (Cd) | Extractable: 0.1 ppm<br>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:<br>All materials except Leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br>Total:<br>All materials except Leather: DIN EN 16711-1:2016<br>Leather: DIN EN ISO 17072-2:2019 | Extractable:<br>0.05 ppm<br>Total: 5 ppm |
| 7440-47-3 | Chromium (Cr) | Extractable:<br>Textiles:<br>Adults and Children: 2 ppm<br>Babies: 1 ppm | Chromium compounds can be used as dyeing additives; dye-fixing agents; colour-fastness after-treatments; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning.<br><br>Important: Egypt restricts extractable Chromium to 2 ppm in leather products for babies and 200 ppm in leather products for other ages. | Textiles: DIN EN 16711-2:2016<br>Leather: EN ISO 17072-1:2019 | Extractable:<br>0.5 ppm |
| 18540-29-9 | Chromium VI | Extractable:<br>Leather: 3 ppm<br>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).<br>Important: Saudi Arabia and Egypt have a limit of Not Detected (< 0.5 ppm) in textiles. | Textiles:<br>DIN EN 16711-2:2016 with EN ISO<br>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.<br>Ageing test: ISO 10195:2018 Method A2 is used at brand discretion. | Extractable:<br>Leather: 3 ppm<br>Textiles: 0.5 ppm |
| 7440-48-4 | Cobalt (Co) | Extractable:<br>Adults: 4 ppm<br>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<br>Leather: DIN EN ISO 17072-1:2019 | Extractable:<br>0.5 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| 7440-50-8 | Copper (Cu) | Extractable:<br>Adults: 50 ppm<br>Children and babies: 25 ppm | Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.<br>Copper is exempt from restriction limits in Metal parts.<br>Indonesia Ministerial Regulation No. 18 limits copper to 25 ppm in the following products: towels, bedding, and handkerchiefs. | All materials except Leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019 | Extractable: 5 ppm |
| 7439-92-1 | Lead (Pb) | Extractable:<br>Adults: 1 ppm<br>Children and babies: 0.2 ppm<br>Total: 90 ppm | May be associated with alloys, plastics, paints, inks, pigments, and surface coatings.<br>Crystal or "lead glass" is exempt from total Lead restrictions.<br>Indonesia Ministerial Regulation No. 18 limits extractable Lead to 0.2 ppm in the following products: towels, bedding, and handkerchiefs. | Extractrable:<br>All materials except Leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br>Total:<br>Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3<br>Lead in paint and surface coatings: CPSC-CH-E1003-09.1 | Extractable: 0.2 ppm<br>Total: 10 ppm |
| 7439-97-6 | Mercury (Hg) | Extractable: 0.02 ppm<br>Total: 0.5 ppm | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH).<br>They may also be used in paints and as catalysts in the manufacture of PU and vinyl chloride for use in PVC. | Extractable:<br>All materials except leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br>Total:<br>All materials except leather: DIN EN 16711-1:2016<br>Leather: DIN EN ISO 17072-2:2019 | Extractable: 0.02 ppm<br>Total: 0.1 ppm |
| 7440-02-0 | Nickel (Ni) | Extractable: 1 ppm<br>Release (metal parts):<br>Prolonged skin contact:<br>0.5 µg/cm²/week<br>Eyewear frames:<br>0.5 µg/cm²/week | Nickel and its compounds can be used for plating and improving the hardness of alloys, as well as increasing overall corrosion-resistance. They can also occur as impurities in pigments and alloys. | Extractable:<br>All materials except leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br><br>Release:<br>EN 12472:2020 and EN 1811:2023<br>Release (eyewear frames): EN 16128:2015 | Extractable: 0.1 ppm<br>Release: 0.5 µg/cm²/week |
| 7782-49-2 | Selenium (Se) | Extractable: 500 ppm | Selenium and its compounds may be found in paints and inks.<br>Important: Morocco and Egypt now have a 100 ppm limit | All materials except leather: DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019 | Extractable: 50 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Heavy Metals (Jewelry)** | | | | **Sample preparation for jewelry and wearables:**<br>**Wax areas not intended for skin contact:**<br>**EN 1811:2023** | |
| 7440-36-0 | Antimony (Sb) | Paints and Coatings:<br>Extractable: 60 ppm | Antimony and its compounds can be used as a flame retardant in paints, as well as a colourant in pigments. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 5 ppm |
| 7440-38-2 | Arsenic (As) | Paints and Coatings:<br>Extractable: 25 ppm | Arsenic and its compounds can be used in paints and inks. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 5 ppm |
| 7440-39-3 | Barium (Ba) | Paints and Coatings:<br>Extractable: 1000 ppm | Barium and its compounds can be used in pigments for ink. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 100 ppm |
| 7440-43-9 | Cadmium (Cd) | Substrates, Paints, and Coatings:<br>Total:<br>Adults: 75 ppm<br>Children: 40 ppm | Cadmium and its compounds are used as pigments (especially in red, orange, yellow, and green).<br>It can also be used in alloys to improve hardness or be found as a contaminant. | ASTM F963-23 as referenced in ASTM F2923:2020 | Total: 5 ppm |
| 7440-47-3 | Chromium (Cr) | Paints and Coatings:<br>Extractable: 60 ppm | Chromium and its compounds can be used as pigments in paints. It can also be used as part of alloys such as stainless steel. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 5 ppm |
