# bluesign® Restricted Substances List (RSL) Consumer Safety Limits

**Version 14.0 | July 1, 2023**

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# 1 Introduction

Product stewardship with respect to consumer safety aspects is difficult to manage in a complex supply chain. Supplier compliance declarations, which attest conformity with the brand Restricted Substance List (brand RSL) can be a good way to start. They should be further accompanied by a responsible testing program that monitors reliability of suppliers' declarations.
The BSSL (bluesign® system substances list) specifies consumer safety limits for chemical substances in articles. Due to the quantity and range of listed substances only a comprehensive input stream management and a network of committed bluesign® SYSTEM PARTNERS (including chemical suppliers), that together result in a positive list of preferred chemicals (bluesign® FINDER), can assure best compliance with the BSSL limits.

The RSL at hand is an extract of the BSSL and contains consumer safety limits and recommended testing methods for the most important and legally restricted substances in textile and leather articles and accessories. Brands and retailers can use this RSL as an orientation for the terms and conditions of purchase. Together with a testing matrix the document can also be utilized as a guide for appropriate testing of articles such as textiles.
The RSL is revised at least annually in alignment with the BSSL.

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# 2 Definitions

## 2.1 Accessory

A component of a consumer product which is not classified as textile fabric (e.g. button, label, zipper, etc.)

## 2.2 Article

An object which during production is given a special shape, surface or design, which determines its function to a greater degree than does its chemical composition (fibers, textile fabrics, buttons, zippers, etc.).

## 2.3 BSSL

*bluesign® system substances list (BSSL)*. A list that specifies consumer safety limits for chemical substances in articles. It also defines usage bans for chemical substances prohibited from the manufacturing of articles.

## 2.4 CAS Number

CAS registry numbers are unique numerical identifiers for chemical elements, compounds, polymers, biological sequences, mixtures and alloys. Chemical Abstracts Service (CAS), a division of the American Chemical Society, assigns these identifiers to every chemical that has been described in the literature. The intention is to make database searches more convenient, as chemicals often have many names. Almost all molecule databases today allow searching by CAS number.

## 2.5 Chemical substance

A chemical element and its compounds with constant composition and properties. It is defined by the CAS number.

## 2.6 Component
A part of an article that can be distinguished according to the material composition, the functionality and/or the color and is easily, mechanically separated from the other components.

## 2.7 Limit value
Limit values are defined for single substances or substance groups. The limit value is the maximum amount of a chemical substance or substance group permitted in articles for the usage ranges A, B and C.

### 2.7.1 Detection limit (DL)
The lowest quantity of a substance that can be distinguished from the absence of that substance with a stated confidence level.

### 2.7.2 Quantification limit (QL)
The lowest analyte concentration, that can be quantitatively detected with a stated accuracy and precision.

### 2.7.3 Limitation
For several substances or substance groups a limitation is defined. For these substances or substance group a usage ban is not given but only a consumer safety limit.

## 2.8 Member
This term describes a member of a group of restricted substances. It can be a chemical substance or a subgroup of substances. See also chapter 2.13.

## 2.9 Mixture
A chemical product composed of two or more substances. It can be, for example, a colorant or an auxiliary.

## 2.10 Monitoring
For some chemical substances toxicological and/or ecological properties are not yet well defined. Therefore, the risk assessment is not complete. For some substances sufficient information on possible/typical contamination of articles and chemical products is not available now. Those substances are under observation. Exact restrictions will be defined as soon as more information exists. In cases where monitoring status is accompanied by a limit value, the limit value should be the goal.


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## 2.11 Sector of Use

Bluesign® ASSESSMENT for chemical products defines sector of use categories. BLUESIGN uses an approach similar to REACh for the risk-based evaluation of chemical substances and transfers this to the evaluation of chemical products. This allows a product, process and industry specific assessment of risks to human and the environment, that can be adapted to all kind of industries. Some sectors of use are combined to groups as shown in the following table:

| Sector of Use Group | Sector of Use |
|---|---|
| Textiles | Fibers/yarns |
| | Textile articles including fabrics, laminates and non-wovens |
| | Garments and other finished textile articles |
| Down/feather | Down and feather articles |
| Leather | Leather articles |
| Polymer parts | Plastic articles |
| | Rubber articles |
| Metal parts | Basic metals, including alloys |
| | Fabricated metal articles |

## 2.12 Several

When a substance group is not defined by a single CAS number, the field CAS Number contains the entry "Several". Several does not in every case mean that the whole substance group is restricted (e.g. aldehydes, amines), in case of a restriction of the whole substance group this is reflected by a limit entry for the group or a corresponding comment. For substance groups, especially for large groups, some or all members are listed in the annex. When group members are listed in the annex, this is indicated in the comment for the group.

## 2.13 Substance groups

For better readability and to show the hierarchy of substance groups the RSL lists:

- Main substance group (**bold**, **normal letter**)
- Substance group (**bold, *italic letter***)
- Substance subgroup (*italic letter*)
- Single substances (normal letter)

## 2.14 Usage ban

For several chemical substances or substance groups a usage ban is defined. For these substances or substance groups intentional use in manufacturing of articles is prohibited. That means that chemical products (e.g. colorants or textile auxiliaries) used for manufacturing of articles must not intentionally contain these substances or substance groups.
The aim of a usage ban is to avoid release of harmful substances to workers, to the environment and to avoid occurrence in the manufactured article by applying the precautionary principle.


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### 2.15 Usage range

Usage ranges classify consumer goods according to their consumer safety relevance.
Three usage ranges (A, B, C) are defined with A being the most stringent category concerning limit values/bans:

- Usage Range A: Next to skin use and baby articles (0 to 3 years)
- Usage Range B: Occasional skin contact
- Usage Range C: No skin contact

Common consumer goods and allocated usage ranges are listed in the separate document "Usage Ranges".

# 3 Scope and validity

The document specifies restrictions (limits and bans) for chemical substances in

- Articles and accessories made for different sectors of use (like textile and leather); see chapter 2.11.

### 3.1 Scope

The limits and restrictions shall be applied for each individual component of an intermediate or finished article. A component is each part of an article that can be distinguished according to the material composition and/or functionality and/or color and is easily mechanically separated from other components.

### 3.2 Validity

This document comes into effect from July 1, 2023.
It replaces the bluesign® Restricted Substances List (RSL) Consumer Safety Limits, version 13.0 from July 1, 2022

For all bluesign® SYSTEM PARTNERS the implementation of the revised sections, unless stated otherwise, shall take place by July 1, 2023 at the latest.
This document is revised annually and in line with the latest legislation and research and supported by opinions of the bluesign® SYSTEM PARTNER experts.

### 3.3 Articles from recycled material

Textile recycling is an important factor for sustainability, but often a black box regarding the mix of (restricted) chemicals inside.
Instructions regarding the use of recycled materials are given in our guidance documents, the "Guidance sheet Input stream management of non chemical raw materials/intermediates at manufacturers" and the "Guideline Input Stream Management at Manufacturers". To enable bluesign® APPROVED articles from recycled materials, bluesign reserves the right to accept in exceptional cases higher limits than given in this document under the precondition of legal compliance, consumer safety and proper input stream management.


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## 3.4 PFAS chemistry

- Since July 2022 no new registration of PFAS based chemical products in bluesign® FINDER.
- Since July 2023 all PFAS based chemicals have been phased out from bluesign® FINDER.
- Since July 2023 no new registration of articles finished with PFAS based chemicals in the bluesign® GUIDE.
- From July 2024 all articles finished with PFAS chemistry will be phased out from the bluesign® GUIDE.
- Exceptions might be possible, for more details see "Guidance Sheet PFAS phase out".

Analytical proof that PFAS chemicals are not included:
At first screening test for total Fluorine via combustion ion chromatography (EN14582 or ASTM 07359; Quantification Limit: 50 mg/kg).
Followed by confirmatory testing on single substances in case of findings (requires information from the supply chain on possible fluorine compounds).

Regarding the definition of PFAS, bluesign follows the EU restriction proposal with the title "Per- and polyfluoroalkyl substances (PFAS)":

Any substance that contains at least one fully fluorinated methyl (CF3-) or methylene (-CF2-) carbon atom (without any H/Cl/Br/I attached to it).

A substance that only contains the following structural elements is excluded from the scope of the restriction:
CF3-X or X-CF2-X', where X = -OR or -NRR' and X' = methyl (-CH3), methylene (-CH2-), an aromatic group, a carbonyl group (-C(O)-), -OR'', -SR'' or –NR''R''';
and where R/R'/R''/R''' is a hydrogen (-H), methyl (-CH3), methylene (-CH2-), an aromatic group or a carbonyl group (-C(O)-).

This definition might also affect substances that do not fall into the typical application of water/oil/stain repellents. For the time being, as the EU general PFAS restriction is not yet in force and exceptions are not fixed, bluesign will focus in its phase out concept on PFAS substances that are used in water/oil/stain repellents. bluesign reserves the right to extend the restriction to other applications after expert judgement.


