STUDIO ANNELOES

# RESTRICTED SUBSTANCES LIST STUDIO ANNELOES

RSL VERSION 2.0

SEPTEMBER 2024

STUDIO ANNELOES

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**Introduction RSL version 2.0**

## INTRODUCTION

Dear Supplier,

The production of apparel and footwear from raw materials to finished products is a complex and chemical-intensive process.

For this reason, STUDIO ANNELOES is committed to developing and implementing responsible chemical management procedures throughout its supply chain and for all manufacturing processes and product components (including accessories / trims attached to garments, footwear, prints and packaging materials).

STUDIO ANNELOES expects the same commitment from its suppliers and has developed a Restricted Substances List (STUDIO ANNELOES RSL 2.0) as a reference for suppliers regarding all chemicals that are banned or restricted in STUDIO ANNELOES's production processes and finished products. The purpose of the Restricted Substances List (RSL) is to help reduce the use of hazardous substances in STUDIO ANNELOES's textile and apparel supply chain.

It is STUDIO ANNELOES's priority to ensure that all chemicals and other substances (dyes, finishes etc) used in the manufacture of its products are approved and quantities fall within the maximum allowable concentration limits stated in this RSL. Non-compliance with these requirements can have serious consequences not only for the final consumer but also for the environment and for workers involved in the manufacturing process.

The RSL includes:

1. Legal requirements inside the EU
2. Upcoming European Legislation
3. Responsibility of all suppliers regarding Substances of Very High Concern (SVHC) mentioned on the REACH Candidate list
4. Requirements based on best practice as identified by organisations such as AFIRM which is the Industry Standard for RSL.

A valid OEKO-TEX® Standard 100 product certificate issued by the OEKO-TEX® Association (www.oeko-tex.com) covers most of requirements of this RSL. The Sustainable Textile Production (STeP) is an OEKO-TEX® certification that has a wider scope which includes an analysis of a production facility's management and performance with respect to certain environmental considerations. Certification based on the Oeko-Tex ® Standard 100 or STeP can sometimes be more cost effective than single tests. **All suppliers delivering an Oekotex certified product to STUDIO ANNELOES must take into account that the requirments as mentioned in the Oekotex 100 standard always prevail over the requirements mentioned in this RSL.**

Please be prepared that your contact person may request a signature for each order as a declaration that the specific order complies with our RSL requirements. It is also possible that one or more of your styles could be selected for pre-shipment testing at a certified laboratory.

As a matter of general principle, STUDIO ANNELOES reserves the right to select styles to be (counter) tested upon arrival in our warehouse. If this test produces a “FAIL” result, all of the costs incurred in this testing process shall be borne by the supplier, including all additional costs associated with non-marketable styles.

As part of our ongoing sustainability improvement process, this RSL will be updated on a regular basis to incorporate additions to the list and/or changes to legislation. Together with our vendors, we seek opportunities to achieve continuous improvement in this area. To this end, the RSL can be used as a basis for the development of Quality Management Systems.

Should you have any questions or require further information, please contact Laura Koedijk, Sustainability Manager:

laura@studioanneloes.nl

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**Materials version 2.0 - Examples of materials within the scope of the STUDIO ANNELOES RSL***

| Natural Fibres Including semi-synthetics | Blended Fibres | Synthetic Fibres | Synthetic Coated Fabrics | Natural Leather & Fur Skin | Coatings & Prints | Natural Materials | Other Materials | Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber | Metal | Feathers & Down | Glue |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • Cotton<br>• Wool<br>• Silk<br>• Hemp<br>• Cashmere<br>• Linen<br>• Fur hair<br>• Rayon (Semi-synthetic)<br>• Lyocell (Semi-synthetic) | • Cotton-Polyester<br>• Wool-Nylon<br>• Ramie- Polyester | • Polyester<br>• Acrylic<br>• Nylon<br>• Polyamide | Textiles with:<br>•Polyurethane (PU) coating<br>• Polyvinyl Chloride (PVC) coating<br>• Othter Polymeric coatings | • Leather<br>• Fur skin<br>• Bonded/ recycled leather | Printing techniques such as:<br>• Heat transfers<br>• Dye sublimation printing<br>• Screen printing<br>• Direct-to- garment printing<br>• Discharge printing<br>• Plastisol transfers<br><br>Coatings such as:<br>• Polyvinyl chloride (PVC)<br>• Polyurethane (PU)<br>• UV-cured | • Horn<br>• Bone<br>• Cork<br>• Wood<br>• Paper<br>• Straw<br>• Stone<br>• Shell (e.g. coconut or mother of pearl)<br>• Jacron (a semi synthetic paper productl) | • Glass<br>• Synthetic stone<br>• Porcelain<br>• Ceramic<br>• Crystal | • Ethylene vinyl acetate (EVA)<br>• Polystyrene (PS)<br>• Polyethylene (PE)<br>• Acrylonitrile butadiene styrene (ABS)<br>• Neoprene<br>• Polypropylene (PP)<br>• Polycarbonate (PC)<br>• Polyamide (PA)<br>• Polyurethane (PU)<br>• Polyvinyl chloride (PVC)<br>• Thermoplastic polyurethane (TPU)<br>• Thermoplastic elastomer (TPE)<br>• Styrene ethylene butylene styrene (SEBS) | • Stainless steel<br>• Brass<br>• Copper<br>• Gold<br>• Silver<br>• Aluminum | • Feathers<br>• Down | • Hot melt adhesive<br>• Powdered adhesive<br>• Flock adhesive<br>• Contact adhesive<br>• Latex glue<br>• Polyurethane glue<br>• Neoprene cement<br>• Epoxies<br>• Silicone adhesive<br>• UV-cured adhesive |

* NOTE: This list provides examples of materials within each category but is not all-inclusive.

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**Risk matrix apparel and footwear version 2.0**

●●● indicates a higher risk that a chemical is used and/or could be detected in a particular material.
●● indicates a lower risk that a chemical is used and/or could be detected in a particular material.
No dot indicates that the risk is not anticipated in a particular material.

| CHEMICAL | NATURAL FIBERS | SYNTHETIC FIBERS | BLENDED FIBERS | SYNTHETIC COATED FABRICS, ARTIFICIAL LEATHER | NATURAL LEATHER | NATURAL MATERIALS | METALS | OTHER:PORCELAIN, CERAMIC, GLAS, CRYSTAL, ETC. | FEATHER & DOWN | POLYMERS | | | | | | | | COATING AND PRINTS | GLUE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | EVA | PU Foams | All other PU & TPU | Rubber excludes latex and sillicon rubbers | Polycarbonate | ABS | PVC | All Other foams, plastics & Polymer | | |
| ACETOPHENONE & 2-PHENYL-2-PROPANOL | | | | | | | | | | ●● | | | | | | | | | |
| ACIDIC AND ALKALINE SUBSTANCES (pH) | ●●● | ●●● | ●●● | ●●● | ●●● | | | | | | | | | | | | | | |
| ALKYLPHENOL (AP) & ALKYLPHENOL ETHOXYLATES (APEOs), including all isomers | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | | | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● |
| AZO AMINES AND ARYLAMINE SALTS | ●●●/A | ●●●/A | ●●●/A | ●●●/A | ●●●/A | ●●●/A | | | ●●●/A | | | | | | | | | ●●● | |
| BISPHENOLS | | ●●● | ●●● | ●●● | ●●● | | | | | ●● | ●● | ●● | ●● | ●●● | ●● | ●● | ●● | | |
| CHLORINATED PARAFFINS | | | | ●●/J | ●●● | | | | | ●● | ●● | ●●● | ●●● | ●● | ●● | ●●● | ●● | | |
| CHLOROPHENOLS | ●● | ●● | ●● | | ●● | | | | | | | | | | | | | | |
| CHLORINATED BENZENES AND TOLUENES | | ●● | ●● | ●● | | | | | | | | | | | | | | | |
| DIMETHYLFUMURATE (DMFu) | | | | | ●● | | | | | | | | | | | | | | |
| DISPERSE DYES - ALLERGENIC | | ●●●/A | ●●●/A | ●●●/A | | | | | | | | | | | | | | ●● | |
| DYES - CARCINOGENIC | | ●●●/A | ●●●/A | ●●●/A | | | | | | | | | | | | | | ●● | |
| DYES - NAVY BLUE | | ●● | ●● | | | | | | | | | | | | | | | | |
| FLAME RETARDANTS | ●●/B | | | | | | | | | | | | | | | | | | |
| FLUORINATED GREENHOUSE GASES | | | | | | | | | | | | | | | | | | | |
| FORMALDEHYDE | ●●● | ●●● | ●●● | ●● | ●●● | ●●●/C | | | | | | | ●● | | | | | ●●● | ●●● |
| HEAVY METALS CHROMIUM VI | ●●/D | ●●/E | | | ●●● | | | | | | | | | | | | | | |
| HEAVY METALS EXTRACTABLE | ●●● | ●●● | ●●● | ●● | ●●● | | ●●/F | | | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | |

**A** High risk for dyed/colored materials (non-white only)

**B** Medium risk only if Flame Retardant use or contamination is suspected.

**C** High risk for Wood, Paper, and Straw materials

**D** Medium risk for Wool materials

**E** Medium risk if extractrable Chrome above 1 mg/kg

**F** Copper is exempt from restriction limits in metal parts

**G** Medium risk for plant-based fibers only; N/A for animal-based fibers

**H** High risk for Cadmium and Lead only; Crystal is exempt for Lead

**J** High risk for PVC materials only. Otherwise, medium risk

**K** Medium risk for Styrene/Butadiene Rubbers (SBRs) only

**L** High risk if PFAS use or contamination is suspected.

**M** High risk if Rubber or black Polymeric materials, otherwisemedium risk

**N** High risk for PU and PVC- based materials only

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**Risk matrix apparel and footwear version 2.0**

●●● indicates a higher risk that a chemical is used and/or could be detected in a particular material.
●● indicates a lower risk that a chemical is used and/or could be detected in a particular material.
No dot indicates that the risk is not anticipated in a particular material.

| CHEMICAL | NATURAL FIBERS | SYNTHETIC FIBERS | BLENDED FIBERS | SYNTHETIC COATED FABRICS, ARTIFICIAL LEATHER | NATURAL LEATHER | NATURAL MATERIALS | METALS | OTHER:PORCELAIN, CERAMIC, GLAS, CRYSTAL, ETC. | FEATHER & DOWN | POLYMERS | | | | | | | | | COATING AND PRINTS | GLUE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | EVA | PU Foams | All other PU & TPU | Rubber excludes latex and sillicon rubbers | Polycarbonate | ABS | PVC | All Other foams, plastics & Polymer | | | |
| HEAVY METALS RELEASBLE NICKEL | | | | | | | ●●● | | | | | | | | | | | | | |
| HEAVY METALS TOTAL CONTENT | ●●/G | | ●●/G | ●●● | ●● | | ●●● | ●●●/H | | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●● |
| MONOMERS, STYRENE & VINYL CHLORIDE | | | | ●●●/J | | | | | | | | | ●●/K | | ●● | ●●● | | ●●●/J | | |
| N-NITROSAMINES | | | | | | | | | | | | | ●● | | | | | | | |
| ORGANOTIN COMPOUNDS | | ●● | ●● | ●●● | ●● | | | | | | ●●● | ●●● | ●●● | | | ●●● | ●●● | ●●● | ●●● | |
| ORTHO-PHENYLPHENOL (OPP) | ●● | ●● | ●● | ●● | ●● | | | | | | | | | | | | | ●● | | |
| OZONE DEPLETING SUBSTANCES | | | | | | | | | | | | | | | | | | | | |
| PER - AND POLYFLUOROAKYL SUBSTANCES (PFAS) | ●●●/L | | | | | | | | | | | | | | | | | | | |
| PESTICIDES AND HERBICIDES AGRICULTURAL | | | | | | | | | | | | | | | | | | | | |
| PHTHALATES | | | | ●●● | | | | | | ●●● | ●●● | ●●● | ●●● | ●● | ●● | ●●● | ●●● | ●●● | ●●● | |
| POLYCLIC AROMATIC HYDROCARBONS | | | | ●● | | | | | | ●●●/M | ●●●/M | ●●●/M | ●●● | | | ●●●/M | ●●●/M | ●●●/M | ●●●/M | |
| QUINOLINE | | ●● | ●● | | | | | | | | | | | | | | | | | |
| SOLVENTS/RESIDUALS DMFa | | | | ●●● | | | | | | | ●●● | ●●● | | | | | | ●●●/N | ●●●/N | |
| SOLVENTS/RESIDUALS DMAC AND NMP | | | | ●●● | | | | | | | ●● | ●● | | | | | ●● | ●● | ●● | |
| SOLVENTS/RESIDUALS FORMAMIDE | | | | | | | | | | ●● | | | | | | | | ●● | | |
| UV ABSORBERS/STABILISERS | | | | | | | | | | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | | |
| VOLATILE ORGANIC COMPOUNDS (VOCs) | | | | ●● | | | | | | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●●● | |

| | | | |
|---|---|---|---|
| **A** High risk for dyed/colored materials (non-white only) | **E** Medium risk if extractrable Chrome above 1 mg/kg | **J** High risk for PVC materials only. Otherwise, medium risk | **N** High risk for PU and PVC- based materials only |
| **B** Medium risk only if Flame Retardant use or contamination is suspected. | **F** Copper is exempt from restriction limits in metal parts | **K** Medium risk for Styrene/Butadiene Rubbers (SBRs) only | |
| **C** High risk for Wood, Paper, and Straw materials | **G** Medium risk for plant-based fibers only; N/A for animal-based fibers | **L** High risk if PFAS use or contamination is suspected. | |
| **D** Medium risk for Wool materials | **H**High risk for Cadmium and Lead only; Crystal is exempt for Lead | **M** High risk if Rubber or black Polymeric materials, otherwisemedium risk | |

STUDIO ANNELOES

**Packaging Matrix version 2.0**

●●● indicates a high risk that a chemical is used and/or could be detected in a particular material.

