

Annex 1

HELLY HANSEN RSL (Restricted Substance List)

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1 Introduction

BLUESIGN supports bluesign® SYSTEM PARTNERS in managing consumer safety related issues by providing them with the Template bluesign® Restricted Substances List (RSL). The Template bluesign® RSL is an extract of the *BSSL (bluesign® system substances list, consumer safety limits)* and defines minimum requirements for chemical substances in articles. For further information, please see the document *Restricted Substances List (RSL)/Testing matrix – Directions for use Version 11.0*.

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) consumer safety limits. 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

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.

2.8 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.

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". 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 the environment and to avoid occurrence in the manufactured article by applying the precautionary principle.

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

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 Application

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, 2021.

It replaces the Template bluesign® RESTRICTED SUBSTANCES LIST (RSL) Consumer safety limits, version 11.0 from December 1, 2020.

For all bluesign® SYSTEM PARTNERS the implementation of the revised sections, unless stated otherwise, shall take place by July 1, 2022 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.

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: test method, e.g. GC-MS, LC-MS // sample preparation, e.g. extraction, digestion, derivatization.

Depending on their availability international or national standards are also given for several substances and these methods may be applied. Other methods can only be applied if it can be verified that equivalent results are obtained.

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	Purge & trap is recommended
DIN EN ISO 105-E04 (2013)	Acidic sweat solution	37	60	Textile to liquor ratio 1:50

5 Restricted parameters and substances

5.1 Restricted parameters

Parameter	Limit	Test Method// Sample Preparation
pH	Non-leather products: 4.0-7.5	ISO 3071 (2005)
	Leather products: 3.5-7.5	ISO 4045 (2008)
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: at least 3 – 4, the goal is > 4	ISO 105-E04 (2013)
Color fastness to saliva and perspiration	Fast (corresponds to level 5 of 5-step grey scale described in ISO 105-A02 (1993))	§64 LFGB BVL B 82.10-1 in combination with DIN 53160-1 and -2 (2010)