| 7439-92-1 | Lead (Pb) | Substrates, Paints, and Coatings:<br>Total: 90 ppm | Lead and its compounds may be associated with plastics, paints, inks, pigments, and surface coatings. It can also be found in metals as a contaminant.<br><br>Crystal or “lead glass” is exempt from total lead restrictions. | ASTM F963-23 as referenced in ASTM F2923:2020 | Total: 10 ppm |
| 7439-97-6 | Mercury (Hg) | Paints and Coatings:<br>Extractable: 60 ppm | Mercury and its compounds may be used in paints and can be found as a contaminant in alloys and in gold due to its use during the extraction process. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 5 ppm |
| 7440-02-0 | Nickel (Ni) | Release (metal parts):<br>Prolonged skin contact: 0.5µg/cm²/week<br>Pierced part: 0.2µg/cm²/week | Nickel and its compounds can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys. | EN 12472:2020 and EN 1811:2023 | Release:<br>Prolonged skin contact:<br>0.5 µg/cm²/week Pierced part:<br>0.2 µg/cm²/week |
| 7782-49-2 | Selenium (Se) | Paints and Coatings:<br>Extractable: 500 ppm | Selenium and its compounds may be found in paints and inks. | ASTM F963-23 as referenced in ASTM F2923:2020 | Extractable: 50 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Monomers** | | | | | |
| 100-42-5 | Styrene, Free | 500 ppm | Styrene is a precursor for polymerization and maybe present in various Styrene copolymers like plastic buttons. Free styrene is restricted, not total styrene. | Extraction in Methanol<br>GC/MS, sonication at 60 degrees C for 60 minutes | 50 ppm |
| 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 6401:2022 | 1 ppm |
| **N-Nitrosamines** | | | | | |
| 62-75-9 | N-nitrosodimethylamine (NDMA) | 0.5 ppm each | Can be formed as by-product in the production of rubber. | EN ISO 19577:2019 with LC/MS/MS verification if positive | 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) | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Organotin Compounds** | | | | | |
| Various | Dibutyltin (DBT) | 1 ppm each | Class of chemicals combining tin and organics such as butyl and phenyl groups.<br><br>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.<br><br>In textiles and apparel, organotins are associated with plastics, rubber, inks, paints, metallic glitter, polyurethane products, and heat transfer material. | All materials:<br>ISO 16179:2025 or 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) | | | | |
| Various | Dimethyltin (DMT) | | | | |
| Various | Diphenyltin (DPhT) | | | | |
| Various | Dipropyltin (DPT) | | | | |
| Various | Monomethyltin (MMT) | | | | |
| Various | Monophenyltin (MPhT) | | | | |
| 1461-25-2 | Tetrabutyltin (TeBT) | | | | |
| 597-63-8 | Tetraethyltin (TeET) | | | | |
| 3590-84-9 | Tetraoctyltin (TeOT) | | | | |
| Various | Tributyltin (TBT) | 0.5 ppm each | | | |
| Various | Triphenyltin (TPhT) | | | | |
| **Ortho-phenylphenol** | | | | | |
| 90-43-7 | Ortho-phenylphenol (OPP) | 1000 ppm | OPP is used for its preservative properties in leather or as a carrier in polyester dyeing processes. | All materials: EN 17134-2:2023 | 100 ppm |
| **Ozone-Depleting Substances** | | | | | |
| Various | See Regulation (EU) 2024/590 for a complete list. | 5 ppm | Prohibited from use.<br><br>Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry-cleaning agent. | All materials:<br>GC/MS headspace 120 degrees C for 45 minutes | 5 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (PFAS)** | | | | | |
| Various | All PFAS as measured by Total Organic Fluorine | 50 ppm | Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for recycled materials, personal protective equipment, and outdoor apparel for severe wet conditions. See California AB 1817 and check with your brand customer for their exemption policy, which may depend on the market.<br><br>PFAS may be used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.<br><br>Refer to Appendix III for a list of PFAS substances and CAS Numbers for which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.<br><br>See AFIRM PFAS Phaseout Guidance for a recommended testing approach to ensure compliance with all global regulations using the methods included in this section. | EN 14582:2016<br>or ASTM D7359:2018<br>Methods quantify total fluorine (inorganic + organic). See AFIRM PFAS Phaseout Guidance for additional information about total versus total organic fluorine. | 20 ppm total |
| Various | Perfluorooctane Sulfonate (PFOS) and its salts | 25 ppb total | | All materials: EN 17681-1:2025 | 25 ppb total |
| Various | PFOS-related substances | 1000 ppb total | | | 1000 ppb total |
| Various | Perfluorooctanoic Acid (PFOA) and its salts | 25 ppb total | | | 25 ppb total |
| Various | PFOA-related substances | 1000 ppb total | | | 1000 ppb total |
| Various | Perfluorohexane-1-sulphonic acid (PFHxS) and its salts | 25 ppb total | | | 25 ppb total |
| Various | PFHxS-related substances | 1000 ppb total | | | 1000 ppb total |
| Various | C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts | 25 ppb total | | | 25 ppb total |
| Various | C9-C14 PFCAs-related substances | 260 ppb total | | | 260 ppb total |
| Various | Perfluorohexanoic Acid (PFHxA) and its salts | 25 ppb | | | 25 ppb total |
| Various | PFHxA-related substances | 1000 ppb | | | 1000 ppb |
| **Pesticides, Agricultural** | | | | | |