●● indicates a medium risk that a chemical is used and/or could be detected in a particular material.

● indicates a low risk that a chemical is used and/or could be detected in a particular material.

No dot indicates that there is a negligable risk of a chemical being used and/or detected in a particular material.

| SUBSTANCE | NATURAL FIBERS | BLENDED FIBERS | SYNTHETIC FIBERS | COATINGS, DYES & PRINTS | NATURAL MATERIALS including paper and cardboard | POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER | METAL | GLUE | LEATHER Natural | LEATHER Artificial |
|---|---|---|---|---|---|---|---|---|---|---|
| ALKYPHENOL (AP) AND ALKYPHENOL ETHOXYLATES (APEO) including all isomers | ●●● | ●●● | ●●● | ●●● | ●●● | ●●●/A | | ●●● | ●●● | ●●● |
| AZO-AMINES AND ARYLAMINE SALTS | ●●● | ●●● | ●●● | | ●●● | | | | ●●● | ●●● |
| BISPHENOLS | | ●● | ●● | ●●/B | ●●●/C | ●●/D | | | ●● | ●● |
| BUTYLHYDROXYTOLUENE (BHT) | | | | | | ●●/E | | | | |
| DIMETHYLFUMARATE (DMFu) | | | | | | ●●/F | | | ●● | |
| FORMALDEHYDE | ●● | ●● | ●● | ●●● | ●●● | ● | | ●●● | ●● | ●● |
| HEAVY METALS CHROMIUM VI TOTAL* | | | | ●● | ●● | ●/G | ● | | ●●● | ●● |
| HEAVY METALS CADMIUM TOTAL* | | | | ●● | ●●/H | ●/J | ●● | | ●● | ●● |
| HEAVY METALS LEAD TOTAL* | | | | ●● | ●●/H | ●/J | ●● | | ●● | ●● |
| HEAVY METALS MERCURY TOTAL* | | | | ●● | ●● | ● | | | ●● | ●● |
| MOSH/MOAH | | | | ●●●/K | ●●●/L | ●●●/K | | | | |
| ORGANOTIN COMPOUNDS | ● | ● | ● | ●●● | | ●●● | | ●●● | ● | ●●● |
| PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFAS) | ●●/M | ●●/M | ●●/M | ●●/M | ●●/M | | | ●●/M | ●●/M | ●●/M |
| PHTHALATES | | | | ●●●/N | | ●●●/O | | ●●● | ●●/P | ●●● |

| | | |
|---|---|---|
| **A** High risk for foams | **F** Medium risk for silica gel packets and foam packaging | **L** High risk for recycled paper |
| **B** High risk for PVC | **G** Low risk for coloured bags | **M** Medium risk if a fluorinated finish is applied |
| **C** High risk for thermal receipt and recycled paper | **H** Medium risk for materials with high recycled content | **N** High risk for plastisol prints |
| **D** Medium risk for tapes, Polycarbonate and recycled plastic cases | **J** Medium risk for PVC | **O** High risk for PVC |
| **E** Medium risk for polybags | **K** High risk for printed packaging materials | **P** Medium risk for patent or coated leather |

*Please note that Chromium VI, Cadmium, Lead, and Mercury are restricted to a sum total of 100 mg/kg in several jurisdictions. Cadmium, Lead, and Mercury are analyzed using the same method even if the risk of finding them varies across different materials.

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **ACETOPHENONE AND 2- PHENYL-2-PROPANOL** | | | | | |
| Acetophenone | 98-86-2 | | Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60 degrees C | < 50 mg/kg each | Potential breakdown products in EVA foam when using certain cross-linking agents, including Dicumyl Peroxide. |
| 2-Phenyl-2-Propanol | 617-94-7 | | | | |
| **ACIDIC AND ALKALINE SUBSTANCES** | | | | | |
| pH value | Various | | Textiles and synthetic coated fabrics:<br><br>EN ISO 3071:2020<br><br>Leather: EN ISO 4045:2018 | Textiles: 4.0–7.5<br><br>Leather:<br>Chrome tanned: 3.2–5.5<br><br>Other: leather: 3.5-7.5 | pH value is a characteristic number, ranging from pH 0 to pH 14, which indirectly shows the content of acidic or alkaline substances in a product.<br><br>pH values less than 7 indicate sources of acidic substances, and values greater than 7 indicate sources of alkaline substances.<br><br>To avoid irritation or chemical burns to the skin, the pH value of products must be in the range of human skin— approximately pH 5.5.<br><br>STUDIO ANNELOES recommends the limits cited to comply with all global regulations for all products.<br><br>For chrome-tanned leather, the final fixing bath of the re-tanning process should always have a pH below 4.0 to guard against the formation of Chromium VI |

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO) INCLUDING ALL ISOMERS** | | | | | |
| Nonylphenols (NP), mixed isomers | Various | EU: REACH Regulation 1907/2006 Annex XVII entry No. 46<br><br>EU: REACH Regulation 1907/2006 SVHC Candidate List | Textiles and Leather: EN ISO 21084:2019<br><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 APs:<br>< 10 mg/kg<br><br>Total APs + APEOs:<br>< 100 mg/kg | 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.<br><br>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.<br><br>We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 mg/kg and that more time is necessary for the supply chain to phase them out completely.<br><br>Recycled products: Contact Laura Koedijk Sustainability Manager at Studio Anneloes for information about potential exemptions from the limit on NPEOs in recycled textile products. |
| Octylphenols (OP), mixed isomers | Various | | | | |
| Nonylphenol ethoxylates (NPEOs) | Various | EU: REACH Regulation 1907/2006 Annex XVII entry No. 46 + 46a<br><br>The entry is applicable for textile articles which can reasonably be expected to be washed in water during their normal lifecycle in concentrations equal to or greater than 0.01% (100 mg/kg) by weight of that textile article or of each part of the textile article. | All materials except Leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS<br><br>Leather: Sample prep and analysis using 18218-1:2023 with quantification according to EN ISO 18254-1:2016 | | |
| Octylphenol ethoxylates (OPEOs) | Various | | | | |

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| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **AZO-AMINES AND ARYLAMINE SALTS** | | | | | |
| 4-Aminobiphenyl | 92-67-1 | EU: REACH Regulation 1907/2006 Annex XVII entry No. 43 + appendix 8 | All materials except leather: EN ISO 14362-1:2017<br><br>Leather: EN ISO 17234-1:2020<br><br>4-Aminoazobenzene (4AAB) All materials except leather: EN ISO 14362-3: 2017<br><br>Leather: EN ISO 17234-2:2011 | < 20 mg/kg each | Azo dyes and pigments are colorants 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 cleaved amines are restricted.<br><br>Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles. |
| Benzidine | 92-87-5 | | | | |
| 4-Chloro-o-toluidine | 95-69-2 | | | | |
| 2-Naphtylamine | 91-59-8 | | | | |
| o-Aminoazotoluene | 97-56-3 | | | | |
| 2-Amino-4-nitrotoluene | 99-55-8 | | | | |
| p-Chloraniline | 106-47-8 | | | | |
| 2,4-Diaminoanisole | 615-05-4 | | | | |
| 4,4'-Diaminodiphenylmethane (4,4'-MDA) | 101-77-9 | | | | |
| 3,3'-Dichlorobenzidine | 91-94-1 | | | | |
| 3,3'-Dimethoxybenzidine | 119-90-4 | | | | |
| 3,3'-Dimethylbenzidine | 119-93-7 | | | | |
| 3,3'-dimethyl-4,4'-diaminodiphenylmethane | 838-88-0 | | | | |
| p-Cresidine | 120-71-8 | | | | |
| 4,4'-Methylen-bis(2-chloraniline) | 101-14-4 | | | | |
| 4,4'-Oxydianiline | 101-80-4 | | | | |
| 4,4'-Thiodianiline | 139-65-1 | | | | |
| o-Toluidine | 95-53-4 | | | | |
| 2,4-Toluylendiamine (2,4-TDA) | 95-80-7 | | | | |
| 2,4,5-Trimethylaniline | 137-17-7 | | | | |
| 2-Methoxyaniline (= o-Anisidine) | 90-04-0 | | | | |
| 4-Aminoazobenzene (4-AAB) | 60-09-3 | | | | |
| 2,4-Xylidine | 95-68-1 | | | | |
| 2,6-Xylidine | 87-62-7 | | | | |
| 4-Chloro-o-toluidinium chloride | 3165-93-3 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | | | |
| 2-Naphthylammoniumacetate | 553-00-4 | | | | |
| 4-Methoxy-m-phenylene diammonium sulphate | 39156-41-7 | | | | |
| 2,4,5-Trimethylaniline hydrochloride | 21436-97-5 | | | | |