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# 4 Testing methods

The testing methods listed in the table in chapter 5 are the recommended ones. The testing methods column consists of two entries: sample preparation, e.g. extraction, digestion, derivatization, and the test method, e.g. GC-MS, LC-MS, etc.
Depending on their availability international or national standards are also given for several substances and these methods may be applied. Other accredited methods can only be applied if it can be verified that equivalent results are obtained.
If not stated otherwise all test methods shall define the total content of the substance in the article. High recovery rate and low uncertainty shall be obtained. Robustness of method shall be given. Details of the respective sample preparation methods can be found in the table below:

| Sample preparation | Solvent(s) | Temperature (°C) | Time (min) | Other requirements |
|---|---|---|---|---|
| Extraction with KOH | Potassium hydroxide (1M) | 90 | 12-15h | Derivatization with Acetic anhydride |
| Extraction with MeOH | Methanol | 70 | 60 | Ultrasonic bath |
| Extraction with THF | Tetrahydrofuran | 40 | 60 | |
| Extraction with DCM | Dichloromethane | 40 | 60 | Ultrasonic bath |
| Extraction with MTBE | Methyl tert-butyl ether | 60 | 60 | Ultrasonic bath |
| Extraction with water | Deionized water | | | |
| Extraction with MeOH/Acetonitrile | Methanol/Acetonitrile (1:1) | 70 | 30 | Ultrasonic bath |
| Extraction with Potassium carbonate solution | Potassium carbonate solution | Room temp. | 60 | Ultrasonic bath |
| Extraction with THF/Acetone | Tetrahydrofuran/Acetone | 60 | 60 | Ultrasonic bath, derivatization with Acetonitrile |
| Extraction with Acetone | Acetone | 70 | 60 | Ultrasonic bath |
| Extraction with Hexane/Dichloroethane | Hexane/Dichloroethane | 70 | 60 | |
| ASE - Accelerated Solvent Extraction | Acetone/Hexane (1:1) | 100 | - | |
| ASE - Accelerated Solvent Extraction | Ethyl acetate | 40 | - | |
| Soxhlet Extraction | Acetone/Hexane (1:1) | - | 480 | |
| Headspace | - | 120 | 45 | |
| DIN EN ISO 105-E04 (2013) | Acidic sweat solution | 37 | 60 | Textile to liquor ratio 1:50 |


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# 5 Restricted parameters and substances

## 5.1 Restricted parameters

| Parameter | Limit | Test Method// Sample Preparation |
|---|---|---|
| pH-Value | Non-leather products: 4.0 - 7.5 | ISO 3071 (2020) |
| | Leather products: 3.2 – 4.5 (chrome tanned leather products)<br>3.5 – 7.9 (other leather products) | ISO 4045 (2018) |
| Odor | No unpleasant odor shall be emitted from the products | SNV 195 651 |
| **Color Fastness Properties** | | |
| Color fastness to perspiration | Textiles dyed with disperse or metal complex dyes:<br>at least 3 – 4,<br>the goal is > 4 | ISO 105-E04 (2013) |
| Color fastness to saliva and perspiration | Fast<br>(corresponds to level 5 of 5-step grey scale described in ISO 105-A02 (1993) | §64 LFGB BVL B 82.10-1<br>in combination with DIN 53160-1 and -2 (2010) |


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## 5.2 Restricted substances

| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Aldehydes** | | | | | | | | | |
| Formaldehyde | 50-00-0 | Leather | Usage ban | 15 | 75 | 300 | mg/kg | EN ISO 17226-2 (2019) with EN ISO 17226-1 (2021) confirmation method in case of interferences. | Test method:<br>Alternatively,<br>EN ISO 17226-1 (2021) can be used on its own. |
| | | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Limitation | 15 | 75 | 300 | mg/kg | ISO 14184-1 (2011) | |
| **Alkylphenolethoxylates (APEOs)** | | | | | | | | | |
| **Alkylphenolethoxylates (APEOs)** | Several | All | Usage ban | | 100 | | mg/kg | | For sum of all restricted APEO.<br>Goal should be 100 mg/kg for APEOs + APs.<br>Test methods: See NPEO. |
| ***Nonylphenol ethoxylates (NPEO)*** | Several | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | | 100 | | mg/kg | EN ISO 18254-1 (2016) with determination of APEO using LC/MS or LC/MS/MS | For sum of all allocated Members/Substances.<br><br>(if traces above 10 ppm are detected the source of contamination has to be identified and phased out) |
| | | Leather | Usage ban | | 100 | | mg/kg | Sample prep. and analysis using EN ISO 18218-1 (2015) with quantification according to EN ISO 18254-1 (2016) | |
| ***Octylphenol ethoxylates (OPEO)*** | Several | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | | 100 | | mg/kg | See NPEO | |
| | | Leather | Usage ban | | 100 | | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Alkylphenols (APs)** | | | | | | | | | |
| **Alkylphenols (APs)** | Several | All | Usage ban | 10 | | | mg/kg | | For sum of all alkylphenols. |
| ***Nonylphenol (NP), mixed isomers*** | Several | Textiles<br>Leather | Usage ban | 10 | | | mg/kg | EN ISO 21084 (2019) | For sum of all allocated Members/Substances. |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 10 | | | mg/kg | EN ISO 21084 (2019), modified // 1 g sample / 20 ml THF with Sonication for 60 min at 70°C | |
| ***Octylphenol (OP), mixed isomers*** | Several | Textiles<br>Leather | Usage ban | 10 | | | mg/kg | See NP | |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 10 | | | mg/kg | | |
| **Amines** | | | | | | | | | |
| Aniline - free content | 62-53-3 | Leather | Usage ban | 30 | | | mg/kg | EN ISO 17234-1 (2015) | In case aniline is detected the test needs to be repeated without addition of sodium dithionite. |
| | | Textiles<br>Polymer parts | Usage ban | 30 | | | mg/kg | EN ISO 14362-1 (2017) | |
| **Arylamines** | | | | | | | | | |
| **Arylamines (including corresponding salts)** | Several | Leather | Usage ban | 20 each | | | mg/kg | EN ISO 17234-1 (2020)<br>EN ISO 17234-2 (2011) // for azo colorants which may release 4-Aminoazobenzene | Single substances listed in Annex.<br><br>(as substance for example in PU, and as decomposition product of azo colorants which, by reductive cleavage of one or more azo groups, may release one or more of the aromatic amines). |
| | | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 20 each | | | mg/kg | EN ISO 14362-1 (2017)<br>EN ISO 14362-3 (2017) // for azo colorants which may release 4-Aminoazobenzene | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Biocides** | | | | | | | | | |
| Biocides: Independent from the biocidal substances listed in the RSL, the supplier shall always be requested to declare whether biocides were used or not. Identity of the relevant biocides shall be disclosed by name and CAS No. Declaration duty shall be laid down in the purchase specification. | | | | | | | | | |
| Dimethylfumarate | 624-49-7 | All | Usage ban | 0.1 | | | mg/kg | ISO 16186 (2021) | |
| ***o-Phenylphenol and its salts*** | Several | Leather | Limitation | 50 | 100 | 200 | mg/kg | DIN 50009 (2021) | |
| | | Textiles | Limitation | 50 | | | mg/kg | | |
| Pyrithione zinc | 13463-41-7 | All | Usage ban | 10 | | | mg/kg | DIN EN 16711-1 (2016) // Total content | Testing: Zn metal content, in case of positive result further testing with CE/ICP-MS. |
| **Chlorinated Benzenes and Toluenes** | | | | | | | | | |
| **Chlorinated Benzenes and Toluenes** | Several | All | Usage ban | 5.0 | | | mg/kg | EN 17137 (2018) | For sum of all allocated chlorinated benzenes and toluenes // additional regulation for each allocated Member/Substance - Usage ban 1.0 mg/kg.<br>Single substances listed in Annex. |
| **Chlorinated Phenols** | | | | | | | | | |
| **Chlorinated Phenols** | Several | All | Usage ban | See groups | | | | DIN 50009 (2021)<br>EN ISO 17070 (Leather) | Single substances listed in Annex. |
| ***Mono- and Dichlorophenols*** | Several | All | Usage ban | 1.0 | | | mg/kg | | For sum of all allocated Mono- and DiCPs. |
| *Trichlorophenol, all isomers* | 25167-82-2 | All | Usage ban | 0.05 | 0.5 | 0.5 | mg/kg | | For sum of all allocated TriCPs. |
| *Tetrachlorophenol, its salts and compounds* | 25167-83-3 | All | Usage ban | 0.05 | 0.5 | 0.5 | mg/kg | | For sum of all allocated TeCPs. |
| *Pentachlorophenol, its salts, esters and compounds* | Several | All | Usage ban | 0.05 | 0.5 | 0.5 | mg/kg | | For sum of all allocated PCPs. |
| **Colorants** | | | | | | | | | |
| ***Colorants banned for other reasons*** | Several | All | Usage ban | 20 each | | | mg/kg | DIN 54231 (2022) | Single substances listed in Annex. |
| ***Colorants with allergenic potential*** | Several | All | Usage ban | 20 each | | | mg/kg | | |
| ***Colorants with carcinogenic potential*** | Several | All | Usage ban | 20 each | | | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Dioxins and Furans** | | | | | | | | | |
| ***Dioxins and Furans - Group 1 and 2*** | Several | All | Usage ban | 5.0 | | | µg/kg | | For sum of all allocated Members/Substances to Group 1 and 2. Single substances listed in Annex. |
| *Dioxins and Furans - Group 1* | Several | All | Usage ban | 1.0 | | | µg/kg | | For sum of all allocated Members/Substances to Group 1. Single substances listed in Annex. |
| *Dioxins and Furans - Group 3* | Several | All | Usage ban | 95 | | | µg/kg | EPA 8290A | For sum of all allocated Members/Substances to Group 3 - official regulation for sum of all allocated Members/Substances to Group 1, 2 and 3 - 100 µg/kg. Single substances listed in Annex. |
| ***Dioxins and Furans - Group 4 and 5*** | Several | All | Usage ban | 5.0 | | | µg/kg | | For sum of all allocated Members/Substances to Group 4 and 5. Single substances listed in Annex. |
| *Dioxins and Furans - Group 4* | Several | All | Usage ban | 1.0 | | | µg/kg | | For sum of all allocated Members/Substances to Group 4. Single substances listed in Annex. |
| **Fibers** | | | | | | | | | |
| ***Asbestos*** | Several | All | Usage ban | Not detected | | | | REM/EDX BGI 505-46 U.S. EPA/600/R-93/116 | Single substances listed in Annex. |
| **Flame retardants** | | | | | | | | | |
| **Flame retardants** | Several | All | Usage ban | 5.0 each | | | mg/kg | EN ISO 17881-1 (2016) for brominated flame retardants EN ISO 17881-2 (2016) for phosphorus flame retardants | Single substances listed in Annex. |
| ***Chlorinated Paraffins, all chain lengths*** | Several | Textiles Metal parts Polymer parts Down/feather articles | Usage ban | 5.0 each | | | mg/kg | ISO 22818 (2021) | Single substances listed in Annex. |
| | | Leather | Usage ban | 100 each | | | mg/kg | ISO 18219 (2021) | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Glycols** | | | | | | | | | |
| 2-Ethoxyethanol | 110-80-5 | All | Usage ban | | 5.0 | | mg/kg | GC-MS // Extraction with Methanol<br>Plastic articles: 2-Step extraction with THF and Methanol | |
| 2-Ethoxyethyl acetate | 111-15-9 | All | Usage ban | | 5.0 | | mg/kg | | |
| 2-Methoxy-1-propanol | 1589-47-5 | All | Usage ban | | 5.0 | | mg/kg | | |
| 2-Methoxyethanol | 109-86-4 | All | Usage ban | | 5.0 | | mg/kg | | |
| 2-Methoxyethyl acetate | 110-49-6 | All | Usage ban | | 5.0 | | mg/kg | | |
| 2-Methoxypropyl acetate | 70657-70-4 | All | Usage ban | | 5.0 | | mg/kg | | |
| Bis(2-methoxyethyl) ether | 111-96-6 | All | Usage ban | | 5.0 | | mg/kg | | |
| Ethylene glycol dimethyl ether | 110-71-4 | All | Usage ban | | 5.0 | | mg/kg | | |
| Triethylene glycol dimethyl ether | 112-49-2 | All | Usage ban | | 5.0 | | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Halogenated Biphenyls, halogenated Terphenyls and halogenated Naphthalenes** | | | | | | | | | |
| ***Polybrominated Biphenyls*** | 59536-65-1 | All | Usage ban | 5.0 | | | mg/kg | EN ISO 17881-1 (2016) for brominated compounds ISO/TR 17881-3 (2018) for chlorinated compounds | For sum of all allocated Members/Substances. |
| ***Polybrominated Naphthalenes*** | Several | All | Usage ban | 1.0 | | | mg/kg | | |
| ***Polybrominated Terphenyls*** | Several | All | Usage ban | 1.0 | | | mg/kg | | |
| ***Polychlorinated Biphenyls*** | 1336-36-3 | All | Usage ban | 1.0 | | | mg/kg | | |
| ***Polychlorinated Naphthalenes*** | Several | All | Usage ban | 1.0 each | | | mg/kg | | Usage ban 1.0 mg/kg for every allocated Member/Substance. |
| ***Polychlorinated Terphenyls*** | 61788-33-8 | All | Usage ban | 1.0 | | | mg/kg | | For sum of all allocated Members/Substances. |
| **Halogenated Diarylalkanes** | | | | | | | | | |
| ***Halogenated Diarylalkanes*** | Several | All | Usage ban | 1.0 each | | | mg/kg | GC-MS // Extraction following DIN EN 62321-6 (2016) | Single substances listed in Annex. |
| **Isocyanates** | | | | | | | | | |
| **Isocyanates** | Several | All | Limitation | 1.0 | | | mg/kg | EN 13130-8 (2004) | Free content applies to sum of all allocated isocyanates. Single substances listed in Annex. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| ***Antimony, its salts and compounds*** | Several | | | | | | | | |