| Various | See Appendix II for a complete list. | 0.5 ppm each | May be found in natural fibers, primarily cotton. | All materials:<br>EN ISO 15913:2003 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09 | 0.5 ppm each |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Phthalates** | | | | | |
| 28553-12-0 | Di-Iso-nonylphthalate (DINP) | 500 ppm each<br>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.<br>Phthalates can be found in:<br>• Flexible plastic components (e.g., PVC)<br>• Print pastes<br>• Adhesives<br>• Plastic buttons<br>• Plastic sleevings<br>• Polymeric coatings<br>Listed here are all legally restricted phthalates as well as those included on the REACH substances of very high concern (SVHC) candidate list at the time of publication. Suppliers should assume that the lululemon RSL includes all phthalates on the SVHC list—whether itemized here or not—since the list is updated frequently.<br>Other ortho-phthalates (like DPHP) may have similar toxicological characteristics to those listed. Before using any unlisted ortho-phthalates, please make sure to have a sound toxicology study from your chemical supplier. If you are unsure, please communicate with your lululemon contact partner. | Sample preparation for all materials: CPSC-CH-C1001-09.4<br>Measurement:<br>Textiles: GC/MS, EN ISO 14389:2022 (8.1 Calculation based on weight of print only; 8.2 Calculation based on weight of print and textile if print cannot be removed).<br>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) | | | | |
| 68515-50-4 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | | | | |
| 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<br>Dipentyl ester, branched and linear | | | | |
| 68648-93-1 | 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixedndecyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate;<br>1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; | | | | |
| 68515-51-5 | 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters | | | | |
| 776297-69-9 | n-Pentyl-isopentylphthalate (nPIPP) | | | | |
| 26040-51-7 | Bis(2-ethylhexyl) tetrabromophthalate | | | | |
| 53306-54-0 | Bis(2-propylheptyl) phthalate (DPHP) | Information olny | AFIRM recommends testing to assess content levels. | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|---|
| **Polycyclic Aromatic Hydrocarbons (PAHs)** | | | | | | |
| 83-32-9 | Acenaphtene | No individual restriction | Total:<br>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.<br><br>**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 or EN 17132:2019 or ISO 16190:2021 | 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 | | | | | |
| 56-55-3 | Benzo(a)anthracene | 1 ppm each<br>Child care article:<br>0.5 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** | | | | | | |
| 91-22-5 | Quinoline | 50 ppm | | Quinoline can be included with disperse dye testing, as the same method is used for both. Found as an impurity in polyester and some dyestuffs. It is not expected to be found in non-dyed materials | All materials: DIN 54231:2022 with methanol extraction at 70 degrees C | 10 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Solvents / Residuals** | | | | | |
| 68-12-2 | Dimethylformamide (DMFa) | 500 ppm | Solvent used in plastics, rubber, and polyurethane (PU) coating. Waterbased PU does not contain DMFa and is therefore preferable. | Textiles: EN 17131:2019<br>All other materials:<br>ISO 16189:2021 | 50 ppm each |
| 75-12-7 | Formamide | 1000 ppm each | Byproduct in the production of EVA foams.<br>Taiwan CNS 15493: BSMI may enforce a limit of 200 ppm in yoga mats under authority of the Consumer Protection Act. | | |
| 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 used in production of water-based polyurethanes and other polymeric materials. May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper. | | |
| **UV Absorbers / Stabilizers** | | | | | |
| 3846-71-7 | UV 320 | 1000 ppm each | Used as UV absorbers for plastics (PVC, PET, PC, PA, ABS, PU and other polymers), coatings, resins, rubber, and PU foam materials such as open cell foams for padding. | ISO 24040:2022 with extraction in THF, analysis by GC/MS | 100 ppm each |
| 3896-11-5 | UV326 | | | | |
| 3864-99-1 | UV 327 | | | | |
| 36437-37-3 | UV 350 | | | | |
| 25973-55-1 | UV 328 | 100 ppm | | | |
| 2440-22-4 | Drometrizole | For informational purposes only.<br>lululemon recommends testing to assess content levels. | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Volatile Organic Compounds (VOCs)** | | | | | |
| 71-43-2 | Benzene | 5 ppm | The VOCs listed in Appendix IV represent a broad range of potentially harmful substances that can be semiquantified using the prescribed headspace method. Detection of substances that are also listed in other substance groups with specific test methods and limit values may require further testing to asses product conformance<br>These VOCs should not be used in textile auxiliary chemical preparations.<br>They are associated with solvent–based processes such as solvent-based polyurethane coatings and glues/adhesives.<br>They should not be used for any kind of facility cleaning or spot cleaning.<br>Individual VOCs should be reported if found at levels greater than 100 ppm. Confirmation testing may be required, especially for substances that are also listed in other substance groups. | For general VOC screening:<br>GC/MS headspace 45 minutes at 120 degrees C | Benzene: 5 ppm<br>Other: 100 ppm each |
| Various | Other: See Appendix IV for a complete list. | Total: 500 ppm | | | |