| Restricted Substances List version 2.0 | | | | | |
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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **BISPHENOLS** | | | | | |
| Bisphenol-A (BPA) | 80-05-7 | EU: REACH Regulation 1907/2006 SVHC Candidate List | Leather: EN ISO 11936:2023<br><br>All other materials:<br><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 | < 1 mg/kg | BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC.<br><br>BPS may be used as a substitute for BPA for some specific uses, including in thermal receipt paper.<br><br>BPS and BPF can be found in polyamide dye fixing agents and in sulfone- and phenol-based leather synthetic tanning agents.<br><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><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.<br><br>STUDIO ANNELOES recommends testing relevant materials for bisphenols according to the Testing Matrix and to work with suppliers to minimize residual concentrations or replace them with better alternatives where possible. |
| Bisphenol S (BPS) | 80-09-1 | | | < 1000 mg/kg each | |
| Bisphenol B (BPB) | 77-40-7 | | | | |
| Bisphenol F (BPF) | 620-92-8 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **CHLORINATED PARAFFINS** | | | | | |
| Short-chain Chlorinated Paraffins (SCCPs) (C10-C13) | 85535-84-8 | EU: Regulation 2019/1021 on Persistant Organic Pollutants<br><br>EU: REACH Regulation 1907/2006 SVHC Candidate List | 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) | < 1000 mg/kg | May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production. |
| Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17) | 85535-85-9 | EU: Regulation 1907/2006 Candidate List. | | < 1000 mg/kg | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **CHLOROPHENOLS** | | | | | |
| Pentachlorophenol (PCP) · and its salts and esters | 87-86-5 | EU: Regulation 2019/1021 on Persistant Organic Pollutants | All materials: EN 17134-2:2023 | < 0.5 mg/kg 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.<br><br>PCP, TeCP, and TriCP can also be used as in-can preservatives in print pastes and other chemical mixtures. |
| 2,3,5,6- Tetrachlorophenol (TeCP) | 935-95-5 | SWITZERLAND: ORRChem annex 1.2 (Art.3) | | | |
| 2,3,4,6- Tetrachlorphenol (TeCP) | 58-90-2 | | | | |
| 2,3,4,5- Tetrachlorphenol (TeCP) | 4901-51-3 | | | | |
| 2,3,4-Trichlorophenol (TriCP) | 15950-66-0 | | | | |
| 2,3,5-Trichlorophenol (TriCP) | 933-78-8 | | | | |
| 2,3,6-Trichlorophenol (TriCP) | 933-75-5 | | | | |
| 2,4,5-Trichlorophenol (TriCP) | 95-95-4 | | | | |
| 2,4,6-Trichlorophenol (TriCP) | 88-06-2 | | | | |
| 3,4,5-Trichlorophenol (TriCP) | 609-19-8 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **CHLORINATED BENZENES AND TOLUENES** | | | | | |
| Hexachlorobenzene (HCB) | 118-74-1 | EU: Regulation 2019/1021 on Persistant Organic Pollutants | All materials: EN 17137:2018 | < 1 mg / kg (total) | Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/ polyester fibers.<br><br>They can also be used as solvents.<br><br>Cross-contamination from anti-moth agents and poly shipping bags may cause failures. |
| Pentachlorobenzenes (PCB) | 608-93-5 | | | | |
| α,α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride | 5216-25-1 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | | | |
| α,α,α-trichlorotoluene; benzotrichloride | 98-07-7 | | | | |
| α-chlorotoluene; benzyl chloride | 100-44-7 | | | | |
| 1,2,3-Trichlorobenzene<br>1,2,4-Trichlorobenzene<br>1,3,5-Trichlorobenzene | 87-61-6<br>120-82-1<br>108-70-3 | | | | |
| 1,2,3,4-Tetrachlorobenzene<br>1,2,3,5-Tetrachlorobenzene<br>1,2,4,5-Tetrachlorobenzene | 634-66-2<br>634-90-2<br>95-94-3 | | | | |
| 1,3-Dichlorobenzene<br>1-4-Dichlorobenzene | 541-73-1<br>106-46-7 | | | | |
| 2-Chlorotoluene<br>3-Chlorotoluene<br>4-Chlorotoluene | 95-49-8<br>108-41-8<br>106-43-4 | | | | |
| 2,3-Dichlorotoluene<br>2,4-Dichlorotoluene<br>2,5-Dichlorotoluene<br>2,6-Dichlorotoluene<br>3,4-Dichlorotoluene | 32768-54-0<br>95-73-8<br>19398-61-9<br>118-69-4<br>95-75-0 | | | | |
| 2,3,6-Trichlorotoluene<br>2,4,5-Trichlorotoluene | 2077-46-5<br>6639-30-1 | | | | |
| 2,3,4,5-Tetrachlorotoluene<br>2,3,4,6-Tetrachlorotoluene<br>2,3,5,6- Tetrachlorotoluene | 76057-12-0<br>875-40-1<br>1006-31-1 | | | | |
| Pentachlorotoluenes | 877-11-2 | | | | |
| 1,2-Dichlorobenzene | 95-50-1 | | | < 10 mg/kg | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **DIMETHYLFUMARATE (DMFu)** | | | | | |
| Dimethylfumarate (DMFu) | 624-49-7 | EU: REACH Regulation 1907/2006 Annex XVII entry No.61 | All materials: ISO 16186:2021 | < 0.1 mg/kg | DMFu is an anti-mold agent that may be used in sachets in packaging to prevent the buildup of mold, especially during shipping. |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **DISPERSE DYES - ALLERGENIC** | | | | | |
| C.I. Disperse Blue 1 | 2475-45-8 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | All materials: DIN 54231:2022 | < 30 mg/kg 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.<br><br>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. |
| C.I. Disperse Blue 35A | 56524-77-7 | GERMANY: The authoritative German Federal Institute for Risk Assessment (BfR) strongly advises not to to use the sensitising disperse dyes listed. Please note that in Germany findings for these substances are judged according to the Lebensmittel- , Bedarfsgegenstände-, und Futtermittelgesetzbuch (LFGB), which is somehow legally binding and considered to be best practice | | | |
| C.I. Disperse Blue 35B | 56524-76-6 | | | | |
| C.I. Disperse Blue 106 | 12223-01-7 | | | | |
| C.I. Disperse Blue 124 | 61951-51-7 | | | | |
| C.I. Disperse Orange 3 | 730-40-5 | | | | |
| C.I. Disperse Orange 37/59/76 | 12223-33-5<br>13301-61-6<br>51811-42-8 | | | | |
| C.I. Disperse Red 1 | 2872-52-8 | | | | |
| C.I. Disperse Yellow 3 | 2832-40-8 | | | | |
| C.I. Disperse Blue 3 | 2475-46-9 | | | | |
| C.I. Disperse Blue 7 | 3179-90-6 | | | | |
| C.I. Disperse Blue 26 | 3860-63-7 | | | | |
| C.I. Disperse Blue 102 | 12222-97-8 | | | | |
| C.I. Disperse Brown 1 | 23355-64-8 | | | | |
| C.I. Disperse Orange 1 | 2581-69-3 | | | | |
| C.I. Disperse Orange 11 | 82-28-0 | | | | |
| C.I. Disperse Orange 149 | 85136-74-9 | | | | |
| C.I. Disperse Red 11 | 2872-48-2 | | | | |
| C.I. Disperse Red 17 | 3179-89-3 | | | | |
| C.I. Disperse Red 151 | 61968-47-6 | | | | |
| C.I. Disperse Yellow 1 | 119-15-3 | | | | |
| C.I. Disperse Yellow 7 | 6300-37-4 | | | | |
| C.I. Disperse Yellow 9 | 6373-73-5 | | | | |
| C.I. Disperse Yellow 23 | 6250-23-3 | | | | |
| C.I. Disperse Yellow 39 | 12236-29-2 | | | | |
| C.I. Disperse Yellow 49 | 54824-37-2<br>6858-49-7 | | | | |
| C.I. Disperse Yellow 56 | 54077-16-6 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **DYES- CARCINOGENIC** | | | | | |
| C.I. Basic Red 9 | 569-61-9 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | All materials: DIN 54231:2022 | < 30 mg/kg each | Basic dyes are water- soluble cationic dyes mainly used on acrylic fibers. |
| C.I. Basic Violet 3 (with ≥ 0.1 % Michler's ketone or base)* | 548-62-9 | | | | |
| C.I. Basic Blue 26 (with ≥ 0.1 % Michler's ketone or base)* | 2580-56-5 | The dyes marked* are included in EU: REACH Regulation 1907/2006 SVHC Candidate List | | | |
| Basic Violet 1 | 8004-87-3 | | | | |
| C.I. Basic Violet 14 | 632-99-5 | | | | |
| C.I. Basic Green 4 (oxalate, chloride or free) | 2437-29-8<br>569-64-2<br>10309-95-2 | | | | |
| C.I. Acid Red 26 | 3761-53-3 | | | | Acid dyes are water-soluble anionic dyes mainly used on fibers such as wool, silk, and nylon. |
| C.I. Acid Violet 49 | 1694-09-3 | | | | |
| C.I. Direct Black 38* | 1937-37-7 | | | | Direct dyes are used on natural fibers such as cotton, linen, cellulose and in special treatments such as dip dyes. |
| C.I. Direct Red 28* | 573-58-0 | | | | |
| C.I. Direct Blue 6 | 2602-46-2 | | | | |
| C.I. Direct Brown 95 | 16071-86-6 | | | | |
| 4-Dimethylaminoazobenzene (Solvent Yellow 2) | 60-11-7 | | | | Solvent dyes are dyes which are soluble in organic solvents, and can be used on natural and synthetic fibers. |
| Solvent Yellow 14 | 842-07-9 | | | | |
| C.I. Solvent Blue 4* | 6786-83-0 | | | | |
| 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol (Solvent Violet 8)* | 561-41-1<br>52080-58-7 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **DYES - NAVY BLUE** | | | | | |
| Component 1: C39H23ClCrN7O12S.2Na | 118685-33-9 | EU: REACH Regulation 1907/2006 Annnex XVII entry no.43 + appendix 9 | All materials: DIN 54231:2022 | < 30 mg/kg | Navy blue colorants are regulated and prohibited from use for dyeing of textiles. |
| Component 2: C46H30CrN10O20S2.3Na | Not allocated | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **FLAME RETARDANTS** | | | | | |
| Tri(2,3-dibromopropyl)phosphate (TRIS)* | 126-72-7 | EU: REACH Regulation 1907/2006 Annex XVII entry No. 4 | EN ISO 17881-1 (2016) for brominated flame retardants<br><br>EN ISO 17881-2 (2016) for phosphorus flame retardants | < 10 mg/kg each<br><br>*Banned in textiles with skin contact | 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><br>Listed here are examples of flame-retardant substances used historically across the apparel and footwear industry.<br><br>It is not intended to be a complete list.<br><br>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 POPs Regulation.<br><br>The 10 mg/kg limit is established to account for incidental impurities, byproducts, and contaminants.<br><br>Flame retardants should not be used for any other purpose, e.g., as softeners or plasticizers. |
| Tris(aziridinyl)phosphinoxide (TEPA)* | 545-55-1 | EU: REACH Regulation 1907/2006 Annex XVII entry No.7 | | | |
| Polybromobiphenyls (PBBs)* | 59536-65-1 | EU: REACH Regulation 1907/2006 Annex XVII entry No.8 | | | |
| Octabromodiphenylethers (OctaBDEs) | 32536-52-0 | EU: REACH Regulation 1907/2006 Annex XVII entry No.45 | | | |
| Polybrominated diphenyl ethers (PBDEs) | Various | EU: Regulation 2019/1021 on Persistant Organic Pollutants | | | |
| Decabromodiphenylether (DecaBDE) | 1163-19-5 | | | | |
| Pentabromodiphenylethers (PentaBDEs) | 32534-81-9 | | | | |
| Hexabromocyclododecane and all main diastereomeres identified (alpha-, beta-, gamma-) (HBCDD) | 3194-55-6<br>134237-50-6<br>134237-51-7<br>134237-52-8<br>25637-99-4 | | | | |
| Decabromodiphenyl ethane (DBDPE) | 84852-53-9 | The Flame retardants marked ** are included in EU: REACH Regulation 1907/2006 SVHC Candidate List | | | |
| Trixylylphosphate (TXP)** | 25155-23-1 | | | | |
| Tetrabromobisphenol A (TBBPA)** | 79-94-7 | | | | |
| Bis(2,3-dibromopropyl)phosphate (BIS) | 5412-25-9 | | | | |
| 2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)** | 3296-90-0 | | | | |
| Tris(1,3-dichloro-iso-propyl)phosphate (TDCPP) | 13674-87-8 | | | | |
| Tris(2-chloroethyl)phosphate (TCEP)** | 115-96-8 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **FLUORINATED GREENHOUSE GASES** | | | | | |
| See Regulation (EU) No 2024/573 for a complete list. | Various | EU: Regulation 2024/573 of the European Parliament and of the Council (repealing Regulation 517/2014 of the European Parliament and of the Council) | Sample preparation: Purge and trap — thermal desorption or SPME<br>Measurement: GC/MS | < 0.1 mg/kg each | Prohibited from use.<br>May be used as foam blowing agents, solvents, fire retardants, and aerosol propellants. |
| **FORMALDEHYDE** | | | | | |
| Formaldehyde | 50-00-0 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | All materials except Leather: 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 17226-1:2021 confirmation method in case of interferences.<br><br>Alternatively, EN ISO 17226-1:2021 can be used on its own. | < 75 mg/kg | Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins. |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **HEAVY METALS EXTRACTABLE** | | | | | |
| Chromium VI (Cr VI) | 18540-29-9 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | EN 16711-2:2016<br>EN ISO 17075-1:2017 if Cr is detected | < 1 mg/kg | 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). |
| Arsenic (As) | 7440-38-2 | | All materials except Leather:<br>DIN EN 16711-2:2016<br>Leather: DIN EN ISO 17072-1:2019<br>* Crystal or “lead glass” is exempt from total Lead restrictions. | < 0.2 mg/kg | Arsenic and its compounds can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics. |
| Cadmium (Cd) | 7440-43-9 | | | < 0.1 mg/kg | Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints. |
| Lead (Pb) | 7439-92-1 | | | < 1 mg/kg* | Lead may be associated with plastics, paints, inks, pigments and surface coatings. |
| Antimony (Sb) | 7440-36-0 | | | < 30 mg/kg | Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments, and alloys. |
| Barium (Ba) | 7440-39-3 | | | < 1000 mg/kg | 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. |
| Cobalt (Co) | 7440-48-4 | | | < 4 mg/kg | Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons. |
| Copper (Cu) | 7440-50-8 | | | < 50 mg/kg | Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent. |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **HEAVY METALS EXTRACTABLE CONTINUED** | | | | | |
| Nickel (Ni) | 7440-02-0 | | All materials except Leather:<br><br>DIN EN 16711-2:2016<br><br>Leather: DIN EN ISO 17072-1:2019 | < 1 mg/kg | 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. |
| Chromium (Cr) | 7440-47-3 | | | < 2 mg/kg<br>Leather: < 200 mg/kg | Chromium compounds can be used as dyeing additives; dye-fixing agents; color-fastness after- treatmnts; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning. |
| Mercury (Hg) | 7439-97-6 | | | < 0.02 mg/kg | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints and as catalysts in the manufacture of PU and vinyl chloride for use in PVC. |
| Selenium (Se) | 7782-49-2 | | | < 500 mg/kg | Selenium may be found in synthetic fibres, paints, inks, plastics and metal trims. |
| **APPLICABLE FOR LEATHER** | | | | | |
| Chromium VI (Cr VI) | 18540-29-9 | EU: REACH Regulation 1907/2006 ANNEX XVII entry No.47 | 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><br>Aging of the sample is required according to ISO 10195 (2018) Method A1 (24h, 80°C, max. 10%rH, usage of a non- ventilated oven) | Not detected<br>Detection Limit: 3 mg/kg | 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). |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **HEAVY METALS RELEASABLE NICKEL** | | | | | |
| Nickel | 7440-02-0 | EU:REACH Regulation 1907/2006 ANNEX XVII entry No.27 | EN 12472:2020 and EN 1811:2023<br><br>Release (eyewear frames):<br><br>EN 16128:2015 | Release (metal parts):<br><br>Prolonged skin contact:<br>< 0.5 µg/cm2/week<br><br>Eyewear frames:<br>< 0.5 µg/cm2/week | Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys.<br><br>They can also occur as impurities in pigments and alloys. |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **HEAVY METALS TOTAL CONTENT** | | | | | |
| Cadmium (Cd) | 7440-43-9 | EU: REACH Regulation 1907/2006 ANNEX XVII entry No.23 | All materials except Leather: DIN EN 16711-1:2016<br><br>Leather: DIN EN ISO 17072-2:2019 | < 75 mg/kg | Heavy metals, including arsenic, cadmium, lead, and mercury may be found in pigments and dyes, metal alloys and coating, and in the PVC stabilization process.<br><br>Cadmium may be found in low quality dyes. Arsenic, cadmium, lead, and mercury may be found in pigments, but have largely been phased out. Metal alloys and coatings may contain arsenic, cadmium, and lead.<br><br>PVC stabilization may be accomplished with the use of cadmium or lead. |
| Lead (Pb) | 7439-92-1 | EU: REACH Regulation 1907/2006 ANNEX XVII entry No.63 | 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 | < 90 mg/kg | |
| Mercury (Hg) | 7439-97-6 | EU:REACH Regulation 1907/2006 ANNEX XVII entry No.62 | All materials except Leather: DIN EN 16711-1:2016<br><br>Leather: DIN EN ISO 17072-2:2019 | < 0.5 mg/kg | |
| Arsenic (As) | 7440-38-2 | | | < 100 mg/kg | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **MONOMERS** | | | | | |
| Styrene, Free | 100-42-5 | | Extraction in Methanol GC/MS, sonication at 60 degrees C for 60 minutes | < 500 mg/kg | Styrene is a precursor for polymerization and may be present in various Styrene copolymers like plastic buttons.<br><br>Free styrene is restricted, not total styrene. |
| Vinyl Chloride | 75-01-4 | | EN ISO 6401:2022 | < 1 mg/kg | Vinyl Chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops, and synthetic leather. |
| **N-NITROSAMINES** | | | | | |
| N-Nitrosodibutylamine (NDBA) | 924-16-3 | | EN ISO 19577:2019 with LC/MS/MS verification if positive. | < 0.5 mg/kg each | Can be formed as by-product in the production of rubber. |
| N-Nitrosodiethylamine (NDEA) | 55-18-5 | | | | |
| N-Nitrosodimethylamine (NDMA) | 62-75-9 | | | | |
| N-Nitrosodipropylamine (NDPA) | 621-64-7 | | | | |
| N-Nitrosomorpholine (NMOR) | 59-89-2 | | | | |
| N-Nitroso-N-ethyl-N-phenylamine (NEPhA) | 612-64-6 | | | | |
| N-Nitroso-N-methyl-N-phenylamine (NMPhA) | 614-00-6 | | | | |
| N-Nitroso-piperidine (NPIP) | 100-75-4 | | | | |
| N-Nitroso-pyrrolidine (NPYR) | 930-55-2 | | | | |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **ORGANOTIN COMPOUNDS** | | | | | |
| Tributyltin (TBT) compounds | Various | EU: Regulation 1907/2006 REACH ANNEX XVII entry No.20 | All materials: CEN ISO/TS 16179:2012 or EN ISO 22744-1:2020<br><br>· Footwear, Leather, Plastic: CEN ISO TS16179:2012 | < 0.5 mg/kg | Class of chemicals combining tin and organics such as butyl and phenyl groups that should no longer be used in the production of apparel, footwear, and related products.<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. |
| Triphenyltin (TPhT) compounds | Various | | | | |
| Dibutyltin (DBT) compounds | Various | | | < 1 mg/kg each | |
| Dioctyltin (DOT) compounds | Various | | | | |
| Monobutyltin (MBT) | Various | | | | |
| Tricyclohexyltin (TCyHT) | Various | | | | |
| Trioctyltin (TOT) | Various | | | | |
| Tripropyltin (TPT) | Various | | | | |
| Trimethyltin (TMT) | Various | | | | |
| Monooctyltin (MOT) | Various | | | | |
| Dimethyltin (DMT) | Various | | | | |
| Diphenyltin (DPhT) | Various | | | | |
| Dipropyltin (DPT) | Various | | | | |
| Monomethyltin (MMT) | Various | | | | |
| Monophenyltin (MPhT) | Various | | | | |
| Tetrabutyltin (TeBT) | Various | | | | |
| Tetraethyltin (TeET) | Various | | | | |
| Tetraoctyltin (TeOT) | Various | | | | |