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	ISO 17226-1 (2019) ISO 17226-2 (2019)	
		Textiles Metal parts Polymer parts Down/feather articles	Limitation	15	75	300	mg/kg	ISO 14184-1 (2011)	
Alkylphenoethoxylates (APEOs)									
<i>Nonylphenol ethoxylates (NPEO)</i>	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		100		mg/kg	EN ISO 18254-1 (2016)	For sum of all allocated Members/Substances (if traces above 10 ppm are detected the source of contamination has to be identified and phased out)
		Leather	Usage ban		100		mg/kg	EN ISO 18254-1 (2016) EN ISO 18218-1 (2015)	
<i>Octylphenol ethoxylates (OPEO)</i>	Several	Leather	Usage ban		100		mg/kg	EN ISO 18254-1 (2016) EN ISO 18218-1 (2015)	
		Textiles Metal parts Polymer parts Down/feather articles	Usage ban		100		mg/kg	EN ISO 18254-1 (2016)	
Alkylphenols (APs)									
<i>Nonylphenol (NP), mixed isomers</i>	Several	Textiles Leather	Usage ban		10		mg/kg	EN ISO 21084 (2019)	For sum of all allocated Members/Substances
		Metal parts Polymer parts 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	
<i>Octylphenol (OP), mixed isomers</i>	Several	Textiles Leather	Usage ban		10		mg/kg	EN ISO 21084 (2019)	For sum of all allocated Members/Substances
		Metal parts Polymer parts 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	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
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 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 (2015) EN ISO 17234-2 (2011) // for azo colorants which may release 4-Aminoazobenzene	Single substances listed in Annex (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 Metal parts Polymer parts Down/feather articles	Usage ban		20 each		mg/kg	EN ISO 14362-1 (2017) EN ISO 14362-3 (2017) // for azo colorants which may release 4-Aminoazobenzene	
Biocides									
Dimethylfumarate	624-49-7	Textiles	Usage ban		0.1		mg/kg	EN 17130 (2019)	
		Metal parts Polymer parts Down/feather articles Leather	Usage ban		0.1		mg/kg	GC-MS // ISO/TS 16186 (2012)	
<i>o</i>-Phenylphenol and its salts	Several	Leather	Limitation	50	100	200	mg/kg	prEN ISO 13365-1 (2019)	
		Textiles	Limitation		50		mg/kg	BVL B 82.02-8 (2001) // Extraction with KOH DIN EN ISO 17070 (2015) // Extraction with KOH EN 17134 (2019) // Extraction with KOH	
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 Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Chlorinated Phenols									
Chlorinated Phenols	Several	All	Usage ban	See limits of substance groups below				BVL B 82.02-8 (2001) // Extraction with KOH DIN EN ISO 17070 (2015) // Extraction with KOH	Usage ban for every allocated Member/Substance
<i>Pentachlorophenol, its salts, esters and compounds</i>	Several	All	Usage ban	0.05	0.5	0.5	mg/kg		Single substances listed in Annex
<i>Tetrachlorophenol, its salts and compounds</i>	25167-83-3	All	Usage ban	0.05	0.5	0.5	mg/kg		For sum of all allocated PCPs
<i>Trichlorophenol, all isomers</i>	25167-82-2	All	Usage ban	0.05	0.5	0.5	mg/kg		For sum of all allocated TeCPs
Mono- and Dichlorophenols	Several	All	Usage ban	1.0			mg/kg		For sum of all allocated TriCPs
Colorants									
Colorants banned for other reasons	Several	All	Usage ban	20 each			mg/kg	DIN 54231 (2005)	Single substances listed in Annex
Colorants with allergenic potential	Several	All	Usage ban	20 each			mg/kg	DIN 54231 (2005)	
Colorants with carcinogenic potential	Several	All	Usage ban	20 each			mg/kg	DIN 54231 (2005)	
Dioxins and Furans									
Dioxins and Furans - Group 1 and 2	Several	All	Usage ban	5.0			µg/kg	EPA 8290A	For sum of all allocated Members/Substances to Group 1 and 2
<i>Dioxins and Furans - Group 1</i>	Several	All	Usage ban	1.0			µg/kg		Single substances listed in Annex
									For sum of all allocated Members/Substances to Group 1
									Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Dioxins and Furans (continued)									
<i>Dioxins and Furans - Group 3</i>	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
<i>Dioxins and Furans - Group 4</i>	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	prEN ISO 18219-1 (2019) prEN ISO 18219-2 (2019)	Single substances listed in Annex
		Leather	Usage ban		100 each		mg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Glycols									
2-Ethoxyethanol	110-80-5	Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
		Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
2-Ethoxyethyl acetate	111-15-9	Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
		Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
2-Methoxy-1-propanol	1589-47-5	Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
		Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
2-Methoxyethanol	109-86-4	Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
		Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
2-Methoxyethyl acetate	110-49-6	Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
		Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Glycols (continued)									
2-Methoxypropyl acetate	70657-70-4	Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
		Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
Bis(2-methoxyethyl) ether	111-96-6	Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
		Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
Ethylene glycol dimethyl ether	110-71-4	Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	
		Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
Triethylene glycol dimethyl ether	112-49-2	Plastic article	Usage ban		5.0		mg/kg	GC-MS // 2-Step extraction with THF and Methanol	
		Textiles Metal parts Rubber articles Down/feather articles Leather	Usage ban		5.0		mg/kg	GC-MS // Extraction with Methanol	

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		For sum of all allocated Members/Substances
Polybrominated Terphenyls	Several	All	Usage ban		1.0		mg/kg		For sum of all allocated Members/Substances
Polychlorinated Biphenyls	1336-36-3	All	Usage ban		1.0		mg/kg		For sum of all allocated Members/Substances
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 Biphenyls, halogenated Terphenyls and halogenated Naphthalenes									
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
Metals									
Antimony, its salts and compounds	Several	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 Polymer parts Down/feather articles	Limitation			60	mg/kg	DIN EN ISO 11885 (2009) EN 71-3 (2019) // Acidic solution migration simulating gastric juices DIN EN ISO 17294-2 (2017)	
		Fibers/yarn	Limitation			260	mg/kg	DIN EN 16711-1 (2016) // Total content	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Metals (continued)									
Arsenic, its salts and compounds		Textiles Metal parts Polymer parts Down/feather articles	Usage ban		0.2		mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content
		Leather	Usage ban		0.2		mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	
Cadmium, its salts and compounds	Several	Textiles Polymer parts 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 Polymer parts Down/feather articles 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	Textiles Metal parts Polymer parts 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) EN ISO 17075-2 (2017) DIN EN ISO 4044 (2017)	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Metals (continued)									
Chromium, its salts and compounds	Several	Metal parts Polymer parts Down/feather articles	Limitation	60			mg/kg	DIN EN ISO 11885 (2009) EN 71-3 (2019) // Acidic solution migration simulating gastric juices 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 A: 1.0 // B: 2.0 // C: 2.0 mg/kg
Cobalt, its salts and compounds	Several	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	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	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Metals (continued)									
Lead, its salts and compounds	Several	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	
	Several	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	
Mercury, its salts and compounds	Several	Metal parts	Usage ban	60			mg/kg	EN 71-3 (2019) // Acidic solution migration simulating gastric juices EN ISO 12846 (2012)	As extractable metal content
		Leather	Usage ban	0.02			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	
		Textiles Polymer parts Down/feather articles	Usage ban	0.02			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	
Nickel, its salts and compounds	Several	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 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 A: 1.0 // B: 4.0 // C: 4.0 mg/kg
		Metal parts Polymer parts Down/feather articles	Usage ban for A and B	0.5	0.5	-	µg/cm ² /week	EN 1811 (2011) + A1 (2015) // Release prEN 12472 (2018)	As released metal content