| Antimony – as content | 7440-36-0 | Leather | Limitation | 5 | 10 | 10 | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | As extractable metal content // Usage as flame retardant: bluesign® CRITERIA for flame retardants have to be followed. |
| | | Textiles | Limitation | 5 | 10 | 10 | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Limitation | 60 | | | mg/kg | DIN EN ISO 11885 (2009)<br>EN 71-3 (2019) // Acidic solution migration simulating gastric juices<br>DIN EN ISO 17294-2 (2017) | |
| | | Fibers/yarn | Limitation | 260 | | | mg/kg | DIN EN 16711-1 (2016) // Total content | As total metal content // valid for polyester fibers (also dope dyed), but not for finished polyester textiles. |
| ***Arsenic, its salts and compounds*** | Several | | | | | | | | |
| Arsenic – as content | 7440-38-2 | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 0.2 | | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content.<br><br>Limit for total metal content: 10 mg/kg |
| | | Leather | Usage ban | 0.2 | | | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | |
| ***Barium, its salts and compounds*** | Several | | | | | | | | |
| Barium - as content | 7440-39-3 | All | Limitation | 1000 | | | mg/kg | EN 71-3 (2019) // Acidic solution migration simulating gastric juices<br>DIN EN ISO 17294-2 (2017)<br>DIN EN ISO 11885 (2009) | As extractable metal content. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Metals (continued)** | | | | | | | | | |
| ***Cadmium, its salts and compounds*** | Several | | | | | | | | |
| Cadmium – as content | 7440-43-9 | Textiles<br>Polymer parts<br>Down/feather articles | Usage ban | 0.1 | | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content. |
| | | Leather | Usage ban | 0.1 | | | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | |
| | | Textiles<br>Polymer parts<br>Down/feather articles<br>Metal parts | Usage ban | 40 | | | mg/kg | DIN EN 16711-1 (2016) // Total content | As total metal content. |
| | | Leather | Usage ban | 40 | | | mg/kg | EN ISO 17072-2 (2019) // Total content | |
| ***Chromium VI, its salts and compounds*** | Several | | | | | | | | |
| Chromium VI – as content | 18540-29-9 | Textiles<br>Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 0.5 | | | mg/kg | EN ISO 17075-1 (2017) | As extractable metal content. |
| | | Metal parts | Usage ban | 0.5 | | | mg/kg | EN 62321-7-1 (2016) | |
| | | Leather | Usage ban | 3.0 | | | mg/kg | EN ISO 17075-1 (2017)<br>EN ISO 17075-2 (2017)<br>DIN EN ISO 4044 (2017) | For leather:<br>Thermal pre-ageing test required in advance: ISO 10195:2018. |
| ***Chromium, its salts and compounds*** | Several | | | | | | | | |
| Chromium – as content | 7440-47-3 | Metal parts<br>Polymer parts<br>Down/feather articles | Limitation | 60 | | | mg/kg | DIN EN ISO 11885 (2009)<br>EN 71-3 (2019) // Acidic solution migration simulating gastric juices<br>DIN EN ISO 17294-2 (2017) | If products are covered with a metal layer, including a chromium layer, coating must be constantly in good condition // as extractable metal content. |
| | | Textiles | Limitation | 0.5 | | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content // for textiles dyed with chromium containing metal complex dyes<br>A: 1.0 // B: 2.0 // C: 2.0 mg/kg. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Metals (continued)** | | | | | | | | | |
| ***Cobalt, its salts and compounds*** | Several | | | | | | | | |
| Cobalt – as content | 7440-48-4 | Leather | Limitation | | 1.0 | | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | As extractable metal content // for textiles and leather dyed with cobalt containing metal complex dyes A: 1.0 // B: 4.0 // C: 4.0 mg/kg. |
| | | Textiles | Limitation | | 1.0 | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | |
| | | Metal parts Polymer parts Down/feather articles | Limitation | 1.0 | 4.0 | 4.0 | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content. |
| ***Copper, its salts and compounds*** | Several | | | | | | | | |
| Copper – as content | 7440-50-8 | Textiles | Limitation | 25 | 50 | 50 | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content. |
| | | Leather | Limitation | 25 | 50 | 50 | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | |
| ***Lead, its salts and compounds*** | Several | | | | | | | | |
| Lead – as content | 7439-92-1 | Metal parts | Usage ban | | 90 | | mg/kg | DIN EN 16711-1 (2016) // Total content | As total metal content. |
| | | Leather | Usage ban | | 40 | | mg/kg | EN ISO 17072-2 (2019) // Total content | |
| | | Textiles Polymer parts Down/feather articles | Usage ban | | 40 | | mg/kg | DIN EN 16711-1 (2016) // Total content | |
| | | Leather | Usage ban | 0.2 | 1.0 | 1.0 | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | As extractable metal content. |
| | | Textiles Polymer parts Down/feather articles | Usage ban | 0.2 | 1.0 | 1.0 | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Metals (continued)** | | | | | | | | | |
| ***Mercury, its salts and compounds*** | Several | | | | | | | | |
| Mercury as content | 7439-97-6 | Metal parts | Usage ban | 60 | | | mg/kg | EN 71-3 (2019) // Acidic solution migration simulating gastric juices<br>EN ISO 12846 (2012) | As extractable metal content. |
| | | Leather | Usage ban | 0.02 | | | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | |
| | | Textiles<br>Polymer parts<br>Down/feather articles | Usage ban | 0.02 | | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | |
| ***Nickel, its salts and compounds*** | Several | | | | | | | | |
| Nickel – as content | 7440-02-0 | Textiles | Limitation | 1.0 | | | mg/kg | DIN EN 16711-2 (2016) // Acidic sweat solution | As extractable metal content // for textiles dyed with nickel containing metal complex dyes<br>A: 1.0 // B: 4.0 // C: 4.0 mg/kg. |
| | | Leather | Limitation | 1.0 | | | mg/kg | EN ISO 17072-1 (2019) // Acidic sweat solution | As extractable metal content // for leather dyed with nickel containing metal complex dyes<br>A: 1.0 // B: 4.0 // C: 4.0 mg/kg. |
| | | Metal parts<br>Polymer parts | Usage ban for A and B | 0.5 | 0.5 | - | µg/cm² /week | EN 1811 (2011) + A1 (2015) // Release<br>EN 12472 (2020) | As released metal content. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Monomers** | | | | | | | | | |
| Acrylamide | 79-06-1 | All | Usage ban | 1.0 | | | mg/kg | CEN/TS 13130-10 (2005) | |
| **Other Chemical Substances** | | | | | | | | | |
| 2-Phenyl-2-propanol | 617-94-7 | All | Limitation | 10 | 50 | 50 | mg/kg | GC-MS // Extraction with Methanol | |
| Acetophenone | 98-86-2 | All | Limitation | 20 | | | mg/kg | GC-MS // Extraction with Methanol | |
| Azodicarbonamide (ADCA) | 123-77-3 | All | Usage ban | 100 | 200 | 200 | mg/kg | Solvent Extraction // GC-MS or LC-MS or LC-DAD | |
| Benzyl chloride | 100-44-7 | All | Usage ban | 1.0 | | | mg/kg | GC-MS // Extraction with Dichloromethane | |
| Bisphenol A | 80-05-7 | All | Usage ban | 1.0 | 10 | 10 | mg/kg | EN ISO 18857-2 (2012) // Extraction with Methanol<br>EN ISO 18857-2 (2012) // Extraction with THF | For usage range A: 10 mg/kg is accepted when article is not intended to come into contact with mouth. |
| Bisphenol AF | 1478-61-1 | All | Usage ban | 100 | | | mg/kg | | |
| Bisphenol F | 620-92-8 | All | Usage ban | 100 | | | mg/kg | | |
| Bisphenol S | 80-09-1 | All | Usage ban | 100 | | | mg/kg | | Specific limit for leather tanning and textile aftertreatment: 500 ppm. |
| ***Cresol, all isomers*** | 1319-77-3 | All | Usage ban | See isomers | | | | BVL B 82.02-8 (2001) // Extraction with KOH<br>DIN EN ISO 17070 (2015) // Extraction with KOH | 10 mg/kg for each isomer. |
| m-Cresol | 108-39-4 | All | Usage ban | 10 | | | mg/kg | | |
| o-Cresol | 95-48-7 | All | Usage ban | 10 | | | mg/kg | | |
| p-Cresol | 106-44-5 | All | Usage ban | 10 | | | mg/kg | | |
| Formamide | 75-12-7 | Textiles | Usage ban | 50 | 50 | 100 | mg/kg | EN 17131 (2019) | |
| | | Metal parts<br>Polymer parts<br>Down/feather articles<br>Leather | Usage ban | 50 | 50 | 200 | mg/kg | CEN ISO/TS 16189 (2013) | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Other Chemical Substances (continued)** | | | | | | | | | |
| Phenol | 108-95-2 | All | Limitation | 20 | 50 | 100 | mg/kg | LC-MS // Extraction with Methanol<br>GC-MS // Extraction with Methanol | |
| Quinoline | 91-22-5 | All | Usage ban | | 50 | | mg/kg | LC-MS/MS // Extraction with Methanol<br>LC-DAD // Extraction with THF or Methanol<br>LC-MS/MS // Extraction with THF | |
| Isoquinoline | 119-65-3 | All | Usage ban | | 50 | | mg/kg | LC-MS/MS // Extraction with Methanol<br>LC-DAD // Extraction with THF<br>LC-DAD // Extraction with Methanol<br>LC-MS/MS // Extraction with THF | |
| ***Siloxanes*** | Several | All | Usage ban | | | | | GC // with reference to TEGEWA method (2021) | Usage ban for every allocated member/substance. |
| Octamethyl cyclotetrasiloxane (D4) | 556-67-2 | All | Usage ban | | 30 | | mg/kg | | |
| Decamethyl cyclopentasiloxane (D5) | 541-02-6 | All | Usage ban | | 200 | | mg/kg | | |
| Dodecamethyl cyclohexasiloxane (D6) | 540-97-6 | All | Usage ban | | 200 | | mg/kg | | |
| **Ozone Depleting Substances** | | | | | | | | | |
| ***Ozone depleting substances (CFCs) class I*** | Several | All | Usage ban | | 0.1 each | | mg/kg | GC-MS // Headspace | Usage ban for direct use in manufacturing of articles. |