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **ORTHO-PHENYLPHENOL** | | | | | |
| o-Phenylphenol (OPP) | 90-43-7 | | All materials: EN 17134-2:2023 | < 1000 mg/kg | OPP is used for its preservative properties in leather or as a carrier in polyester dyeing processes. |
| **OZONE DEPLETING SUBSTANCES** | | | | | |
| See Regulation (EC) No 1005/2009 for a complete list | Various | Regulation (EC) No 1005/2009 | All materials: GC/MS headspace 120 degrees C for 45 minutes | < 5 mg/kg | Prohibited from use. Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry cleaning agent. |

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)* (SEE APPENDIX A FOR INDIVIDUAL SUBSTANCES)** | | | | | |
| **NO INTENTIONAL USE ALLOWED** | | | | | Regulations around the world ban the use of PFAS in apparel and 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-repellentagents as well as in breathable membranes that remove moisture, e.g., PTFE.<br><br>* Refer to Appendix A for the full list of substances and CAS Numbers included in this restriction.<br><br>**Danish legislation banning PFAS is expected to be adopted from July 2025 with a transition period of one year. The ban would apply from July 2026.** |
| All PFAS as measured by total organic fluorine | Various | USA | EN 14582:2016 or ASTM D7359:2023 | < 100 mg/kg by 2025<br>< 50 mg/kg by 2027 | |
| Perfluoroctane Sulfonates (PFOS) and related substances ** | Various | EU: Regulation 2019/1021 on Persistant Organic Pollutants | All materials: EN ISO 23702-1:2023 or EN 17681-1:2022 & 17681-2:2022 | < 1µg / m² total | |
| Perfluoroctanoic Acid (PFOA) and it salts | Various | | | < 0.025 mg/kg total | |
| PFOA-related substances | Various | | | < 1 mg/kg total | |
| Perfluorohexane-1-sulphonic acid (PFHxS) and its salts | Various | | | < 0.025 mg/kg total | |
| PFHxS-related substances | Various | | | < 1 mg/kg total | |
| C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts | Various | EU: REACH Regulation 1907/2006 Annex XVII entry No.68 | | < 0.025 mg/kg total | |
| C9-C14 PFCA-related substances | Various | | | < 0.26 mg/kg total | |
| PFHxA, its salts, and related substances | Various | EU REACH regulation 2025-2026 expected to be going into force 2027-2029 | | Anticipated regulated limits in the EU:<br><br>PFHxA and its salts:<br>< 0.025 mg/kg<br><br>PFHxA-related substances:<br>< 1 mg/kg | |

**The 1 µg/m2 total area-based limit for PFOS and related substances is in the process of revision under the EU POPs Regulation and will transition to a 0.025 mg/kg total sum limit on PFOS and its salts and a 1 mg/kg total sum limit on PFOS-related substances. This will bring EU PFOS restrictions into alignment with other existing PFAS restrictions included here.

· Important note:
New draft updated method prEN 17681-1:2023 for targeted PFAS analysis is likely to be finalized and adopted in a future version of the STUDIO ANNELOES RSL. STUDIO ANNELOES anticipates higher findings of various PFAS analytes, especially FTOHs, with this new method, and industry should prepare accordingly

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **PESTICIDES AND HERBICIDES AGRICULTURAL (SEE APPENDIX B FOR INDIVIDUAL SUBSTANCES)** | | | | | |
| See Appendix B for the complete list | Various | EU: Regulation 2019/1021 on Persistant Organic Pollutants | All materials: EN ISO 15913:2003 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09 | < 0.5 mg/kg each | May be found in natural fibers, primarily cotton. |

STUDIO ANNELOES

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|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **PHTHALATES** | | | | | |
| Bis(2-ethylhexyl) phthalate (DEHP) | 117-81-7 | EU: REACH Regulation 1907/2006 Annex XVII entry No. 51 | Sample preparation for all materials: CPSC-CH-C1001-09.4<br><br>Measurement:<br><br>Textiles:<br>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).<br><br>All materials except textiles:<br>GC/MS | < 500 mg/kg each<br><br>Total: < 1000 mg/kg | Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility.<br><br>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 components (e.g., PVC)<br>• Print pastes<br>• Adhesives<br>• Plastic buttons<br>• Plastic sleevings<br>• Polymeric coatings<br><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 RSL includes all phthalates on the SVHC list—whether itemized here or not— since the list is updated frequently. |
| Dibutyl phthalate (DBP) | 84-74-2 | | | | |
| Butylbenzyl phthalate (BBP) | 85-68-7 | | | | |
| Di-isobutyl phthalate (DIBP) | 84-69-5 | | | | |
| Di-“isononyl” phthalate (DINP) | 28553-12-0<br>68515-48-0 | EU: REACH Regulation 1907/2006 Annex XVII entry No.52 a,b,c | | | |
| Di-“isodecyl” phthalate (DIDP) | 26761-40-0<br>68515-49-1 | | | | |
| Di-n-octyl phthalate (DNOP) | 117-84-0 | | | | |
| 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) | 71888-89-6 | EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12 | | | |
| Di-isopentylphthalate (DIPP) | 605-50-5 | | | | |
| Di-n-pentyl phthalate (DPP) | 131-18-0 | | | | |
| Bis(2-methoxyethyl) phthalate (DMEP) | 117-82-8 | | | | |
| Di-n-hexyl phthalate (DnHP) | 84-75-3 | | | | |