# Section 3.0

RSL Test Matrix for Apparel, Accessories, and Footwear

| | | | | | | | | Polymers | | | | | Prints | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Substance** | Natural Fibers | Synthetic Fibers | Blended Fibers (Natural & Synthetic) | Natural Leather | Natural Leather (Coated) | Synthetic Coated Fabrics | Coatings | EVA | PU foams | All Other Foams, Plastics, & Polymers | Rubber (Natural & Synthetic) | Inks & Paints | Screen Prints | Sublimation/ Digital Prints | Heat Transfer Prints | Metal | Glue | Feathers & Down | Natural Materials |
| Acetophenone and 2-Phenyl-2-Propanol | | | | | | | | ✓ | | | | | | | | | | | |
| Alkylphenols (APs) NP, OP | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Alkylphenol Ethoxylates (APEOs) NPEO, OPEO | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | • | • |
| Azo-amines | ✓[1] | ✓[1] | ✓[1] | ✓[1] | ✓[1] | ✓[1] | | | | | | ✓[1] | ✓[1] | ✓[1] | ✓[1] | | | | |
| Bisphenols | ✓[9] | ✓ | ✓ | | | | | | | ✓ | | | | | | | | | |
| Brominated and Organophosphorus Substances | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | ✓[3] | | | | | | | ✓[3] | ✓[3] |
| Chlorinated Paraffins, SCCP (C10-C13) and MCCP (C14-C17) | | | | ✓ | ✓ | ✓ | ✓ | • | • | ✓ | ✓ | | • | | | | • | | |
| Chlorophenols (Tri-, Tetra-, and Pentachlorophenols) | • | • | • | • | • | | | | | | | ✓ | ✓ | | | | | | |
| Chlorinated Benzenes and Toluenes | | • | • | | | | | | | | | | | | | | | | |
| Cyclosiloxanes | • | • | • | | | | | | | ✓[8] | | | | | | | | | |
| Dimethylfumarate (DMFu) | | | | • | | | | | | | | | | | | | | | |
| Dyes, Forbidden and Disperse | | ✓[1] | ✓[1] | | | ✓[1] | | | | | | ✓[1] | | ✓[1] | | | | | |
| Dyes, Navy Blue | | •[2] | •[2] | | | | | | | | | | | | | | | | |
| Formaldehyde | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | | |
| Heavy Metals, Chromium VI | | | | ✓ | ✓ | | | | | | | | | | | | | | |
| Heavy Metals Total (Cd, Pb, Hg & As) | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Heavy Metals, Nickel Release | | | | | | | | | | | | | | | | ✓ | | | |
| Heavy Metals, Extractable | ✓ | ✓ | ✓ | | • | ✓ | • | | | | | | | | | • | | | |
| N-Nitrosamines | | | | | | | | | | | ✓ | | | | | | | | |
| Organotin Compounds | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | |
| Ortho-phenylphenol (OPP) | | • | • | • | • | | | | | | | | | | | | | | |
| PFAS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓[4] |
| Phthalates | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | |
| Polycyclic Aromatic Hydrocarbons (PAHs) | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | |
| Quinoline | | • | • | | | | | | | | | | | | | | | | |
| Solvents/Residuals – Dimethylformamide (DMFa) | | | | | ✓[5] | ✓[5] | ✓[5] | | ✓ | ✓[5] | | | | | | | ✓[5] | | |
| Solvents/Residuals – DMAC and NMP | | | | | ✓ | ✓ | ✓ | | • | • | | | | | | | | | |
| Solvents/Residuals – Formamide | | | | | | | | ✓ | | | | | | | | | | | |
| Styrene Monomer | | | | | | | | | | ✓[6] | ✓[7] | | | | | | | | |
| UV-Absorbers | | | | | | | | • | • | • | • | | | | | | | | |
| Volatile Organic Compounds (VOCs) | | | | | ✓ | ✓ | ✓ | • | • | • | • | • | ✓ | • | | | ✓ | | |

**Remarks:**

✓ = Core testing (compliance must be verified by test report)
• = Suppplemental testing (lululemon may ask for testing)

1 = Test if dyed/coloured material (non-white)
2 = Test if blue coloured

3 = Test if treated with flame retardant finish
4 = Test if straw

5 = Test if PU-based material
6 = Test if styrene-based plastic

7 = Test if styrene-butadiene rubber
8 = Test if silicone polymer

9 = Test if wool or cashmere

# Section 4.0

## Restricted Substances List for Packaging

# Introduction

lululemon creates products and experiences that reflect the values of our guests and our aspirations for a healthier world. This philosophy extends to the packaging we use to bring our products to market.

Packaging RSL requirements support lululemon's Be Planet initiatives, complies with global packaging regulations, and minimizes the potential for packaging materials to contaminate product. This section outlines, sets, and specifies testing guidelines, methods, and limits for packaging.

## Scope

Packaging materials covered by this RSL include product packaging, and packaging utilized by lululemon retail or e-commerce channels.