| ***Ozone depleting substances (CFCs) class II*** | Several | All | Usage ban | | 0.1 each | | mg/kg | GC-MS // Headspace | See Regulation (EC) No 1005/2009 for a complete list of single substances. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Pesticides** | | | | | | | | | |
| **Pesticides** | Several | All | Limitation | | 0.5 | | mg/kg | GC-MS // ASE with Acetone/Hexane<br>LC-MS // ASE with Acetone/Hexane<br>GC-MS // Soxhlet Extraction with Acetone/Hexane<br>LC-MS // Soxhlet Extraction with Acetone/Hexane | Applies to total sum of all allocated members/substances.<br><br>Single substances listed in Annex. |
| **PFAS (Poly- and perfluoroalkyl substances)** | | | | | | | | | |
| **PFAS (Poly- and per-fluoroalkyl substances)** | Several | All | Usage ban | | 50 | | mg/kg | EN 14582 (total fluorine)<br>ASTM 07359 (total fluorine) | Limit refers to total fluorine content. Exceptions might be possible for specific uses, see "Guidance Sheet PFAS phase out" and PFAS statement in section 3.4.<br>Articles need to comply latest 01 January 2025. |
| ***Perfluorohexane sulfonic acid and its derivatives*** | Several | All | Usage ban | | | | | | Limits defined for subgroups. |
| *Perfluorohexane sulfonic acid and its salts* | Several | All | Usage ban | | 20 | | µg/kg | Leather:<br>EN ISO 23702-1 (2018)<br>Other materials:<br>CEN/TS 15968 (2014) | |
| *Perfluorohexane sulfon amides* | Several | All | Usage ban | | 20 | | µg/kg | | |
| *Perfluorohexane sulfon amidoethanols* | Several | All | Usage ban | | 20 | | µg/kg | | |
| *Perfluorohexane sulfon amidoethyl (meth)acrylates* | Several | All | Usage ban | | 20 | | µg/kg | | |
| *Perfluorohexane sulfon halides* | Several | All | Usage ban | | 20 | | µg/kg | | |
| *Perfluorohexane sulfon polymers* | Several | All | Usage ban | | 20 | | µg/kg | | |
| ***Perfluorooctane sulfonic acid and its derivatives*** | Several | All | Usage ban | | 1.0 | | µg/m² | | Single substances listed in Annex. |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS (Poly- and perfluoroalkyl substances) - continued** | | | | | | | | | |
| ***Perfluorohexanoic acid and its salts*** | Several | All | Usage ban | 25 | | | µg/kg | Leather:<br>EN ISO 23702-1 (2018)<br>Other materials:<br>CEN/TS 15968 (2014) | Single substances listed in Annex. |
| ***Perfluorooctanoic acid and its salts*** | Several | All | Usage ban | 25 | | | µg/kg | | |
| ***Perfluorocarboxylic acids (C9-C14) and its salts*** | Several | All | Usage ban | 25 | | | µg/kg | | |
| ***Perfluorohexanoic acid related substances*** | Several | All | Usage ban | 1000 | | | µg/kg | | |
| ***Perfluorooctanoic acid related substances*** | Several | All | Usage ban | 1000 | | | µg/kg | | |
| ***Perfluorocarboxylic acids (C9-C14) related substances*** | Several | All | Usage ban | 260 | | | µg/kg | | |
| **Plasticizers** | | | | | | | | | |
| ***Phthalic acid esters*** | Several | All | Usage ban | 50 each | | | mg/kg | CPSC-CH-C1001-09.4<br>Textile:<br>EN ISO 14389 (2014) | Single substances listed in Annex. |
| **Polyaromatic hydrocarbons (PAHs)** | | | | | | | | | |
| **Polyaromatic hydrocarbons (PAHs)** | Several | All | Usage ban | 10 | | | mg/kg | AfPS GS 2019<br>Alternative test methods:<br>EN17132 or ISO 16190 | For sum of all allocated PAHs.<br><br>PAHs without substance specific limit are listed in Annex. |
| Benzo(a)anthracene | 56-55-3 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Benzo(a)pyrene | 50-32-8 | All | Usage ban | 0.2 | | | mg/kg | | |
| Benzo(b)fluoroanthene | 205-99-2 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Benzo(e)pyrene | 192-97-2 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Benzo(j)fluoroanthene | 205-82-3 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Benzo(k)fluoroanthene | 207-08-9 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Chrysene | 218-01-9 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |
| Dibenzo(a,h)anthrene | 53-70-3 | All | Usage ban | 0.5 | 1.0 | 1.0 | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Polymers** | | | | | | | | | |
| Polyvinyl chloride | 9002-86-2 | All | Usage ban | See comment | | | | Total chlorine (EN 14582) // FTIR (when chlorine detected) | Usage ban for usage range A and B - Not detected // for usage range C: for special applications bluesign has the right to make an individual decision. |
| **Solvents** | | | | | | | | | |
| 1,2-Dichloroethane | 107-06-2 | All | Usage ban | 1.0 | | | mg/kg | GC-MS // Headspace | |
| Benzene | 71-43-2 | All | Usage ban | 5.0 | | | mg/kg | VDA 278 (2011) | |
| Dichloromethane | 75-09-2 | All | Usage ban | 5.0 | | | mg/kg | GC-MS // Headspace | Usage ban for direct use in manufacturing of articles. |
| N,N-Dimethylacetamide (DMAc) | 127-19-5 | Textiles | Usage ban | 5.0 | | | mg/kg | EN 17131 (2019) | Exceptions:<br>Textile articles produced by solvent coating, lamination or fiber manufacturing - A/B/C 50 mg/kg.<br>As residual fiber solvent in elastane and PAN fibers with Monitoring status - A: 10 mg/kg, B/C: 50 mg/kg.<br>Aramid fibers: For special applications bluesign technologies has the right to make an individual decision. |
| | | Leather | Usage ban | 5.0 | | | mg/kg | EN ISO 19070 (2016) | |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 5.0 | | | mg/kg | ISO 16189 (2021) | |
| N,N-Dimethylformamide (DMF) | 68-12-2 | Textiles | Usage ban | 5.0 | | | mg/kg | EN 17131 (2019) | Exceptions for textiles:<br>Specific limits are defined for articles produced by lamination and fiber manufacturing - A/B/C = 50 mg/kg or by solvent coating, A/B/C = 50/50/250 mg/kg.<br>For PAN fibers bluesign has the right to make individual decisions. |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 5.0 | | | mg/kg | ISO 16189 (2021) | |
| | | Leather | Usage ban | 5.0 | | | mg/kg | EN ISO 19070 (2016) | |
| N-Ethyl-2-pyrrolidone (NEP) | 2687-91-4 | Leather | Usage ban | 10 | 10 | 100 | mg/kg | EN ISO 19070 (2016) | |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 10 | 10 | 100 | mg/kg | ISO 16189 (2021) | |
| | | Textiles | Usage ban | 10 | 10 | 100 | mg/kg | EN 17131 (2019) | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Solvents (continued)** | | | | | | | | | |
| N-Methylpyrrolidone (NMP) | 872-50-4 | Textiles | Usage ban | 10 | 10 | 100 | mg/kg | EN 17131 (2019) | Exception is valid for Aramid fibers: for special applications bluesign has the right to make an individual decision. |
| | | Metal parts<br>Polymer parts<br>Down/feather articles | Usage ban | 10 | 10 | 100 | mg/kg | ISO 16189 (2021) | |
| | | Leather | Usage ban | 10 | 10 | 100 | mg/kg | EN ISO 19070 (2016) | |
| Trichloroethylene | 79-01-6 | All | Usage ban | | 5.0 | | mg/kg | GC-MS // Headspace | |
| Tetrachloroethylene | 127-18-4 | All | Usage ban | | 1.0 | | mg/kg | GC-MS // Headspace | |
| Toluene | 108-88-3 | All | Usage ban | 10 | 50 | 50 | mg/kg | GC-MS // Headspace | Usage ban not valid for solvent coating, laminating and painting/lacquering. |
| ***Xylene, all isomers*** | 1330-20-7 | All | Usage ban | 50 | 100 | 100 | mg/kg | GC-MS // Headspace | Sum of all isomers.<br>Usage ban not valid for solvent coating, laminating and painting/lacquering. |
| **Tin-organic Compounds** | | | | | | | | | |
| **Tin-organic Compounds - as mono-, di- and tri-, tetraalkyltin organics** | Several | All | Usage ban | | | | | CEN ISO/TS 16179 (2012) | Usage ban for all allocated Members/Substances. |
| ***Methyltin compounds*** | Several | | Usage ban | | | | | | |
| *Monomethyltin compounds (MMT)* | Several | All | Usage ban | | 2.0 | | mg/kg | | |
| *Dimethyltin compounds (DMT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| *Trimethyltin compounds (TMT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| ***Ethyltin compounds*** | Several | | Usage ban | | | | | | |
| *Tetraethyltin compounds (TET)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **Tin-organic Compounds (continued)** | | | | | | | | | |
| ***Propyltin compounds*** | Several | | Usage ban | | | | | CEN ISO/TS 16179 (2012) | Usage ban for all allocated Members/Substances. |
| *Dipropyltin compounds (DPT)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |
| *Tripropyltin compounds (TPT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| ***Butyltin compounds*** | Several | | Usage ban | | | | | | |
| *Monobutyltin compounds (MBT)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |
| *Dibutyltin compounds (DBT)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |
| *Tributyltin compounds (TBT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| *Tetrabutyltin compounds (TeBT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| ***Hexyltin compounds*** | Several | | Usage ban | | | | | | |
| *Tricyclohexyltin compounds (TCyHT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| ***Octyltin compounds*** | Several | | Usage ban | | | | | | |
| *Monooctyltin compounds (MOT)* | Several | All | Usage ban | | 2.0 | | mg/kg | | |
| *Dioctyltin compounds (DOT)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |
| *Trioctyltin compounds (TOT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| *Tetraoctyltin compounds (TeOT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |
| ***Phenyltin compounds*** | Several | | Usage ban | | | | | | |
| *Monophenyltin compounds (MPhT)* | Several | All | Usage ban | | 1.0 | | mg/kg | | |
| *Diphenyltin compounds (DPhT)* | Several | All | Usage ban | | 2.0 | | mg/kg | | |
| *Triphenyltin compounds (TPhT)* | Several | All | Usage ban | | 0.5 | | mg/kg | | |