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| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **PHTHALATES CONTINUED** | | | | | |
| 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | EU: Regulation 1907/2006 Candidate List. | Sample preparation for all materials: CPSC-CH-C1001-09.4<br><br>Measurement:<br><br>Textiles:<br>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).<br><br>All materials except textiles:<br>GC/MS | < 500 mg/kg each<br><br>Total: < 1000 mg/kg | Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility.<br><br>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 components (e.g., PVC)<br>• Print pastes<br>• Adhesives<br>• Plastic buttons<br>• Plastic sleevings<br>• Polymeric coatings<br><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 RSL includes all phthalates on the SVHC list—whether itemized here or not— since the list is updated frequently. |
| Bis(2-ethylhexyl) tetrabromophthalate | 26040-51-7 | | | | |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 68515-42-4 | | | | |
| N-pentyl-isopentyl phthalate (NPIPP) | 776297- 69-9 | | | | |
| Di-cyclohexylphthalate (DCHP) | 84-61-7 | | | | |
| 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DHxP) | 68515-50-4 | | | | |
| 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) | 68515-51-5<br>68648-93-1 | | | | |
| Di-iso-hexylphthalate (DIHxP) | 71850-09-4 | | | | |
| Di-n-propylphthalate (DPrP) | 131-16-8 | | | | |
| Diethyl phthalate (DEP) | 84-66-2 | | | | |
| Dimethyl phthalate (DMP) | 131-11-3 | | | | |
| Di-iso-octyl phthalate (DIOP) | 27554-26-3 | | | | |

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|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **POLYCHLORINATED AND HALOGENATED BIPHENYLS (PCBs) AND NAPHTHALENES (PCN)** | | | | | |
| Halogenated biphenyls, including Polycholorinated biphenyl (PCB) | 1336-36-3 and others | EU:Regulation 2019/1021 on Persistent Organic Pollutants<br><br>SWITZERLAND: ORRChem annex 1.1 and 1.2 (Art.3) | Extraction following IEC 62321-6 (2015) // GC-MS | Not detected | PCBs and PCNs are persistent organic pollutants and have entered the environment through both use and disposal.<br><br>PCBs and PCNs are used as plasticizers, pigments, adhesives, insecticides, flame retardants, water repellent finishes and as pesticide. |
| Halogenated naphthalenes, including Polychlorinated naphthalenes (PCN) | 70776-03-3 and others | | | | |

STUDIO ANNELOES

| Restricted Substances List version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)** | | | | | |
| Benzo(a)pyrene [BaP] | 50-32-8 | EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12<br><br>EU: REACH Regulation 1907/2006 Annex XVII entry No. 50 | All materials: AFPS GS 2019 or EN 17132: 2019 or ISO 16190: 2021 | 1 mg/kg each<br><br>Total 18 PAHs: < 10 mg/kg | PAHs are natural components of crude oil and are common residues from oil refining.<br><br>PAHs have a characteristic smell similar to that of car tires or asphalt.<br><br>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. |
| Benzo(a)anthracene | 56-55-3 | | | | |
| Chrysene | 218-01-9 | | | | |
| Benzo(b)fluoranthene | 205-99-2 | | | | |
| Benzo(k)fluoranthene | 207-08-9 | | | | |
| Dibenzo(a,h)anthracene | 53-70-3 | | | | |
| Benzo(e)pyrene | 192-97-2 | | | | |
| Benzo(j)fluoranthene | 205-82-3 | | | | |
| Antracene | 120-12-7 | EU: Regulation 1907/2006 Candidate List | | No individual restriction<br><br>Total 18 Pahs: < 10 mg/kg | PAHs are often found in the outsoles of footwear and in printing pastes for screen prints.<br><br>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). |
| Benzo(g,h,i)perylene | 191-24-2 | | | | |
| Fluoranthene | 206-44-0 | | | | |
| Naphthalene* | 91-20-3 * | | | | |
| Phenanthrene | 85-01-8 | | | | |
| Pyrene | 129-00-0 | | | | |
| Acenaphthene | 83-32-9 | | | | |
| Acenaphthylene | 208-96-8 | | | | |
| Fluorene | 86-73-7 | | | | |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | | | |

| Restricted Substances List version 2.0 | | | | | |
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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **QUINOLINE** | | | | | |
| Quinoline | 91-22-5 | EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12 | All materials: DIN 54231:2022 with methanol extraction at 70 degrees C | < 50 mg/kg | Found as an impurity in polyester and some dyestuffs.<br><br>Quinoline can be included with disperse dye testing, as the same method is used for both. It is not expected in non-dyed materials. |
| **RESTRICTION ON PACKAGING** | | | | | |
| Cadmium (Cd) | Various | EU Directive 94/62/EC | CEN/TR 13695-1 | The sum of concentration levels of lead, cadmium, mercury and hexavalent chromium present in packaging or packaging components shall not exceed 100 mg/kg | Packaging means transportation packaging as well as product packaging, i.e., any material used for the containment, protection, handling, delivery, and presentation of finished goods (article). |
| Lead (Pb) | | | | | |
| Chromium (Cr6+) - hexavalent | | | | | |
| Mercury (Hg) | | | | | |
| MOAH consisting of 1 to 7 aromatic rings | | FRANCE: AGEC law, Article 112 of April 13, 2022 (reduction of certain critical compounds in printing inks for pack | GC-FID/MS | < 1.0%<br>1 January 2025 onwards < 0.1% and <1 mg/kg MOAH compounds containing 3 to 7 aromatic rings) | These mineral oils can be used in printing inks of packaging materials and recycled paper.<br><br>The implementation applies to mineral oils containing substances that disrupt the recycling of packaging waste paper or restrict the use of recycled materials because of the risk of these substances to human health. |
| MOSH consisting of 16 to 35 carbon atoms | | | | < 0.1% | |
| Butylated Hydroxytoluene (BHT) | 128-37-0 | | All materials: ASTM D4275 | < 25 mg/kg | Used as an additive in plastics as an antioxidant to prevent aging. Can cause phenolic yellowing of textiles. |

Suppliers should inform their contracted packaging and/or printing companies about the MOSH/MOAH restrictions in order that they determine, in consultation with printing ink manufacturers, the permissible printing inks (free of MOSH/MOAH) within the meaning of the Arrêté du 13 Avril 2022. A declaration of conformity, whilst not yet required, will be required in the future as part of the planned EU Packaging Regulation. As part of the duty of care as a manufacturer, random checks should be carried out on the printing inks used or the printed materials.

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **SOLVENTS AND RESIDUALS** | | | | | |
| DMFa (N,N Dimethylformamide) | 68-12-2 | EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12 | Textiles: EN 17131:2019<br><br>All other materials: ISO 16189:2021 | < 500 mg/kg | DMFa is a solvent used in plastics, rubber, and polyurethane (PU) coating.<br><br>Water-based PU does not contain DMFa and is therefore preferable. |
| 1-Methyl-2-pyrrolidone (NMP) | 872-50-4 | | | < 1000 mg/kg each | Industrial solvent used in production of water-based Polyurethanes and other polymeric materials.<br><br>May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper. |
| DMAC (N,N-dimethylacetamide) | 127-19-5 | | | | Solvent used in the production of elastane fibers and sometimes as substitute for DMFa. |
| Formamide | 75-12-7 | EU: Regulation 1907/2006 Candidate List | | | Byproduct in the production of EVA foams. |

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| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **UV ABSORBERS/STABILIZERS** | | | | | |
| UV-320 | 3846-71-7 | EU: Regulation 1907/2006 Candidate List | ISO 24040: 2022 with extraction in THF, analysis by GC/MS | < 1000 mg/kg each | PU foam materials such as open cell foams for padding.<br><br>Used as UV-absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber, polyurethane. |
| UV- 327 | 3864-99-1 | | | | |
| UV-328 | 25973-55-1 | | | | |
| UV-350 | 36437-37-3 | | | | |
| Drometrizole | 2440-22-4 | | | For informational purposes only. STUDIO ANNELOES recommends testing to assess content levels. | Used as UV Absorbers for Plastics (PVC, PET, PC, PA, ABS, and other Polymers), Rubber, and Polyurethane. |

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|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **REGULATION** | **TEST METHOD** | **STUDIO ANNELOES RESTRICTED LIMIT** | **POTENTIAL USES & ADDITIONAL INFORMATION** |
| **VOLATILE ORGANIC COMPOUNDS (VOCs)** | | | | | |
| Benzene | 71-43-2 | EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12 | For general VOC screening: GC/MS headspace 45 minutes at 120 degrees C | < 5 mgkg | These VOCs should not be used in textile auxiliary chemical preparations.<br><br>They are associated with solvent- based processes such as solvent- based polyurethane coatings and glues/adhesives.<br><br>They should not be used for any kind of facility cleaning or spot cleaning. |
| Toluene | 108-88-3 | The VOcs marked* are included in EU: REACH Regulation 1907/2006 SVHC Candidate List | | < 1000 mg/kg (total) | |
| 1,2-Dichloroethane* | 107-06-2 | | | | |
| Trichloroethylene* | 79-01-6 | | | | |
| Carbon Disulfide | 75-15-0 | | | | |
| Carbon Tetrachloride | 56-23-5 | | | | |
| Chloroform | 67-66-3 | | | | |
| Cyclohexanone | 108-94-1 | | | | |
| 1,1-Dichloroethylene | 75-35-4 | | | | |
| Ethylbenzene | 100-41-4 | | | | |
| Pentachloroethane | 76-01-7 | | | | |
| 1,1,1,2- Tetrachloroethane | 630-20-6 | | | | |
| 1,1,2,2- Tetrachloroethane | 79-34-5 | | | | |
| Tetrachloroethylene (PERC) | 127-18-4 | | | | |
| 1,1,1- Trichloroethane | 71-55-6 | | | | |
| 1,1,2- Trichloroethane | 79-00-5 | | | | |
| Xylene | 1330-20-7 | | | | |
| Orthoxylene | 95-47-6 | | | | |
| Metaxylene | 108-38-3 | | | | |
| Paraxylene | 106-42-3 | | | | |

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## APPENDIX A. PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)*

### PFOS and Related Substances

| SUBSTANCE | CAS NUMBER |
|---|---|
| Perfluorooctanesulfonic acid (PFOS) | 1763-23-1 |
| Perfluorooctanesulfonic acid, potassium salt (PFOS-K) | 2795-39-3 |
| Perfluorooctanesulfonic acid, lithium salt (PFOS-Li) | 29457-72-5 |
| Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4) | 29081-56-9 |
| Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2) | 70225-14-8 |
| Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C2H5)4) | 56773-42-3 |
| Didecyldimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2) | 251099-16-8 |
| N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA) | 4151-50-2 |
| N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA) | 31506-32-8 |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE) | 1691-99-2 |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE) | 24448-09-7 |
| Perfluoro-1-octanesulfonyl fluoride (POSF) | 307-35-7 |
| Perfluorooctane sulfonamide (PFOSA) | 754-91-6 |

### PFOA and Its Salts

| SUBSTANCE | CAS NUMBER |
|---|---|
| Perfluorooctanoic acid (PFOA) | 335-67-1 |
| Sodium perfluorooctanoate (PFOA-Na) | 335-95-5 |
| Potassium perfluorooctanoate (PFOA-K) | 2395-00-8 |
| Silver perfluorooctanoate (PFOA-Ag) | 335-93-3 |
| Perfluorooctanoyl fluoride (PFOA-F) | 335-66-0 |
| Ammonium pentadecafluorooctanoate (APFO) | 3825-26-1 |

### PFOA-related Substances

| SUBSTANCE | CAS NUMBER |
|---|---|
| 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS) | 39108-34-4 |
| Methyl perfluorooctanoate (Me-PFOA) | 376-27-2 |
| Ethyl perfluorooctanoate (Et-PFOA) | 3108-24-5 |
| 2-Perfluorooctylethanol (8:2 FTOH) | 678-39-7 |
| 1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA) | 27905-45-9 |
| 1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA) | 1996-88-9 |
| 2H,2H-Perfluorodecanoic acid (H2PFDA) | 27854-31-5 |

### PFHxS and Its Salts

| SUBSTANCE | CAS NUMBER |
|---|---|
| Perfluorohexane Sulfonic acid (PFHxS) | 355-46-4 |
| Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K) | 3871-99-6 |
| Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li) | 55120-77-9 |
| Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4) | 68259-08-5 |
| Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na) | 82382-12-5 |

### PFHxS-related Substances

| SUBSTANCE | CAS NUMBER |
|---|---|
| N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA) | 68259-15-4 |
| Perfluorohexane sulfonamide (PFHxSA) | 41997-13-1 |