# Test Methods and Limits

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Alkylphenols (APs) Alkylphenol Ethoxylates (APEOs)** | | | | | |
| Various | Nonylphenol (NP), mixed isomers | Total: 100ppm | 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, solubi- lization, or dispersion. APEOs can be used in paper pulping, lubrication oils, and plastic polymer stabilization.<br><br>APs are used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Bio-degradation of APEOs into APs is the main source of APs in the environment.<br><br>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. | Textiles and Leather: EN ISO 21084:2019<br>Polymers and all other materials:<br>1 g sample/20 mL THF, sonication for 60 minutes at 70 degrees C, analysis according to EN ISO 21084:2019 | Total of NP & OP: 10 ppm |
| Various | Octylphenol (OP), mixed isomers | | | | |
| Various | Nonylphenol ethoxylates (NPEOs) | Total: 100 ppm | | All materials except Leather:<br>EN ISO 18254-1:2016 with determination of APEO using LC/ MS or LC/MS/ MS<br>Leather: Sample prep and Analysis using EN ISO 18218-1:2023 with quantification according to EN ISO 18254-1:2016 | Total of NPEO & OPEO: 20 ppm |
| Various | Octylphenol ethoxylates (OPEOs) | | | | |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Azo-amines and Arylamine Salts** | | | | | |
| 92-67-1 | 4-Aminobiphenyl | 20 ppm each | Azo dyes and pigments are colourants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds.<br><br>Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.<br><br>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<br>Leather: EN ISO 17234-1:2024<br><br>p-Aminoazobenzene:<br><br>All materials except Leather: EN ISO 14362-3:2017<br>Leather: EN ISO 17234-2:2011 | 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 | | | | |
| 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-Toluylendiamine | | | | |
| 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<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Bisphenols** | | | | | |
| 80-05-7 | Bisphenol-A (BPA) | 10 ppm | Used in the production of epoxy resins, polycarbonate plastics, flame retardants, PVC, and thermal receipt paper.<br><br>May be found in recycled polymeric and paper materials due to polycarbon- ate plastic and thermal receipt paper made with bisphenols entering waste streams.<br><br>BPA and BPS are prohibited from use in receipt paper. | All other materials:<br>Extraction: 1g sample/20 ml THF, sonication for 60 minutes at 60° C, then add methanol or acetonitrile for precipitation prior to analysis with LC/MS<br>Note for textiles: For precipitation, draw the extract to another container and add methanol or acetonitrile. Inaccurate higher results will be obtained if the textile sample contacts the precipitation solvent | All other materials:<br>0.1 ppm for individual samples<br>1 ppm for composite samples |
| 80-09-1 | Bisphenol-S (BPS) | 200 ppm each | | | |
| 77-40-7 | Bisphenol-B (BPB) | | | | |
| 620-92-8 | Bisphenol-F (BPF) | | | | |
| **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 D4275:2017 | 5 ppm |
| **Dimethylfumarate (DMFu)** | | | | | |
| 624-49-7 | Dimethylfumarate (DMFu) | 0.1 ppm | DMFu is an anti-mold agent used in sachets in packaging to prevent the build-up of mold, especially during shipping. | All materials: CEN ISO/TS 16186:2021 | 0.05 ppm |
| **Formaldehyde** | | | | | |
| 50-00-0 | Formaldehyde | 150 ppm | 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.<br><br>Formaldehyde found in packaging can off-gas directly onto product. | Paper: DIN EN 645:1994 and EN 1541:2001<br><br>Textiles, Finishings, Dyes, Inks & Coatings: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011<br><br>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.<br>Adhesive: ISO 14184-1:2011 | 16 ppm |
| **Heavy Metals** | | | | | |
| 7440-43-9 | Cadmium (Cd) | Total: 100 ppm | 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 the total of four heavy metals exceeds 100 ppm and Cr contributes to the sum, test for Cr VI. | 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. | Metal: IEC 62321-7-1:2015 The testing laboratory will convert the test result into ppm. 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. All other materials: IEC 62321-7-2:2015 | 3 ppm |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| Organotin Compounds | | | | | |
| Various | Dibutyltin (DBT) | 1 ppm each | Class of chemicals combining tin and organics such as butyl and phenyl groups.<br><br>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.<br><br>In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products, and heat transfer material. | All materials:<br>CEN ISO/TS 16179:2012 or 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) | | | | |
| Various | Tributyltin (TBT) | 0.5 ppm each | | | |
| Various | Triphenyltin (TPhT) | | | | |
| Per- and Polyfluoroalkyl Substances (PFAS) | | | | | |
| Various | All PFAS as measured by Total Organic Fluorine | 50 ppm | Regulations around the world ban the use of PFAS in apparel/footwear with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.<br><br>PFAS may be used in commercial water-, oil-, and stain-repellent agents as well as breathable membranes that remove moisture (e.g., PTFE).<br><br>Refer to Appendix III for a list of PFAS substances and CAS Numbers that can be tested to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.<br><br>An update to AFIRM's PFAS Chemical Information Sheet will include guidance for phasing out the entire class of PFAS with a recommended testing approach to ensure compliance with all global regulations using the methods included in this section. | EN 14582:2016<br>or ASTM D7359:2023 | 20 ppm total |
| Various | Perfluorooctane Sulfonate (PFOS) and its salts | 25 ppb total | | All materials: EN 17681-1:2025 | 25 ppb total |
| Various | PFOS - related substances | 1000 ppb total | | | 1000 ppb total |
| Various | Perfluorooctanoic Acid (PFOA) and its salts | 25 ppb total | | | 25 ppb total |
| Various | PFOA-related substances | 1000 ppb total | | | 1000 ppb total |
| Various | Perfluorohexane-1-sulphonic acid (PFHxS) and its salts | 25 ppb total | | | 25 ppb total |
| Various | PFHxS-related substances | 1000 ppb total | | | 1000 ppb total |
| Various | C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts | 25 ppb total | | | 25 ppb total |
| Various | C9-C14 PFCAs-related substances | 260 ppb total | | | 260 ppb total |
| Various | Other Perfluoroalkyl Carboxylic Acids (PFCA) | No Formal Limit<br>Data Report | | | 100 ppb total |

| CAS No. | Substance | Limits<br>Raw Materials and Finished Product | Potential Uses and Additional Information | Suitable Test Method<br>Sample Preparation and Measurement | Reporting Limits<br>Limits above which test results should be reported |
|---|---|---|---|---|---|
| **Phthalates** | | | | | |
| 28553-12-0 | Di-Iso-nonylphthalate (DINP) | 500 ppm each<br>Total: 1000 ppm | Esters of ortho-phthalic acid (phthalates) are a class of organic compounds commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.<br><br>Phthalates can be found in:<br>• Flexible plastic packaging<br>• Components (e.g., PVC)<br>• Adhesives<br>• Plastic sleeves<br>• Polymeric coatings | All materials:<br>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 alkylesters, 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 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | | | | |
| 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 | 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 octyldiesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters | | | | |
| 68515-51-5 | | | | | |
| 776297-69-9 | n-Pentyl-isopentylphthalate (nPIPP) | | | | |

# Section 5.0

## RSL Test Matrix for Packaging

| Substances | Paper | Plastic, Foam, and Wrap | Finishes, Dyes, Inks, and Coatings | Metal | Textiles | Adhesives | Other Items |
|---|---|---|---|---|---|---|---|
| Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs) | | | ✓ | | ✓ | ✓ | |
| Azo-amines | | | | | ✓[1] | | |
| Bisphenols | ✓ | | | | ✓[2] | | |
| Butylhydroxytoluene (BHT) | | ✓[3] | | | | | |
| Dimethylfumarate (DMFu) | | | | | | | ✓[4] |
| Formaldehyde | ✓ | | ✓ | | | ✓ | |
| Heavy Metals Total (Cr VI, Cd, Pb & Hg) | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Organotin Compounds | | ✓ | ✓ | | | ✓ | |
| PFAS | ✓[5] | ✓[5] | ✓[5] | | ✓[5] | | |
| Phthalates | | ✓ | ✓ | | | ✓ | |

**Remarks:**

✓ = Core testing (compliance must be verified by test report)
1 = Test if dyed/coloured material (non-white)
2 = Test if synthetic or blended fiber
3 = Test if polybag
4 = Test if dessiccant sachets are used to control moisture/mold
5 = Test if the material is treated with water, oil, or stain repellent finished

# Section 6.0

## Better Chemistry and Chemical Management System Resources

## Better Chemistry

There are many resources available to assess, find, and select better chemical alternatives. The resources listed below are publicly available. Additional information can be accessed by clicking on the resource heading.