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| Chemical Name | CAS Number | Sector of Use | Limit Type | A | B | C | Unit | Test Method// Sample Preparation | Comment |
|---|---|---|---|---|---|---|---|---|---|
| **UV stabilizers** | | | | | | | | | |
| UV 320 | 3846-71-7 | All | Usage ban | | 1000 | | mg/kg | ISO 24040 // Extraction with Tetrahydrofuran // GC-MS | |
| UV 327 | 3864-99-1 | All | Usage ban | | 1000 | | mg/kg | | |
| UV 328 | 25973-55-1 | All | Usage ban | | 1000 | | mg/kg | | |
| UV 350 | 36437-37-3 | All | Usage ban | | 1000 | | mg/kg | | |


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# 6 Annex (Compilation of individual substances)

In the following tables single substances belonging to groups:

- Arylamines
- Biocides
- Chlorinated Benzenes and Toluenes
- Chlorinated Phenols
- Colorants
- Dioxins and Furans
- Fibers
- Flame Retardants
- Halogenated Diarylalkanes
- Isocyanates
- Pesticides
- PFAS (Poly- and perfluoroalkyl substances)
- Plasticizers
- Polyaromatic hydrocarbons (PAHs)

are listed.

Limit values and test methods are provided in chapter 5.2.


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| Chemical Name | CAS Number | Chemical Name | CAS Number |
|---|---|---|---|
| **Arylamines** | | ***Xylidines and its salts - with the exception of those specified elsewhere*** | Several |
| *2,4-Diaminoanisole and its salts* | Several | *2,4-Xylidine and its salts* | Several |
| 2,4-Diaminoanisole | 615-05-4 | 2,4-Xylidine | 95-68-1 |
| 2,4-Diaminoanisole sulphate | 39156-41-7 | *2,6-Xylidine and its salts* | Several |
| *2,4-Diaminotoluene and its salts* | Several | 2,6-Xylidine | 87-62-7 |
| 2,4-Diaminotoluene | 95-80-7 | ***Nitrotoluidines and its salts*** | Several |
| *2-Naphthylamine and its salts* | Several | *2-Amino-4-nitrotoluene and its salts* | Several |
| 2-Naphthylamine | 91-59-8 | 2-Amino-4-nitrotoluene | 99-55-8 |
| 2-Naphthylammoniumacetate | 553-00-4 | ***Anisidines and its salts*** | Several |
| *4,4'-Diaminodiphenylmethane and its salts* | Several | Anisidine (o-, p-isomers) | 29191-52-4 |
| 4,4'-Diaminodiphenylmethane | 101-77-9 | *2-Anisidine and its salts* | Several |
| *4,4'-Methylenebis-(2-chloraniline) and its salts* | Several | 2-Anisidine | 90-04-0 |
| 4,4'-Methylenebis-(2-chloraniline) | 101-14-4 | ***Benzidines and its salts*** | Several |
| *4-Amino-3-fluorophenol and its salts* | Several | *3,3'-Dichlorobenzidine and its salts - with the exception of those specified elsewhere* | Several |
| 4-Amino-3-fluorophenol | 399-95-1 | 3,3'-Dichlorobenzidine | 91-94-1 |
| *4-Aminobiphenyl and its salts* | Several | *o-Dianisidines and its salts - with the exception of those specified elsewhere* | Several |
| 4-Aminobiphenyl | 92-67-1 | 3,3'-Dimethoxybenzidine | 119-90-4 |
| *4-Chloroaniline and its salts* | Several | *3,3'-Dimethylbenzidine and its salts* | Several |
| 4-Chloroaniline | 106-47-8 | 3,3'-Dimethylbenzidine | 119-93-7 |
| *6-Amino-2-ethoxynaphthalene and its salts* | Several | *Benzidine and its salts* | Several |
| 6-Amino-2-ethoxynaphthalene | 293733-21-8 | Benzidine | 92-87-5 |
| *o-Aminoazotoluene and its salts* | Several | Benzidine acetate | 36341-27-2 |
| o-Aminoazotoluene | 97-56-3 | Benzidine dihydrochloride | 531-85-1 |
| *p-Aminoazobenzene and its salts* | Several | Benzidine, sulfate | 21136-70-9 |
| p-Aminoazobenzene | 60-09-3 | Benzidine, sulfate (1:1) | 531-86-2 |
| ***Trimethylanilines and its salts*** | Several | | |
| *2,4,5-Trimethylaniline and its salts* | Several | | |
| 2,4,5-Trimethylaniline | 137-17-7 | | |
| 2,4,5-Trimethylaniline hydrochloride | 21436-97-5 | | |


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| Chemical Name | CAS Number | Chemical Name | CAS Number |
|---|---|---|---|
| **Arylamines (continued)** | | **Chlorinated Benzenes and Toluenes (continued)** | |
| ***Toluidines and its salts*** | Several | 1,4-Dichlorobenzene | 106-46-7 |
| | | *Trichlorobenzenes, all isomers* | Several |
| *4,4'-Methylenedi-o-toluidine and its salts* | Several | 1,2,3-Trichlorobenzene | 87-61-6 |
| 4,4'-Methylenedi-o-toluidine | 838-88-0 | 1,2,4-Trichlorobenzene | 120-82-1 |
| *m-Toluidine and its salts* | Several | 1,3,5-Trichlorobenzene | 108-70-3 |
| m-Toluidine | 108-44-1 | *Tetrachlorobenzenes, all isomers* | Several |
| *o-Toluidine and its salts* | Several | 1,2,3,4-Tetrachlorobenzene | 634-66-2 |
| o-Toluidine | 95-53-4 | 1,2,3,5-Tetrachlorobenzene | 634-90-2 |
| *p-Cresidine and its salts* | Several | 1,2,4,5-Tetrachlorobenzene | 95-94-3 |
| p-Cresidine | 120-71-8 | Pentachlorobenzene | 608-93-5 |
| *p-Toluidine and its salts* | Several | Hexachlorobenzene | 118-74-1 |
| p-Toluidine | 106-49-0 | ***Chlorinated Toluenes*** | Several |
| ***Dianilines and its salts*** | Several | Chlorotoluene, unspecific mixture | 25168-05-2 |
| *4,4'-Oxydianiline and its salts* | Several | Pentachlorotoluene | 877-11-2 |
| 4,4'-Oxydianiline | 101-80-4 | *Trichlorotoluenes, all isomers* | Several |
| *4,4'-Thiodianiline and its salts* | Several | 2,3,4-Trichlorotoluene | 7359-72-0 |
| 4,4'-Thiodianiline | 139-65-1 | 2,3,6-Trichlorotoluene | 2077-46-5 |
| ***Chlorotoluidines and its salts*** | Several | 2,4,5-Trichlorotoluene | 6639-30-1 |
| *4-Chloro-2-toluidine and its salts* | Several | 2,4,6-Trichlorotoluene | 23749-65-7 |
| 4-Chloro-2-toluidine | 95-69-2 | 3,4,5-Trichlorotoluene | 21472-86-6 |
| 4-chloro-2-toluidine hydrochloride | 3165-93-3 | a,a,a-Trichlorotoluene | 98-07-7 |
| **Biocides** | | *Dichlorotoluenes, all isomers* | Several |
| o-Phenylphenol | 90-43-7 | 2,3-Dichlorotoluene | 32768-54-0 |
| **Chlorinated Benzenes and Toluenes** | | 2,4-Dichlorotoluene | 95-73-8 |
| ***Chlorinated Benzenes*** | Several | 2,5-Dichlorotoluene | 19398-61-9 |
| Monochlorobenzene | 108-90-7 | 2,6-Dichlorotoluene | 118-69-4 |
| *Dichlorobenzenes, all isomers* | Several | 3,4-Dichlorotoluene | 95-75-0 |
| 1,2-Dichlorobenzene | 95-50-1 | 3,5-Dichlorotoluene | 25186-47-4 |
| 1,3-Dichlorobenzene | 541-73-1 | *Monochlorotoluenes, all isomers* | Several |


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| Chemical Name | CAS Number |
|---|---|
| **Chlorinated Benzenes and Toluenes (continued)** | |
| 2-Chlorotoluene | 95-49-8 |
| 3-Chlorotoluene | 108-41-8 |
| 4-Chlorotoluene | 106-43-4 |
| *Tetrachlorotoluenes, all isomers* | Several |
| 2,3,4,5-Tetrachlorotoluene | 1006-32-2 |
| 2,3,4,6-Tetrachlorotoluene | 875-40-1 |
| 2,3,5,6-Tetrachlorotoluene | 1006-31-1 |
| a,a,a,2-Tetrachlorotoluene | 2136-89-2 |
| a,a,a,4-Tetrachlorotoluene | 5216-25-1 |
| **Chlorinated Phenols** | |
| *Tetrachlorophenol, its salts and compounds* | 25167-83-3 |
| 2,3,4,5-Tetrachlorophenol | 4901-51-3 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 |
| 2,3,5,6-Tetrachlorophenol | 935-95-5 |
| *Trichlorophenol, all isomers* | 25167-82-2 |
| 2,3,4-Trichlorophenol | 15950-66-0 |
| 2,3,5-Trichlorophenol | 933-78-8 |
| 2,3,6-Trichlorophenol | 933-75-5 |
| 2,4,5-Trichlorophenol | 95-95-4 |
| 2,4,6-Trichlorophenol | 88-06-2 |
| 3,4,5-Trichlorophenol | 609-19-8 |
| *Pentachlorophenol, its salts, esters and compounds* | Several |
| Pentachlorophenol | 87-86-5 |
| ***Mono- and Dichlorophenols*** | Several |
| *Dichlorophenols, all isomers* | 25167-81-1 |
| 2,3-Dichlorophenol | 576-24-9 |
| 2,4-Dichlorophenol | 120-83-2 |
| 2,5-Dichlorophenol | 583-78-8 |
| 2,6-Dichlorophenol | 87-65-0 |
| 3,4-Dichlorophenol | 95-77-2 |
| 3,5-Dichlorophenol | 591-35-5 |
| *Monochlorophenols, all isomers* | 25167-80-0 |
| 2-Chlorophenol | 95-57-8 |
| 3-Chlorophenol | 108-43-0 |
| 4-Chlorophenol | 106-48-9 |
| **Colorants** | |
| ***Colorants banned for other reasons*** | Several |
| Acid Orange 24 | 1320-07-6 |
| Acid Violet 49 | 1694-09-3 |
| 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 |
| Direct Black 91 | 6739-62-4 |
| Direct Blue 218 | 28407-37-6 |
| Direct Blue 76 | 16143-79-6 |
| Direct Yellow 1 | 6472-91-9 |
| Disperse Orange 149 | 85136-74-9 |
| Disperse Yellow 23 | 6250-23-3 |
| *Navy Blue: A mixture of: disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-); trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromat* | Several |
| Disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-) | 118685-33-9 |
| Trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromat | |
| Basic Violet 1 | 8004-87-3 |
| 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 |