***NOTE: This list is a subset of PFAS and is not exhaustive**

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|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **SUBSTANCE** | **CAS NUMBER** | **SUBSTANCE** | **CAS NUMBER** |
| **APPENDIX A. PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)* CONTINUED** | | | | | |
| **C9 – C14 PFCAs and Their Salts** | | **C9 – C14 PFCA-related Substances** | | **PFHxA, Its Salts, and Related Substances** | |
| Perfluorononanoic Acid (PFNA, C9-PFCA) | 375-95-1 | 1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA) | 17741-60-5 | Perfluorohexanoic Acid (PFHxA, C6-PFCA) | 307-24-4 |
| Perfluorodecanoic Acid (PFDA, C10-PFCA) | 335-76-2 | 1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA) | 2144-54-9 | 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS) | 27619-97-2 |
| Perfluoroundecanoic Acid (PFUnA, C11-PFCA) | 2058-94-8 | 1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH) | 865-86-1 | 1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH) | 647-42-7 |
| Perfluorododecanoic Acid (PFDoA, C12-PFCA) | 307-55-1 | 2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA) | 34598-33-9 | | |
| Perfluorotridecanoic Acid (PFTrDA, C13-PFCA) | 72629-94-8 | Perfluorocylethanol 8:2 (8:2 FTOH) | 678-39-7 | | |
| Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA) | 376-06-7 | 1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH) | 39239-77-5 | | |
| Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA) | 172155-07-6 | 1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS) | 120226-60-0 | | |
| | | 1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI) | 2043-54-1 | | |
| | | 1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI) | 30046-31-2 | | |

***NOTE: This list is a subset of PFAS and is not exhaustive**

| Appendix version 2.0 | | | | | |
|---|---|---|---|---|---|
| **SUBSTANCE** | **CAS NUMBER** | **SUBSTANCE** | **CAS NUMBER** | **SUBSTANCE** | **CAS NUMBER** |
| **APPENDIX B. PESTICIDES AND HERBICIDES, AGRICULTURAL** | | | | | |
| 2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP | 93-72-1 | Dichlorprop | 120-36-5 | Kepone | 143-50-0 |
| 2,4,5-T | 93-76-5 | Dicofol | 115-32-2 | Lindane | 58-89-9 |
| 2,4-D | 94-75-7 | Dicrotophos | 141-66-2 | Malathione | 121-75-5 |
| Aldrine | 309-00-2 | Dieldrine | 60-57-1 | MCPA | 94-74-6 |
| Azinophosmethyl | 86-50-0 | Dimethoate | 60-51-5 | MCPB | 94-81-5 |
| Azinophosethyl | 2642-71-9 | Dinoseb, Salts and Acetate | 88-85-7 | Mecoprop | 93-65-2 |
| Bromophos-ethyl | 4824-78-6 | DTTB (4, 6-Dichloro-7 (2,4,5-trichloro-phenoxy) -2-Trifluoro methyl benz imidazole) | 63405-99-2 | Metamidophos | 10265-92-6 |
| Captafol | 2425-06-1 | Endosulfan | 115-29-7 | Methoxychlor | 72-43-5 |
| Carbaryl | 63-25-2 | Endosulfan, α- | 959-98-8 | Mirex | 2385-85-5 |
| Chlorbenzilat | 510-15-6 | Endosulfan, β- | 33213-65-9 | Monocrotophos | 6923-22-4 |
| Chlordane | 57-74-9 | Endrine | 72-20-8 | Parathion-methyl | 298-00-0 |
| Chlordimeform | 6164-98-3 | Esfenvalerate | 66230-04-4 | Pentachloroanisole | 1825-21-4 |
| Chlorfenvinphos | 470-90-6 | Ethylendibromid | 106-93-4 | Phosdrin/Mevinphos | 7786-34-7 |
| Chlorthalonil | 1897-45-6 | Ethylparathione; Parathion | 56-38-2 | Perthane | 72-56-0 |
| Coumaphos | 56-72-4 | Fenvalerate | 51630-58-1 | Propethamphos | 31218-83-4 |
| Cyfluthrin | 68359-37-5 | Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs) | Various | Profenophos | 41198-08-7 |
| Cyhalothrin | 91465-08-6 | Heptachlor | 76-44-8 | Quinalphos | 13593-03-8 |
| Cypermethrin | 52315-07-8 | Heptachlorepoxide | 1024-57-3 | Quintozene | 82-68-8 |
| S,S,S-Tributyl phosphorotrithioate (Tribufos) | 78-48-8 | Hexabromobiphenyl | 36355-01-8 | Strobane | 8001-50-1 |
| Deltamethrin | 52918-63-5 | a-Hexachlorcyclohexane with & without Lindane | 319-84-6 | TelodrinE | 297-78-9 |
| DDD | 53-19-0<br>72-54-8 | b-Hexachlorcyclohexane with & without Lindane | 319-85-7 | Toxaphene | 8001-35-2 |
| DDE | 3424-82-6<br>72-55-9 | g-Hexachlorcyclohexane with & without Lindane | 319-86-8 | Tolylfluanide | 731-27-1 |
| DDT | 50-29-3<br>789-02-6 | Hexachlorobenzene | 118-74-1 | Trifluralin | 1582-09-8 |
| Diazinon | 333-41-5 | Isodrine | 465-73-6 | | |
| Dichlofluanide | 1085-98-9 | Kelevane | 4234-79-1 | | |

STUDIO ANNELOES

**REACH ANNEX: ECHA'S CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN LAST UPDATE 27-06-2024**
**NUMBER OF SUBSTANCES ON THE CANDIDATE LIST: 241**

The European Chemicals Agency (ECHA) "CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN FOR AUTHORISATION" can be accessed via the following link:
https://echa.europa.eu/candidate-list-table

The identification of a substance as a Substance of Very High Concern (SVHC) and its inclusion in the Candidate List is the first step of the authorisation procedure.

Companies may have immediate legal obligations following such inclusion which are linked to the listed substance on its own, in preparations and articles.
Specific obligations exist for importers, producers, and suppliers (regardless of geographical location) of any article that contains one or more of these substances above 0.1 percent by weight per component (>1000 mg/kg)[1] These obligations include:

•Notify ECHA if the substance(s) are present in article components above 0.1 percent in quantities totalling over one ton per producer or importer per year [2] and register the products in the SCIP database.

•Notify STUDIO ANNELOES immediately and provide sufficient information to allow safe use of the article to STUDIO ANNELOES and other clients.
•Provide sufficient information, upon request, to allow safe use of the article to a consumer within 45 days of receipt of the request.

The candidate list is updated twice per year by ECHA. The candidate list provided within this RSL reflects the situation at the time of creation of the RSL. Suppliers, importers and producers should always follow the latest version which can be found via the link above.

*[1] European Court of Justice judgement of 10-09-2015 case C-106/14 referring to every constituent part of the article*

*[2] Notification is not required if the substance has already been registered for that use or when the producer or importer of an article can exclude exposure of humans and the environment during the use and disposal of the article. In such cases, the producer or importer must supply appropriate instructions to the recipient of the article.*

**REACH Candidate List RSL 2.0**

| No. | Substance Name | Cas Number | Date of inclusion | Reason for inclusion |
|---|---|---|---|---|
| 1 | Bis(α,α-dimethylbenzyl) peroxide | 80-43-3 | 27-06-2024 | Toxic for reproduction (Article 57 c) |
| 2 | Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol | - | 2024/01/23 | vPvB (Article 57e) |
| 3 | Bumetrizole (UV-326) | 3896-11-5 | 2024/01/23 | vPvB (Article 57e) |
| 4 | 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one | 119344-86-4 | 2024/01/23 | Toxic for reproduction (Article 57c) |
| 5 | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) | 3147-75-9 | 2024/01/23 | vPvB (Article 57e) |
| 6 | 2,4,6-tri-tert-butylphenol | 732-26-3 | 2024/01/23 | Toxic for reproduction (Article 57c)<br>PBT (Article 57d) |
| 7 | Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide | 75980-60-8 | 2023/06/14 | Toxic for reproduction (Article 57c) |
| 8 | Bis(4-chlorophenyl) sulphone | 80-07-9 | 2023/06/14 | vPvB (Article 57e) |