Vendors should always confirm with the chemical supplier that their chemical products will meet lululemon's RSL Standards.

### AFIRM Publications

The AFIRM Group makes available several publications that support the continuous advancement of chemical management and best practices for the apparel and footwear industry. These publications include:

- Chemical information sheets that discuss the likely sources of restricted substances, the reasons for their restriction, and information about safer alternatives
- Chemistry Toolkit that provides an overview of an RSL management program and the implementation of its requirements throughout a brand's supply chain
- Training videos that discuss various aspects of RSL testing

### Zero Discharge of Hazardous Chemicals (ZDHC) Manufacturing Restricted Substances List (MRSL)

To support creating RSL compliant materials and products, the chemistry used for producing such materials or products should be in conformance with the ZDHC MRSL. Sourcing ZDHC MRSL conformant chemical products is also one of the requirements for vendors that is defined in the lululemon Vendor Environmental Manual (see Global Family Portal).

### ZDHC Gateway - Chemical Module:

The ZDHC Gateway - Chemical Module is an online platform lists chemicals conforming to the ZDHC MRSL. Chemical products in the Gateway can achieve three different conformance levels. The higher the level, the more information is available for that chemical product and how it is made, and the more confidence you can have that it would consistently be free from substances listed in the ZDHC MRSL. lululemon recommends to source chemical products at a minimum of level 1, while working towards level 3.

### bluesign® FINDER:

The bluesign FINDER is a free-of-charge web-based, advanced search engine containing bluesign APPROVED chemical products that meet the bluesign CRITERIA and, therefore, the highest level of chemical product verification. All grey and blue products in the bluesign FINDER meet a ZDHC MRSL conformance level 3 and can be found on the ZDHC Gateway as well.

### bluesign® GUIDE:

The bluesign GUIDE is a comprehensive, public database containing bluesign APPROVED fabrics, accessories and trims.

### ECO PASSPORT by OEKO-TEX®:

ECO PASSPORT by OEKO-TEX. is an independent certification for chemicals, colourants, and accessories used in the manufacturing of textiles and leather articles. ECO PASSPORT certified chemical products can achieve ZDHC conformance levels 1, 2 or 3 depending on the certification process. They can be found in the ZDHC Gateway—Chemical Module or in the OEKO-TEX. Buying Guide.

## Chemical Management System

Establishing a chemical management system (CMS) supports vendors in producing RSL compliant products. A properly implemented CMS is designed to improve the safe handling, storage, and disposal of chemicals. It will also facilitate better communication of hazards where needed, reduce worker and environmental exposure to hazardous chemicals, and improve compliance with requirements and regulations. Through the setting of objectives and targets, a CMS will drive continuous improvement and help vendors minimize their environmental impact.

### ZDHC CMS - Framework:

This document lists the minimum requirements for a CMS. It should be easily understood while accommodating the complexities of the ZDHC Program and the supply chain chemistry applications. The ZDHC CMS Framework builds on applicable tools available within the ZDHC and on management standards and other applicable frameworks available within and beyond the industry.

### ZDHC CMS - Technical Industry Guide:

The ZDHC Technical Industry Guide provides guidelines for implementation of the CMS Framework and best practices.

### Higg Facilities Environmental Module:

The Higg Facilities Environmental Module (Higg FEM) from the Sustainable Apparel Coalition is a sustainability assessment tool that standardizes how facilities measure and evaluate their environmental performance. lululemon encourages facilities to use the Higg FEM to self-assess their environmental management practices and set strategies and goals for further improvement.