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| Chemical Name | CAS Number | Chemical Name | CAS Number |
|---|---|---|---|
| **Colorants (continued)** | | Disperse Orange 37/59/76 [3] | 51811-42-8 |
| Basic Violet 3 [1] | 548-62-9 | ***Colorants with carcinogenic potential*** | Several |
| Basic Violet 3 [2] | 603-48-5 | Acid Red 26 | 3761-53-3 |
| Basic Violet 3 [3] | 14426-25-6 | Basic Red 9 | 569-61-9 |
| Solvent Blue 4 | 6786-83-0 | Basic Violet 14 | 632-99-5 |
| ***Colorants with allergenic potential*** | Several | Direct Black 38 | 1937-37-7 |
| Disperse Blue 102 | 12222-97-8 | Direct Blue 6 | 2602-46-2 |
| Disperse Blue 106 | 12223-01-7 | Direct Brown 95 | 16071-86-6 |
| Disperse Blue 124 | 61951-51-7<br>15141-18-1 | Direct Red 28 | 573-58-0 |
| Disperse Blue 26 | 3860-63-7 | Disperse Blue 1 | 2475-45-8 |
| Disperse Blue 3 | 2475-46-9 | Disperse Orange 11 | 82-28-0 |
| Disperse Blue 7 | 3179-90-6 | Disperse Yellow 3 | 2832-40-8 |
| Disperse Brown 1 | 23355-64-8 | Pigment Red 104 | 12656-85-8 |
| Disperse Orange 1 | 2581-69-3 | Pigment Yellow 34 | 1344-37-2 |
| Disperse Orange 3 | 730-40-5 | Solvent Red 80 | 6358-53-8 |
| Disperse Red 1 | 2872-52-8 | Solvent Yellow 2 | 60-11-7 |
| Disperse Red 11 | 2872-48-2 | Solvent Violet 8 - with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2) | 561-41-1 |
| Disperse Red 17 | 3179-89-3 | | |
| Disperse Yellow 1 | 119-15-3 | *Basic Green 4* | Several |
| Disperse Yellow 39 | 12236-29-2 | Leucomalachite green | 129-73-7 |
| Disperse Yellow 49 | 54824-37-2 | Malachite green | 10309-95-2 |
| Disperse Yellow 9 | 6373-73-5 | Malachite green chloride | 569-64-2 |
| Solvent Yellow 14 | 842-07-9 | Malachite green oxalate | 2437-29-8 |
| *Disperse Blue 35* | Several | **Dioxins and Furans** | |
| Disperse Blue 35 [1] | 12222-75-2 | *Dioxins and Furans - Group 3* | Several |
| Disperse Blue 35 [2] | 56524-77-7 | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran | 39001-02-0 |
| Disperse Blue 35 B | 56524-76-6 | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | 3268-87-9 |
| *Disperse Orange 37/59/76* | Several | 1,2,3,4,6,7,8-Heptachlorodibenzofuran | 67562-39-4 |
| Disperse Orange 37/59/76 [1] | 12223-33-5 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | 35822-46-9 |
| Disperse Orange 37/59/76 [2] | 13301-61-6 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran | 55673-89-7 |


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| Chemical Name | CAS Number | Chemical Name | CAS Number |
|---|---|---|---|
| **Dioxins and Furans (continued), Group 4 and 5** | | Anthophyllite | 77536-67-5 |
| *Dioxins and Furans - Group 5* | Several | Chrysotile | 12001-29-5<br>132207-32-0 |
| 1,2,3,4,7,8-Hexabromodibenzo-p-dioxin | 110999-44-5 | | |
| 1,2,3,6,7,8-Hexabromodibenzo-p-dioxin | 110999-45-6 | Crocidolite | 12001-28-4 |
| 1,2,3,7,8,9-Hexabromodibenzo-p-dioxin | 110999-46-7 | Tremolite | 77536-68-6 |
| 1,2,3,7,8-Pentabromodibenzofuran | 107555-93-1 | **Flame retardants** | |
| *Dioxins and Furans - Group 4* | Several | ***Brominated alkyl alcohols*** | Several |
| 1,2,3,7,8-Pentabromodibenzo-p-dioxin | 109333-34-8 | 2,2-Bis(bromomethyl)-1,3-propanediol | 3296-90-0 |
| 2,3,4,7,8-Pentabromodibenzofuran | 131166-92-2 | 1-Propanol, 2,2-dimethyl-, tribromo derivates | 36483-57-5<br>1522-92-5 |
| 2,3,7,8-Tetrabromodibenzofuran | 67733-57-7 | | |
| 2,3,7,8-Tetrabromodibenzo-p-dioxin | 50585-41-6 | 2,3-Dibromopropan-1-ol-(2,3-DBPA) | 96-13-9 |
| ***Dioxins and Furans - Group 1 and 2*** | Several | Bis(2,3-dibromopropyl) phosphate | 5412-25-9 |
| *Dioxins and Furans - Group 2* | Several | Tetrabromobisphenol A | 79-94-7 |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | 70648-26-9 | Tetrabromobisphenol A bis(2,3-dibromopropylether) | 21850-44-2 |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | 39227-28-6 | Tri(aziridin-1-yl) phosphine oxide | 545-55-1 |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | 57117-44-9 | Trimethyl phosphate | 512-56-1 |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | 57653-85-7 | Tri-o-cresyl phosphate | 78-30-8 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | 72918-21-9 | Tris(2,3-dibromopropyl) phosphate | 126-72-7 |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | 19408-74-3 | Tris-(2-chloro-1-methylethyl) phosphate | 13674-84-5 |
| 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | Tris(2-chloroethyl) phosphate | 115-96-8 |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | 60851-34-5 | Tris(methylphenyl) phosphate | 1330-78-5 |
| *Dioxins and Furans - Group 1* | Several | Tris-[2-chloro-1-(chloromethyl)ethyl] phosphate | 13674-87-8 |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | 40321-76-4 | Trixylyl phosphate | 25155-23-1 |
| 2,3,4,7,8-Pentachlorodibenzofuran | 57117-31-4 | ***Hexabromocyclododecan, all isomers - group for all major diastereoisomers identified*** | Several |
| 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | | |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746-01-6 | µ-Hexabromocyclododecane | 134237-52-8 |
| **Fibers** | | 1,2,5,6,9,10-Hexabromocyclododecane | 3194-55-6 |
| ***Asbestos*** | Several | Hexabromocyclododecane | 25637-99-4 |
| Actinolite | 77536-66-4 | α-Hexabromocyclododecane | 134237-50-6 |
| Amosite | 12172-73-5 | β-Hexabromocyclododecane | 134237-51-7 |


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| Chemical Name | CAS Number |
|---|---|
| **Flame retardants (continued)** | |
| ***Chlorinated Paraffins, all chain lengths*** | Several |
| *Paraffin wax, chlorinated* | 63449-39-8 |
| *Paraffin, C10-C13, chlorinated* | 85535-84-8 |
| *Paraffin, C14-C17, chlorinated* | 85535-85-9 |
| *Paraffin, C18-C28, chlorinated* | 85535-86-0 |
| ***Polybrominated diphenyl ethers*** | Several |
| *Monobromodiphenyl ether (MonoBDE)* | Several |
| 2-Bromodiphenyl ether | 7025-06-1 |
| 3-Bromodiphenyl ether | 6876-00-2 |
| 4-Bromodiphenyl ether | 101-55-3 |
| *Tribromodiphenyl ether (TriBDE)* | 49690-94-0 |
| *Tetrabromodiphenyl ether (TetraBDE)* | 40088-47-9 |
| *Pentabromodiphenyl ether (PentaBDE)* | 32534-81-9 |
| *Hexabromodiphenyl ether* | 36483-60-0 |
| *Heptabromodiphenyl ether* | 68928-80-3 |
| *Octabromodiphenyl ether* | 32536-52-0 |
| *Nonabromodiphenyl ether* | 63936-56-1 |
| Decabromodiphenyl ether | 1163-19-5 |
| ***Polybrominated diphenyl ethanes*** | Several |
| Decabromodiphenylethane | 84852-53-9 |


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| Chemical Name | CAS Number |
|---|---|
| **Halogenated Diarylalkanes** | |
| ***Monomethyl-dibromo-diphenyl methane*** | 99688-47-8 |
| ***Monomethyl-dichloro-diphenyl methane*** | 81161-70-8 |
| ***Monomethyl-tetrachloro-diphenyl methane*** | 76253-60-6 |
| **Isocyanates** | |
| 1,3-bis(isocyanatomethyl)benzene | 3634-83-1 |
| Hexamethylene-di-isocyanate | 822-06-0 |
| Isophorone-di-isocyanate | 4098-71-9 |
| Tetramethylxylene-di-isocyanate | 2778-42-9 |
| ***Diphenylmethane-di-isocyanates*** | Several |
| Diphenylmethane-2,2-di-isocyanate | 2536-05-2 |
| Diphenylmethane-2,4-di-isocyanate | 5873-54-1 |
| Diphenylmethane-4,4-di-isocyanate | 101-68-8 |
| Methylenediphenyl diisocyanate - mixed isomers | 26447-40-5 |
| ***Toluene-di-isocyanates*** | 26471-62-5 |
| Toluene-2,4-di-isocyanate | 584-84-9 |
| Toluene-2,6-di-isocyanate | 91-08-7 |

| Chemical Name | CAS Number |
|---|---|
| **Pesticides** | |
| Aldrin | 309-00-2 |
| Azinphos ethyl | 2642-71-9 |
| Azinphos methyl | 86-50-0 |
| Bromophos-ethyl | 4824-78-6 |
| Captafol | 2425-06-1 |
| Carbaryl | 63-25-2 |
| Chlordane | 57-74-9 |
| Chlordecone | 143-50-0 |
| Chlordimeform | 6164-98-3 |
| Chlorfenvinphos | 470-90-6 |
| Chlorobenzilate | 510-15-6 |
| Clothianidin | 210880-92-5 |
| Coumaphos | 56-72-4 |
| Cyfluthrin | 68359-37-5 |
| Cyhalothrin, lambda | 91465-08-6 |
| Cypermethrin | 52315-07-8 |
| Deltamethrin | 52918-63-5 |
| Diazinon | 333-41-5 |
| Dichlorprop | 120-36-5 |
| Dicrotophos | 141-66-2 |
| Dieldrine | 60-57-1 |
| Dimethoate | 60-51-5 |
| Dinotefuran | 165252-70-0 |
| Endosulfan, alpha | 959-98-8 |
| Endosulfan, beta | 33213-65-9 |
| Endrin | 72-20-8 |