STUDIO ANNELOES

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 9 | Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine | - | 2023/01/17 | vPvB (Article 57e) |
| 10 | Perfluoroheptanoic acid and its salts -<br>Ammonium perfluoroheptanoate<br>Potassium perfluoroheptanoate<br>Perfluoroheptanoic acid<br>Sodium perfluoroheptanoate | 6130-43-4<br>21049-36-5<br>375-85-9<br>20109-59-5 | 2023/01/17 | Toxic for reproduction (Article 57c)<br>PBT (Article 57d)<br>vPvB (Article 57e)<br>Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)<br>Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) |
| 11 | Melamine | 108-78-1 | 2023/01/17 | Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)<br>Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) |
| 12 | Isobutyl 4-hydroxybenzoate | 4247-02-3 | 2023/01/17 | Endocrine disrupting properties (Article 57(f) - human health) |
| 13 | bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof | - | 2023/01/17 | vPvB (Article 57e) |
| 14 | Barium diboron tetraoxide | 13701-59-2 | 2023/01/17 | Toxic for reproduction (Article 57c) |
| 15 | 4,4'-sulphonyldiphenol | 80-09-1 | 2023/01/17 | Toxic for reproduction (Article 57c)<br>Endocrine disrupting properties (Article 57(f) - environment)<br>Endocrine disrupting properties (Article 57(f) - human health) |
| 16 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol | 79-94-7 | 2023/01/17 | Carcinogenic (Article 57a) |
| 17 | 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] | 37853-59-1 | 2023/01/17 | vPvB (Article 57e) |
| 18 | N-(hydroxymethyl)acrylamide | 924-42-5 | 2022/06/10 | Carcinogenic (Article 57a)<br>Mutagenic (Article 57b) |
| 19 | Tris(2-methoxyethoxy)vinylsilane | 1067-53-4 | 2022/01/17 | Toxic for reproduction (Article 57c) |
| 20 | S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate | 255881-94-8 | 2022/01/17 | PBT (Article 57d) |
| 21 | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol | 119-47-1 | 2022/01/17 | Toxic for reproduction (Article 57c) |
| 22 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) | - | 2022/01/17 | Endocrine disrupting properties (Article 57(f) - human health) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 23 | Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | 210555-94-5<br>27459-10-5<br>27147-75-7<br>121158-58-5<br>74499-35-7<br>57427-55-1 | 2021/07/08 | Toxic for reproduction (Article 57c)<br>Endocrine disrupting properties (Article 57(f) - environment)<br>Endocrine disrupting properties (Article 57(f) - human health) |
| 24 | Orthoboric acid, sodium salt | 25747-83-5<br>22454-04-2<br>14312-40-4<br>1333-73-9<br>13840-56-7<br>14890-53-0 | 2021/07/08 | Toxic for reproduction (Article 57c) |
| 25 | Medium-chain chlorinated paraffins (MCCP)<br>(UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17) | 1372804-76-6<br>85535-85-9<br>-<br>198840-65-2 | 2021/07/08 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 26 | Glutaral | 111-30-8 | 2021/07/08 | Respiratory sensitising properties (Article 57(f) - human health) |
| 27 | 4,4'-(1-methylpropylidene)bisphenol | 77-40-7 | 2021/07/08 | Endocrine disrupting properties (Article 57(f) - environment)<br>Endocrine disrupting properties (Article 57(f) - human health) |
| 28 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | 75166-31-3<br>80-54-6<br>75166-30-2 | 2021/07/08 | Toxic for reproduction (Article 57c) |
| 29 | 2,2-bis(bromomethyl)propane1,3-diol (BMP);<br>2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);<br><br>2,3-dibromo-1-propanol (2,3-DBPA) | 3296-90-0,<br>36483-57-5<br>1522-92-5<br>96-13-9 | 2021/07/08 | Carcinogenic (Article 57a) |
| 30 | 1,4-dioxane | 123-91-1 | 2021/07/08 | Carcinogenic (Article 57a)<br>Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)<br>Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 31 | Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety<br><br>dioctyltin dilaurate; stannane, dioctyl-, bis(coco acyloxy) derivs.<br>Dioctyltin dilaurate<br>Stannane, dioctyl-, bis(coco acyloxy) derivs. | 3648-18-8<br>91648-39-4 | 2021/01/19 | Toxic for reproduction (Article 57c) |
| 32 | Bis(2-(2-methoxyethoxy)ethyl)ether | 143-24-8 | 2021/01/19 | Toxic for reproduction (Article 57c) |
| 33 | Dibutylbis(pentane-2,4-dionato-O,O')tin | 22673-19-4 | 2020/06/25 | Toxic for reproduction (Article 57c) |
| 34 | butyl 4-hydroxybenzoate | 94-26-8 | 2020/06/25 | Endocrine disrupting properties (Article 57(f) - human health) |
| 35 | 2-methylimidazole | 693-98-1 | 2020/06/25 | Toxic for reproduction (Article 57c) |
| 36 | 1-vinylimidazole | 1072-63-5 | 2020/06/25 | Toxic for reproduction (Article 57c) |
| 37 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 2020/01/16 | Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)<br>Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) |
| 38 | Diisohexyl phthalate | 71850-09-4 | 2020/01/16 | Toxic for reproduction (Article 57c) |
| 39 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 2020/01/16 | Toxic for reproduction (Article 57c) |
| 40 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 2020/01/16 | Toxic for reproduction (Article 57c) |
| 41 | 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides | - | 2019/07/16 | Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)<br>Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) |
| 42 | 2-methoxyethyl acetate | 110-49-6 | 2019/07/16 | Toxic for reproduction (Article 57c) |
| 43 | 4-tert-butylphenol | 98-54-4 | 2019/07/16 | Endocrine disrupting properties (Article 57(f) - environment) |
| 44 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | - | 2019/07/16 | Endocrine disrupting properties (Article 57(f) - environment) |
| 45 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one | 15087-24-8 | 2019/01/15 | Endocrine disrupting properties (Article 57(f) - environment) |
| 46 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 2019/01/15 | Toxic for reproduction (Article 57c) |
| 47 | Benzo[k]fluoranthene | 207-08-9 | 2019/01/15 | Carcinogenic (Article 57a)<br>PBT (Article 57d)<br>vPvB (Article 57e) |
| 48 | Fluoranthene | 206-44-0<br>93951-69-0 | 2019/01/15 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 49 | Phenanthrene | 85-01-8 | 2019/01/15 | vPvB (Article 57e) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 50 | Pyrene | 129-00-0<br>1718-52-1 | 2019/01/15 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 51 | Benzene-1,2,4-tricarboxylic acid 1,2-anhydride | 552-30-7 | 2018/06/27 | Respiratory sensitising properties (Article 57(f) - human health) |
| 52 | Benzo[ghi]perylene | 191-24-2 | 2018/06/27 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 53 | Decamethylcyclopentasiloxane | 541-02-6 | 2018/06/27 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 54 | Dicyclohexyl phthalate (DCHP) | 84-61-7 | 2018/06/27 | Toxic for reproduction (Article 57c)<br>Endocrine disrupting properties (Article 57(f) - human health) |
| 55 | Disodium octaborate | 12008-41-2 | 2018/06/27 | Toxic for reproduction (Article 57c) |
| 56 | Dodecamethylcyclohexasiloxane | 540-97-6 | 2018/06/27 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 57 | Ethylenediamine | 107-15-3 | 2018/06/27 | Respiratory sensitising properties (Article 57(f) - human health) |
| 58 | Lead | 7439-92-1 | 2018/06/27 | Toxic for reproduction (Article 57c) |
| 59 | Octamethylcyclotetrasiloxane | 556-67-2 | 2018/06/27 | PBT (Article 57d)<br>vPvB (Article 57e) |
| 60 | Terphenyl, hydrogenated | 61788-32-7 | 2018/06/27 | vPvB (Article 57e) |
| 61 | Benz[a]anthracene | 56-55-3<br>1718-53-2 | 2018/01/15 | Carcinogenic (Article 57a)<br>PBT (Article 57d)<br>vPvB (Article 57e) |
| 62 | Cadmium carbonate | 513-78-0 | 2018/01/15 | Carcinogenic (Article 57a)<br>Mutagenic (Article 57b)<br>Specific target organ toxicity after repeated exposure (Article 57(f) - human health) |
| 63 | Cadmium hydroxide | 21041-95-2 | 2018/01/15 | Carcinogenic (Article 57a)<br>Mutagenic (Article 57b)<br>Specific target organ toxicity after repeated exposure (Article 57(f) - human health) |
| 64 | Cadmium nitrate | 10022-68-1<br>10325-94-7 | 2018/01/15 | Carcinogenic (Article 57a)<br>Mutagenic (Article 57b)<br>Specific target organ toxicity after repeated exposure (Article 57(f) - human health) |
| 65 | Chrysene | 218-01-9<br>1719-03-5 | 2018/01/15 | Carcinogenic (Article 57a)<br>PBT (Article 57d)<br>vPvB (Article 57e) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 66 | 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination there of] | - | 2018/01/15 | vPvB (Article 57e) |
| 67 | fluoranthene | - | 2018/01/15 | Endocrine disrupting properties (Article 57(f) - environment) |
| 68 | Perfluorohexane-1-sulphonic acid and its salts | - | 2017/07/07 | vPvB (Article 57e) |
| 69 | 4,4'-isopropylidenediphenol Bisphenol A; BPA | 80-05-7 | 2017/01/12 | Toxic for reproduction (Article 57 c) |
| 70 | 4-heptylphenol, branched and linear<br>substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof | - | 2017/01/12 | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |
| 71 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | 3830-45-3<br>3108-42-7<br>335-76-2 | 2017/01/12 | Toxic for reproduction (Article 57 c) PBT (Article 57 d) |
| 72 | p-(1,1-dimethylpropyl)phenol | 80-46-6 | 2017/01/12 | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |
| 73 | Benzo{def}chrysene | 50-32-8 | 2016/20/06 | Carcinogenic (Article 57a): Mutagenic (Article 57b); Toxic for reproduction (Article 57c); PBT (Article 57 d); vPvB (Article 57 e) |
| 74 | 1,3-propanesultone | 1120-71-4 | 2015/12/17 | Carcinogenic (Article 57a); |
| 75 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | 3864-99-1 | 2015/12/17 | vPvB (Article 57e) |
| 76 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | 36437-37-3 | 2015/12/17 | vPvB (Article 57e) |
| 77 | Nitrobenzene | 98-95-3 | 2015/12/17 | Toxic for reproduction (Article 57 c) |
| 78 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | 375-95-1<br>21049-39-8<br>4149-60-4 | 2015/12/17 | Toxic for reproduction (Article 57 c) PBT (Article 57 d) |
| 79 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) | 68515-51-5<br>68648-93-1 | 2015/06/15 | Toxic for reproduction (Article 57 c) |
| 80 | 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof] | - | 2015/06/15 | vPvB (Article 57e) |
| 81 | Bis (2-ethylhexyl)phthalate (DEHP) | 117-81-7 | 2014/12/17; 2008/10/28 | Equivalent level of concern having probable serious effects to the environment (Article 57 f); Toxic for reproduction (article 57c) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 82 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) | 15571-58-1 | 2014/12/17 | Toxic for reproduction (Article 57 c) |
| 83 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | 2014/12/17 | PBT (Article 57 d); vPvB (Article 57 e) |
| 84 | reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) | - | 2014/12/17 | Toxic for reproduction (Article 57 c) |
| 85 | Cadmium fluoride | 7790-79-6 | 2014/12/17 | Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 86 | Cadmium sulphate | 10124-36-4<br>31119-53-6 | 2014/12/17 | Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 87 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 25973-55-1 | 2014/12/17 | PBT (Article 57 d); vPvB (Article 57 e) |
| 88 | Cadmium chloride | 10108-64-2 | 2014/06/16 | Carcinogenic (Article 57a);<br>Mutagenic (Article 57b);<br>Toxic for reproduction (Article 57c);<br>Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 89 | Sodium peroxometaborate | 04-04-7632 | 2014/06/16 | Toxic for reproduction (Article 57 c) |
| 90 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 68515-50-4 | 2014/06/16 | Toxic for reproduction (Article 57 c) |
| 91 | Sodium perborate; perboric acid, sodium salt | - | 2014/06/16 | Toxic for reproduction (Article 57 c) |
| 92 | Trixylyl phosphate | 25155-23-1 | 2013/12/16 | Toxic for reproduction (Article 57 c); |
| 93 | Lead di(acetate) | 301-04-2 | 2013/12/16 | Toxic for reproduction (Article 57 c); |
| 94 | Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 96-45-7 | 2013/12/16 | Toxic for reproduction (Article 57 c); |
| 95 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 573-58-0 | 2013/12/16 | Carcinogenic (Article 57a); |
| 96 | Cadmium sulphide | 1306-23-6 | 2013/12/16 | Carcinogenic (Article 57a); |
| 97 | Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) | 1937-37-7 | 2013/12/16 | Carcinogenic (Article 57a); |
| 98 | Dihexyl phthalate | 84-75-3 | 2013/12/16 | Toxic for reproduction (Article 57 c); |
| 99 | Ammonium pentadecafluorooctanoate (APFO) | 3825-26-1 | 2013/06/20 | Toxic for reproduction (Article 57 c); |
| 100 | 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] | - | 2013/06/20 | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |
| 101 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 2013/06/20 | Toxic for reproduction (Article 57 c); |

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|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 102 | Dipentyl phthalate (DPP) | 131-18-0 | 2013/06/20 | Toxic for reproduction (Article 57 c); |
| 103 | Cadmium | 7440-43-9 | 2013/06/20 | Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 104 | Cadmium oxide | 1306-19-0 | 2013/06/20 | Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 105 | 4,4'-methylenedi-o-toluidine | 838-88-0 | 2012/12/19 | Carcinogenic (Article 57a) |
| 106 | N-pentyl-isopentylphthalate | 776297-69-9 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 107 | 4-Aminoazobenzene | 60-09-3 | 2012/12/19 | Carcinogenic (Article 57a) |
| 108 | Orange lead (lead tetroxide) | 1314-41-6 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 109 | 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 110 | Dimethyl sulphate | 77-78-1 | 2012/12/19 | Carcinogenic (Article 57a) |
| 111 | Heptacosafluorotetradecanoic acid | 376-06-7 | 2012/12/19 | vPvB (Article 57 e) |
| 112 | Lead titanium zirconium oxide | 12626-81-2 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 113 | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] | - | 2012/12/19 | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |
| 114 | 6-methoxy-m-toluidine (p-cresidine) | 120-71-8 | 2012/12/19 | Carcinogenic (Article 57a) |
| 115 | Dinoseb (6-sec-butyl-2,4-dinitrophenol) | 88-85-7 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 116 | 1,2-Diethoxyethane | 629-14-1 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 117 | Sulfurous acid, lead salt, dibasic | 62229-08-7 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 118 | 1-bromopropane (n-propyl bromide) | 106-94-5 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 119 | Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE) | 1163-19-5 | 2012/12/19 | PBT (Article 57 d); vPvB (Article 57 e) |
| 120 | Biphenyl-4-ylamine | 92-67-1 | 2012/12/19 | Carcinogenic (Article 57a) |
| 121 | Pentalead tetraoxide sulphate | 12065-90-6 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 122 | Silicic acid, lead salt | 11120-22-2 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 123 | o-Toluidine | 95-53-4 | 2012/12/19 | Carcinogenic (Article 57a) |
| 124 | Acetic acid, lead salt, basic | 51404-69-4 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 125 | Dioxobis(stearato)trilead | 12578-12-0 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 126 | Lead bis(tetrafluoroborate) | 13814-96-5 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 127 | Lead dinitrate | 10099-74-8 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 128 | Silicic acid (H2Si2O5), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008] | 68784-75-8 | 2012/12/19 | Toxic for reproduction (Article 57 c) |

| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 129 | Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry] | 85-42-7<br>13149-00-3<br>14166-21-3 | 2012/12/19 | Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 130 | N-methylacetamide | 79-16-3 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 131 | Pyrochlore, antimony lead yellow | 8012-00-8 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 132 | Lead monoxide (lead oxide) | 1317-36-8 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 133 | Tetralead trioxide sulphate | 12202-17-4 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 134 | Trilead bis(carbonate)dihydroxide | 1319-46-6 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 135 | Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) | 123-77-3 | 2012/12/19 | Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 136 | 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 137 | N,N-dimethylformamide | 68-12-2 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 138 | Tetraethyllead | 78-00-2 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 139 | Methyloxirane (Propylene oxide) | 75-56-9 | 2012/12/19 | Carcinogenic (Article 57a); Mutagenic (Article 57b) |
| 140 | 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | - | 2012/12/19 | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |
| 141 | Fatty acids, C16-18, lead salts | 91031-62-8 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 142 | Trilead dioxide phosphonate | 12141-20-7 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 143 | o-aminoazotoluene | 97-56-3 | 2012/12/19 | Carcinogenic (Article 57a) |
| 144 | [Phthalato(2-)]dioxotrilead | 69011-06-9 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 145 | Tricosafluorododecanoic acid | 307-55-1 | 2012/12/19 | vPvB (Article 57 e) |
| 146 | Lead oxide sulfate | 12036-76-9 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 147 | Methoxyacetic acid | 625-45-6 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 148 | Diisopentylphthalate | 605-50-5 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 149 | Lead cyanamidate | 20837-86-9 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 150 | 4,4'-oxydianiline and its salts | 101-80-4 | 2012/12/19 | Carcinogenic (Article 57a); Mutagenic (Article 57b) |
| 151 | 4-methyl-m-phenylenediamine (toluene-2,4-diamine) | 95-80-7 | 2012/12/19 | Carcinogenic (Article 57a) |
| 152 | Henicosafluoroundecanoic acid | 2058-94-8 | 2012/12/19 | vPvB (Article 57 e) |
| 153 | Furan | 110-00-9 | 2012/12/19 | Carcinogenic (Article 57a) |
| 154 | Pentacosafluorotridecanoic acid | 72629-94-8 | 2012/12/19 | vPvB (Article 57 e) |
| 155 | Diethyl sulphate | 64-67-5 | 2012/12/19 | Carcinogenic (Article 57a); Mutagenic (Article 57b) |