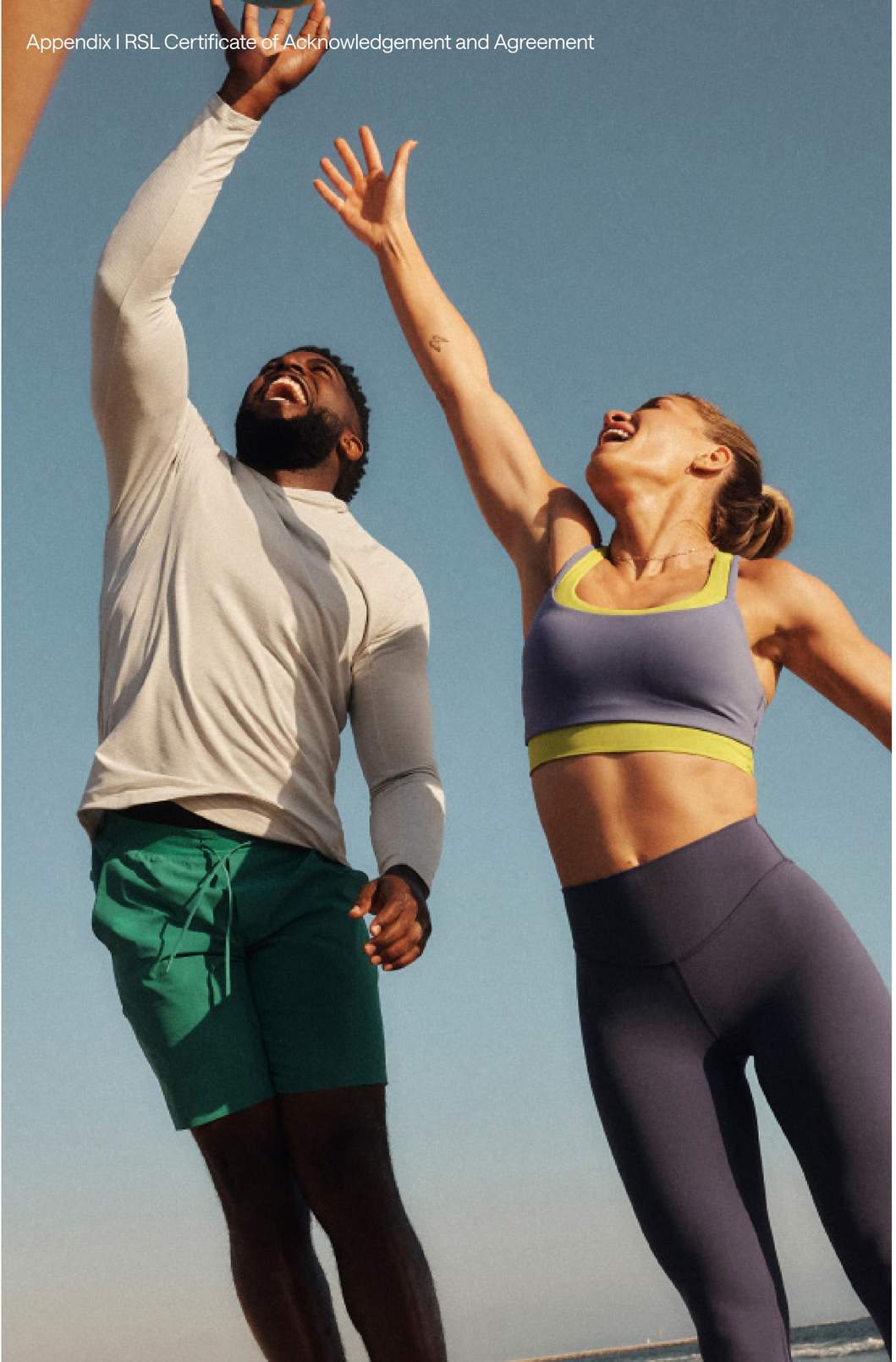
# Section 7.0

## Global Contact Information

For any queries regarding lululemon's RSL contact our **Guest Education Centre**

# Appendix I

## RSL Certificate of Acknowledgent and Agreement



**To: lululemon athletica inc. (“lululemon”)**

Vendor: _____

Address: _____

The undersigned, a duly appointed officer of the Vendor, hereby acknowledges that they have reviewed the most current version of the Restricted Substances List (“the RSL”) and acknowledges they are responsible for compliance with the RSL.

We, the Vendor, certify that all products and every component thereof produced and shipped to lululemon will comply with the RSL as well as with all applicable laws, codes, rules, and regulations including laws relating to occupational health and safety, waste management, and the environment, all as may be amended from time to time.

We further agree that if any product is found that does not comply with the RSL we (a) will not be paid for the order, (b) will be liable for fines, fees, and all other liabilities related thereto, and (c) may lose the right to continue to do business with lululemon.

Vendor hereby agrees to indemnify, defend, and hold harmless lululemon, its affiliates, and each of their officers, directors, employees, agents, and successors, and assigns from and against any and all claims, liabilities, injuries, losses, damages, and expenses, including reasonable attorney’s fees and costs, caused by or relating to Vendor’s failure to comply with the RSL.

We confirm and certify that we have received, read, fully understand, and will comply with the RSL.

Certified this _____ day of _____ , 20____

Name: _____ Title: _____

Signature: _____

(Vice President or above)

# Appendix II

## Pesticides, Agricultural

# Pesticides, Agricultural

| CAS No. | Pesticide Name |
|---|---|
| 93-72-1 | 2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP |
| 93-76-5 | 2,4,5-T |
| 94-75-7 | 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 |
| 57-74-9 | Chlordane |
| 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 |
| 52918-63-5 | Deltamethrin |
| 53-19-0 | DDD |
| 72-54-8 | |
| 3424-82-6 | DDE |
| 72-55-9 | |
| 50-29-3 | DDT |
| 789-02-6 | |
| 333-41-5 | Diazinone |
| 1085-98-9 | Dichlofluanid |

| CAS No. | Pesticide Name |
|---|---|
| 78-48-8 | S,S,S-Tributyl phosphorotrithioate (Tribufos) |
| 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 |
| 66230-04-4 | Esfenvalerate |
| 106-93-4 | Ethylendibromid |
| 56-38-2 | Ethylparathione; Parathion |
| 51630-58-1 | Fenvalerate |
| Various | Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs) |
| 76-44-8 | Heptachlor |
| 1024-57-3 | Heptachloroepoxide |
| 36355-01-8 | Hexabromobiphenyl |
| 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 |

| CAS No. | Pesticide Name |
|---|---|
| 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 |
| 7786-34-7 | Phosdrin/Mevinphos |
| 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 | Tolylfluanide |
| 1582-09-8 | Trifluraline |