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| Chemical Name | CAS Number | Chemical Name | CAS Number |
|---|---|---|---|
| **Pesticides (continued)** | | Phosphamidon | 13171-21-6 |
| Esfenvalerate | 66230-04-4 | Profenophos | 41198-08-7 |
| Ethyl parathion | 56-38-2 | Propetamphos | 31218-83-4 |
| Fenvalerate | 51630-58-1 | Quinalphos | 13593-03-8 |
| Heptachlor | 76-44-8 | Strobane | 8001-50-1 |
| Heptachlor epoxide | 1024-57-3 | Telodrin | 297-78-9 |
| Imidacloprid (ISO) | 105827-78-9<br>138261-41-3 | Thiamethoxam | 153719-23-4 |
| | | Tiacloprid | 111988-49-9 |
| Isodrin | 465-73-6 | Toxaphene | 8001-35-2 |
| Kelevan | 4234-79-1 | Tribufos (DEF) | 78-48-8 |
| Lindane (ISO) | 58-89-9 | Trifluralin - containing < 0.5 ppm NPDA | 1582-09-8 |
| Malathion | 121-75-5 | ***Hexachlorocyclohexane, all isomers*** | 608-73-1 |
| MCPA | 94-74-6 | ***Acetamipirid, its salts, esters and compounds*** | Several |
| MCPB | 94-81-5 | Acetamipirid (ISO) | 135410-20-7 |
| Mecoprop | 93-65-2 | Acetamipirid [2] | 160430-64-8 |
| Methamidophos | 10265-92-6 | ***Dinoseb, its salts, esters and acetate*** | Several |
| Methoxychlor | 72-43-5 | Dinoseb | 88-85-7 |
| Methyl parathion | 298-00-0 | ***2,4-Dichlorophenoxyacetic acid, salts, esters and compounds*** | Several |
| Mevinophos | 7786-34-7 | | |
| Mirex | 2385-85-5 | 2,4-Dichlorophenoxy acetic acid | 94-75-7 |
| Monocrotophos | 6923-22-4 | ***Nitenpyram, its salts, esters and compounds*** | Several |
| o,p'-Dichlorodiphenyl-dichloroethane | 53-19-0 | Nitenpyram [1] | 150824-47-8 |
| o,p'-Dichlorodiphenyl-dichloroethylene | 3424-82-6 | Nitenpyram [2] | 120738-89-8 |
| o,p'-Dichlorodiphenyl-trichloroethane and its isomers - preparations containing DDT and its isomers | 789-02-6 | ***2,4,5-Trichlorophenoxyacetic acid, its salts, esters and compounds*** | Several |
| p,p'-Dichlorodiphenyldichloroethane | 72-54-8 | 2,4,5-Trichlorophenoxy acetic acid | 93-76-5 |
| p,p'-Dichlorodiphenyl-dichloroethylene | 72-55-9 | | |
| p,p'-Dichlorodiphenyl-trichloroethane and its isomers - preparations containing DDT and its isomers | 50-29-3 | | |
| Perthane | 72-56-0 | | |


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| Chemical Name | CAS Number |
|---|---|
| **PFAS (Poly- and perfluoroalkyl substances)** | |
| ***Perfluorooctane sulfonic acid and its derivatives*** | Several |
| *Perfluorooctane sulphonic acid and its salts* | Several |
| Ammonium perfluorooctane sulfonate | 29081-56-9 |
| Diethanolamine perfluorooctane sulfonate | 70225-14-8 |
| Lithium perfluorooctane sulfonate | 29457-72-5 |
| Perfluorooctane sulfonate | 45298-90-6 |
| Perfluorooctane sulfonic acid (PFOS) | 1763-23-1 |
| Potassium heptadecafluoro-octane-1-sulphonate | 2795-39-3 |
| *Perfluorooctane sulfon amidoethanols* | Several |
| 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | 4151-50-2 |
| 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6, 7,7,8,8,8- heptadecafluoro-N-(2-hydroxyethyl)- | 1691-99-2 |
| Heptadecafluoro-N-methyloctane sulfonamideoethanol | 24448-09-7 |
| *Perfluorooctane sulfon polymers* | Several |
| *Perfluorooctane sulfon halides* | Several |
| 1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | 307-35-7 |
| *Perfluorooctane sulfon amides* | Several |
| Heptadecafluoro-N-methyloctane sulfonamide | 31506-32-8 |
| Perfluorooctane sulfonamide | 754-91-6 |
| *Perfluorooctane sulfon amidoethyl (meth)acrylates* | Several |
| ***Perfluorohexanoic acid and its salts*** | Several |
| Perfluorohexanoic acid (PFHxA) | 307-24-4 |
| ***Perfluorooctanoic acid and its salts*** | Several |
| Ammonium pentadecafluoro octanoate | 3825-26-1 |
| Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, sodium salt (1:1) | 335-95-5 |
| Perfluorooctanoic acid (PFOA) | 335-67-1 |
| Potassium perfluorooctanoate | 2395-00-8 |
| ***Perfluorooctanoic acid related substances*** | Several |
| Methyl perfluorooctanoate | 376-27-2 |
| Ethyl perfluorooctanoate | 3108-24-5 |
| *Perfluorooctylethyl alcohols* | Several |
| Perfluorooctylethanol | 678-39-7 |
| *Perfluorooctylethyl olefins* | Several |
| Perfluorooctylethene | 21652-58-4 |
| *Perfluorooctylethyl halides* | Several |
| 1H,1H,2H,2H-Perfluorodecyliodide | 2043-53-0 |
| Heptadecafluoro-1-iodooctane | 507-63-1 |
| Pentadecafluorooctyl fluoride | 335-66-0 |
| *Perfluorooctylethyl acrylate or methacrylate* | Several |
| *Perfluorooctylethyl polymers* | Several |
| ***Perfluorocarboxylic acids (C9-C14) related substances*** | Several |
| *Perfluorodecanoic acid related substances* | Several |
| 10:2 Fluorotelomer alcohol - (10:2 FTOH) | 865-86-1 |


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| Chemical Name | CAS Number |
|---|---|
| **Plasticizers** | |
| ***Phthalic acid esters*** | Several |
| Bis-(2-methoxyethyl) phthalate | 117-82-8 |
| Butylbenzyl phthalate | 85-68-7 |
| Dibutyl phthalate | 84-74-2 |
| Di-cyclohexyl phthalate | 84-61-7 |
| Diethyl phthalate | 84-66-2 |
| Diethylhexyl phthalate | 117-81-7 |
| Di-iso-butyl phthalate | 84-69-5 |
| Di-iso-hexyl phthalate | 71850-09-4 |
| Di-iso-octyl phthalate | 27554-26-3 |
| Di-iso-pentyl phthalate | 605-50-5 |
| Dimethyl phthalate | 131-11-3 |
| Di-n-hexyl phthalate | 84-75-3 |
| Di-n-octyl phthalate | 117-84-0 |
| Dinonyl phthalate | 84-76-4 |
| Di-n-pentyl phthalate | 131-18-0 |
| Di-n-propyl phthalate | 131-16-8 |
| n-Pentyl-isopentyl phthalate | 776297-69-9 |
| *1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters* | 68515-40-2 |
| *1,2-Benzenedicarboxylic acid, di-C6-8-branched alkylesters, C7-rich* | 71888-89-6 |
| *1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkylesters* | 68515-42-4 |
| *1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear* | 68515-50-4 |
| *1,2-Benzenedicarboxylic acid, dipentylester, branched and linear* | 84777-06-0 |
| *1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters* | Several |
| 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters | 68515-51-5 |
| 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters | 68648-93-1 |
| *Di-iso-nonyl phthalate - (DINP)* | Several |
| Di-iso-nonyl phthalate - iso & n-Butene based | 68515-48-0 |
| *Di-iso-decyl phthalate* | Several |
| Di-iso-decyl phthalate [1] | 26761-40-0 |
| Di-iso-decyl phthalate [2] | 68515-49-1 |
| **Polyaromatic hydrocarbons (PAHs)** | |
| Acenaphthene | 83-32-9 |
| Acenaphthylene | 208-96-8 |
| Anthracene | 120-12-7 |
| Benzo[rst]pentaphene | 189-55-9 |
| Dibenzo[b,def]chrysene | 189-64-0 |
| Dibenzo[def,p]chrysene | 191-30-0 |
| Cyclopenta[c,d]pyrene | 27208-37-3 |
| Benzo(ghi)perylene | 191-24-2 |
| Fluoranthene | 206-44-0 |
| Fluorene | 86-73-7 |
| Indeno(1,2,3-cd) pyrene | 193-39-5 |
| Methylpyrene, 1- | 2381-21-7 |
| Naphthalene | 91-20-3 |
| Naphtho[1,2,3,4-def]chrysene | 192-65-4 |
| Phenanthrene | 85-01-8 |
| Pyrene | 129-00-0 |


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