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|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 156 | Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry] | 25550-51-0<br>19438-60-9<br>48122-14-1<br>57110-29-9 | 2012/12/19 | Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| 157 | Dibutyltin dichloride (DBTC) | 683-18-1 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 158 | Lead titanium trioxide | 12060-00-3 | 2012/12/19 | Toxic for reproduction (Article 57 c) |
| 159 | Formamide | 75-12-7 | 2012/06/18 | Toxic for reproduction (Article 57 c) |
| 160 | [4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] | 2580-56-5 | 2012/06/18 | Carcinogenic (Article 57a) |
| 161 | Diboron trioxide | 1303-86-2 | 2012/06/18 | Toxic for reproduction (Article 57 c) |
| 162 | 4,4'-bis(dimethylamino)benzophenone (Michler's ketone) | 90-94-8 | 2012/06/18 | Carcinogenic (Article 57a) |
| 163 | 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 2012/06/18 | Toxic for reproduction (Article 57 c) |
| 164 | Lead(II) bis(methanesulfonate) | 17570-76-2 | 2012/06/18 | Toxic for reproduction (Article 57 c) |
| 165 | α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] | 6786-83-0 | 2012/06/18 | Carcinogenic (Article 57a) |
| 166 | 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) | 2451-62-9 | 2012/06/18 | Mutagenic (Article 57b) |
| 167 | 4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] | 548-62-9 | 2012/06/18 | Carcinogenic (Article 57a) |
| 168 | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] | 561-41-1 | 2012/06/18 | Carcinogenic (Article 57a) |
| 169 | N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) | 101-61-1 | 2012/06/18 | Carcinogenic (Article 57a) |
| 170 | 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC) | 59653-74-6 | 2012/06/18 | Mutagenic (Article 57b) |
| 171 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) | 112-49-2 | 2012/06/18 | Toxic for reproduction (Article 57 c) |
| 172 | Lead styphnate | 15245-44-0 | 2011/12/19 | Toxic for reproduction (article 57 c) |
| 173 | Calcium arsenate | 7778-44-1 | 2011/12/19 | Carcinogenic (article 57 a) |
| 174 | Bis(2-methoxyethyl) ether | 111-96-6 | 2011/12/19 | Toxic for reproduction (article 57 c) |
| 175 | Phenolphthalein | 77-09-8 | 2011/12/19 | Carcinogenic (article 57 a) |
| 176 | Arsenic acid | 7778-39-4 | 2011/12/19 | Carcinogenic (article 57 a) |
| 177 | 2-Methoxyaniline; o-Anisidine | 90-04-0 | 2011/12/19 | Carcinogenic (article 57 a) |

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|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 178 | Potassium hydroxyoctaoxodizincatedichromate | 11103-86-9 | 2011/12/19 | Carcinogenic (article 57 a) |
| 179 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 2011/12/19 | Toxic for reproduction (article 57 c) |
| 180 | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | 2011/12/19 | Equivalent level of concern having probable serious effects to the environment (article 57 f) |
| 181 | Dichromium tris(chromate) | 24613-89-6 | 2011/12/19 | Carcinogenic (article 57 a) |
| 182 | Pentazinc chromate octahydroxide | 49663-84-5 | 2011/12/19 | Carcinogenic (article 57 a) |
| 183 | Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight | - | 2011/12/19 | Carcinogenic (article 57 a) |
| 184 | Lead dipicrate | 6477-64-1 | 2011/12/19 | Toxic for reproduction (article 57 c) |
| 185 | N,N-dimethylacetamide | 127-19-5 | 2011/12/19 | Toxic for reproduction (article 57 c) |
| 186 | 1,2-dichloroethane | 107-06-2 | 2011/12/19 | Carcinogenic (article 57 a) |
| 187 | 2,2'-dichloro-4,4'-methylenedianiline | 101-14-4 | 2011/12/19 | Carcinogenic (article 57 a) |
| 188 | Trilead diarsenate | 3687-31-8 | 2011/12/19 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 189 | Formaldehyde, oligomeric reaction products with aniline | 25214-70-4 | 2011/12/19 | Carcinogenic (article 57 a) |
| 190 | Lead diazide, Lead azide | 13424-46-9 | 2011/12/19 | Toxic for reproduction (article 57 c), |
| 191 | Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight | | 2011/12/19 | Carcinogenic (article 57 a) |
| 192 | Cobalt dichloride | 7646-79-9 | 2011/06/20 - 2008/10/28 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 193 | 1-Methyl-2-pyrrolidone | 872-50-4 | 2011/06/20 | Toxic for reproduction (article 57c) |

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| REACH Candidate List RSL 2.0 | | | | |
|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 194 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters | 68515-42-4 | 2011/06/20 | Toxic for reproduction (article 57c) |
| 195 | Hydrazine | 302-01-2<br>7803-57-8 | 2011/06/20 | Carcinogenic (article 57a) |
| 196 | 1,2,3-Trichloropropane | 96-18-4 | 2011/06/20 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 197 | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | 71888-89-6 | 2011/06/20 | Toxic for reproduction (article 57c) |
| 198 | Strontium chromate | 7789-06-2 | 2011/06/20 | Carcinogenic (article 57a) |
| 199 | 2-Ethoxyethyl acetate | 111-15-9 | 2011/06/20 | Toxic for reproduction (article 57c) |
| 200 | 2-Ethoxyethanol | 110-80-5 | 2010/12/15 | Toxic for reproduction (article 57c) |
| 201 | Cobalt(II) diacetate | 71-48-7 | 2010/12/15 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 202 | Cobalt(II) carbonate | 513-79-1 | 2010/12/15 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 203 | Cobalt(II) sulphate | 10124-43-3 | 2010/12/15 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 204 | Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid. | 7738-94-5<br>13530-68-2 | 2010/12/15 | Carcinogenic (article 57a) |
| 205 | Cobalt(II) dinitrate | 10141-05-6 | 2010/12/15 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 206 | Chromium trioxide | 1333-82-0 | 2010/12/15 | Carcinogenic and mutagenic (articles 57 a and 57 b) |
| 207 | 2-Methoxyethanol | 109-86-4 | 2010/12/15 | Toxic for reproduction (article 57c) |
| 208 | Trichloroethylene | 79-01-6 | 2010/06/18 | Carcinogenic (article 57 a) |
| 209 | Sodium chromate | 7775-11-3 | 2010/06/18 | Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c) |
| 210 | Boric acid | 10043-35-3<br>11113-50-1 | 2010/06/18 | Toxic for reproduction (article 57 c) |
| 211 | Potassium chromate | 7789-00-6 | 2010/06/18 | Carcinogenic and mutagenic (articles 57 a and 57 b). |
| 212 | Tetraboron disodium heptaoxide, hydrate | 12267-73-1 | 2010/06/18 | Toxic for reproduction (article 57 c) |
| 213 | Potassium dichromate | 7778-50-9 | 2010/06/18 | Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c) |
| 214 | Disodium tetraborate, anhydrous | 1303-96-4<br>1330-43-4<br>12179-04-3 | 2010/06/18 | Toxic for reproduction (article 57 c) |
| 215 | Ammonium dichromate | 7789-09-5 | 2010/06/18 | Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c) |
| 216 | Acrylamide | 79-06-1 | 2010/03/30 | Carcinogenic and mutagenic (articles 57 a and 57 b) |
| 217 | 2,4-Dinitrotoluene | 121-14-2 | 2010/01/13 | Carcinogenic (article 57a) |
| 218 | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) | 12656-85-8 | 2010/01/13 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 219 | Anthracene oil, anthracene-low | 90640-82-7 | 2010/01/13 | Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e) |
| 220 | Pitch, coal tar, high temp. | 65996-93-2 | 2010/01/13 | Carcinogenic, PBT and vPvB (articles 57a, 57d and 57e) |
| 221 | Anthracene oil, anthracene paste | 90640-81-6 | 2010/01/13 | Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e) |
| 222 | Lead sulfochromate yellow (C.I. Pigment Yellow 34) | 1344-37-2 | 2010/01/13 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c)) |

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|---|---|---|---|---|
| **No.** | **Substance Name** | **Cas Number** | **Date of inclusion** | **Reason for inclusion** |
| 223 | Lead chromate | 7758-97-6 | 2010/01/13 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 224 | Anthracene oil | 90640-80-5 | 2010/01/13 | Carcinogenic1, PBT and vPvB (articles 57a, 57d and 57e) |
| 225 | Diisobutyl phthalate | 84-69-5 | 2010/01/13 | Toxic for reproduction (article 57c) |
| 226 | Tris(2-chloroethyl)phosphate | 115-96-8 | 2010/01/13 | Toxic for reproduction (article 57c) |
| 227 | Anthracene oil, anthracene paste, anthracene fraction | 91995-15-2 | 2010/01/13 | Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e) |
| 228 | Anthracene oil, anthracene paste,distn. lights | 91995-17-4 | 2010/01/13 | Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e) |
| 229 | 4,4'- Diaminodiphenylmethane (MDA) | 101-77-9 | 2008/10/28 | Carcinogenic (article 57a) |
| 230 | Triethyl arsenate | 15606-95-8 | 2008/10/28 | Carcinogenic (article 57a) |
| 231 | 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) | 81-15-2 | 2008/10/28 | vPvB (article 57e) |
| 232 | Benzyl butyl phthalate (BBP) | 85-68-7 | 2008/10/28 | Toxic for reproduction (article 57c) |
| 233 | Sodium dichromate | 7789-12-0<br>10588-01-9 | 2008/10/28 | Carcinogenic, mutagenic and toxic for reproduction (articles 57a, 57b and 57c) |
| 234 | Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) | 85535-84-8 | 2008/10/28 | PBT and vPvB (articles 57 d and 57 e) |
| 235 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane | 25637-99-4<br>3194-55-6<br>134237-50-6<br>134237-51-7<br>134237-52-8 | 2008/10/28 | PBT (article 57d) |
| 236 | Anthracene | 120-12-7 | 2008/10/28 | PBT (article 57d) |
| 237 | Dibutyl phthalate (DBP) | 84-74-2 | 2008/10/28 | Toxic for reproduction (Article 57c)<br>Endocrine disrupting properties (Article 57(f) - environment)<br>Endocrine disrupting properties (Article 57(f) - human health) |
| 238 | Lead hydrogen arsenate | 7784-40-9 | 2008/10/28 | Carcinogenic and toxic for reproduction (articles 57 a and 57 c) |
| 239 | Diarsenic trioxide | 1327-53-3 | 2008/10/28 | Carcinogenic (article 57a) |
| 240 | Diarsenic pentaoxide | 1303-28-2 | 2008/10/28 | Carcinogenic (article 57a) |
| 241 | Bis(tributyltin)oxide (TBTO) | 56-35-9 | 2008/10/28 | PBT (article 57d) |