# Appendix III

## Per- and Polyfluoroalkyl Substances (PFAS)

| CAS No. | PFAS Name |
|---|---|
| | **PFOS and Related Substances** |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) |
| 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-NH4) |
| 70225-14-8 | Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2) |
| 56773-42-3 | Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C2H5)4) |
| 251099-16-8 | Didecyldimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2) |
| | **PFOS-related Substances** |
| 4151-50-2 | N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA) |
| 31506-32-8 | N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA) |
| 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) |
| 4021-47-0 | Perfluorooctanesulfonic acid, sodium salt (PFOS-Na) |
| | **PFOA and Its Salts** |
| 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** |
| 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) |
| 27854-31-5 | 2H,2H-Perfluorodecanoic acid (H2PFDA) |
| 507-63-1 | Perfluoro-1-iodooctane (PFOI) |
| 882489-14-7 | Tetrabutylphosphonium 2H,2H-Perfluorodecanoate (8:2 FTCA-P(C4H9)4) |
| | **PFHxS and its Salts** |
| 355-46-4 | Perfluorohexane Sulfonic acid (PFHxS) |
| 3871-99-6 | Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K) |
| 55120-77-9 | Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li) |
| 68259-08-5 | Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4) |
| 82382-12-5 | Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na) |

| CAS No. | PFAS Name |
|---|---|
| | **PFHxS-related Substances** |
| 68259-15-4 | N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA) |
| 41997-13-1 | Perfluorohexane sulfonamide (PFHxSA) |
| | **C9-C14 PFCAs and Capital on their and salts** |
| 375-95-1 | Perfluorononanoic Acid (PFNA, C9-PFCA) |
| 335-76-2 | Perfluorodecanoic Acid (PFDA, C10-PFCA) |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA, C11-PFCA) |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA, C12-PFCA) |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA, C13-PFCA) |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA) |
| 172155-07-6 | Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA) |
| 21049-39-8 | PFNA-Na |
| 4149-60-4 | APFN |
| 3830-45-3 | PFDA-Na |
| 3108-42-7 | APFDA |
| 3793-74-6 | PFDoA-NH4 |
| | **C9-C14 PFCA-related Substances** |
| 17741-60-5 | 1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA) |
| 2144-54-9 | 1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA) |
| 865-86-1 | 1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH) |
| 34598-33-9 | 2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA) |
| 678-39-7 | Perfluorocylethanol 8:2 (8:2 FTOH) |
| 39239-77-5 | 1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH) |
| 120226-60-0 | 1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS) |
| 2043-54-1 | 1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI) |
| 30046-31-2 | 1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI) |
| 335-77-3 | Perfluorodecane sulfonic Acid (PFDS) |
| 2806-15-7 | PFDS-Na |
| 2806-16-8 | PFDS-K |
| 67906-42-7 | PFDS-NH4 |
| 2043-53-0 | 1-Iodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI) |
| 101947-16-4 | 1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC2H5)3) |
| | **Other Perfluoroalkyl Carboxylic Acids (PFCAs)** |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA, C6-PFCA) |
| | **PFHxA and its Salts** |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA, C6-PFCA) |
| | **PFHxA-related Substances** |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS) |
| 647-42-7 | 1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH) |
| 17527-29-6 | 1H,1H,2H,2H-Perfluorooctyl acrelate (6:2 FTA) |
| 2144-53-8 | 1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA) |

# Appendix IV

## Volatile Organic Compounds

| Existing VOC's | |
|---|---|
| **CAS No.** | **Substance** |
| 75-15-0 | Carbon Disulfide |
| 56-23-5 | Carbon Tetrachloride |
| 67-66-3 | Chloroform |
| 108-94-1 | Cyclohexanone |
| 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 | 1,1,2,2- Tetrachloroethane |
| 127-18-4 | Tetrachloroethylene (PERC) |
| 108-88-3 | Toluene |
| 71-55-6 | 1,1,1- Trichloroethane |
| 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 | |

| VOCs Listed in Other Substance Groups | |
|---|---|
| **CAS No.** | **Substance** |
| 95-50-1 | 1,2-Dichlorobenzene |
| 106-46-7 | 1,4-Dichlorobenzene |
| 872-50-4 | 1-Methyl-2-pyrrolidione |
| 617-94-7 | 2-phenyl-2-propanol |
| 98-86-2 | Acetophenone |
| 75-12-7 | Formamide |
| 127-19-5 | N,N-Dimethylacetamide (DMAC) |
| 91-20-3 | Naphthalene |
| 68-12-2 | N-N-Dimethylformamide (DMFa) |
| 100-42-5 | Styrene |

| New VOC's | |
|---|---|
| **CAS No.** | **Substance** |
| 96-18-4 | 1,2,3-trichloropropane |
| 78-87-5 | 1,2,Dichloropropane |
| 111-15-9 | 2-Ethoxyethyl acetate |
| 149-57-5 | 2-Ethylhexane acid |
| 62-53-3 | Aniline |
| 111-96-6 | Bis(2-methoxyethyl)ether |
| 78-59-1 | Isophorone |
| 108-95-2 | Phenol |
| 109-99-9 | Tetrahydrofuran (THF) |
| 106-94-5 | 1-bromopropane |
| 70657-70-4 | 1-PG2MEA 1-Propanol,2-methoxy-, acetate) |
| 111-77-3 | 2-(2-Methoxyethoxy)ethanol |
| 584-84-9 | 2,4-toluene diisocyanate |
| 110-80-5 | 2-ethoxyethanol |
| 109-86-4 | 2-Methoxyethanol |
| 1589-47-5 | 2-Methoxypropan-1-o |
| 110-71-4 | Ethylene glycol dimethyl ether (EGDME) |
| 110-49-6 | Ethylene glycol monomethyl ether acetate (EGMEA) |
| 67-72-1 | Hexachloroethane |
| 75-09-2 | Methylene chloride (dichloromethane) |
| 110-54-3 | n-hexane |
| 112-49-2 | Triethylene glycol dimethyl ether (TEGDME) |

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