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	
Acrylamide	79-06-1	All	Usage ban	1.0			mg/kg	CEN/TS 13130-10 (2005)	
Acetophenone	98-86-2	All	Limitation	20			mg/kg	GC-MS // Extraction with Methanol	
Azodicarbonamide (ADCA)	123-77-3	All	Limitation	100	200	200	mg/kg	Solvent Extraction // GC-MS or LC-MS or LC-DAD	
Bisphenol A	80-05-7	All	Usage ban	1.0	10	10	mg/kg	EN ISO 18857-2 (2012) // Extraction with Methanol EN ISO 18857-2 (2012) // Extraction with THF	
Cresol, all isomers	1319-77-3	All	Usage ban	See isomers				BVL B 82.02-8 (2001) // Extraction with KOH	10 mg/kg for each isomer
m-Cresol	108-39-4	All	Usage ban	10			mg/kg	DIN EN ISO 17070 (2015)	
o-Cresol	95-48-7	All	Usage ban	10			mg/kg	// Extraction with KOH	
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 Polymer parts Down/feather articles Leather	Usage ban	50	50	100	mg/kg	CEN ISO/TS 16189 (2013)	
Isoquinoline	119-65-3	All	Usage ban	50			mg/kg	LC-MS/MS // Extraction with Methanol LC-DAD // Extraction with THF LC-DAD // Extraction with Methanol LC-MS/MS // Extraction with THF	

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	10	50	100	mg/kg	LC-MS // Extraction with Methanol GC-MS // Extraction with Methanol	
Quinoline	91-22-5	All	Usage ban		50		mg/kg	LC-MS/MS // Extraction with Methanol LC-DAD // Extraction with THF or Methanol LC-MS/MS // Extraction with THF	
Siloxanes	Several	All	Usage ban					GC // with reference to TEGEWA method	Usage ban for every allocated member/substances
Octamethyl cyclotetrasiloxane (D4)	556-67-2	All	Usage ban		30		mg/kg		
Decamethyl cyclopentasiloxane (D5)	541-02-6	All	Usage ban		50		mg/kg		
Dodecamethyl cyclohexasiloxane (D6)	540-97-6	All	Usage ban		50		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
Pesticides									
Pesticides	Several	All	Limitation		0.5		mg/kg	GC-MS // ASE with Acetone/Hexane LC-MS // ASE with Acetone/Hexane GC-MS // Soxhlet Extraction with Acetone/Hexane LC-MS // Soxhlet Extraction with Acetone/Hexane	Applies to total sum of all allocated members/substances Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Perfluoroalkyl sulfonic acids and derivatives - PFSA									
Perfluorooctane sulfonic acid and its derivatives	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		1.0		µg/m ²	CEN/TS 15968 (2014)	Usage ban on long-chain compounds based on electrofluorination chemistry (C6 and higher).
		Leather	Usage ban		1.0		µg/m ²	EN ISO 23702-1 (2018)	Single substances listed in Annex
Perfluoroalkyl carboxylic acids and derivatives - PFCA									
Perfluorocarboxylic acids and its salts	Several	Leather	Usage ban		0.1		mg/kg	EN ISO 23702-1 (2018)	For sum of all allocated Members/Substances
		Textiles Metal parts Polymer parts Down/feather articles	Usage ban		0.1		mg/kg	CEN/TS 15968 (2014)	
<i>Perfluorohexanoic acid and its salts</i>	Several	Leather	Usage ban		0.05 Monitoring		mg/kg	EN ISO 23702-1 (2018)	Single substances listed in Annex.
		Textiles Metal parts Polymer parts Down/feather articles	Usage ban		0.05 Monitoring		mg/kg	CEN/TS 15968 (2014)	For PFHxA and PFHxA related substances BLUESIGN will strictly follow coming EU regulation on kind of substances, limit values, exceptions and timelines
<i>Perfluorooctanoic acid and its salts</i>	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		25		µg/kg	CEN/TS 15968 (2010)	Phase-out of long-chain compounds based on telomer chemistry (C8 and higher) since end of 2014.
		Leather	Usage ban		25		µg/kg	EN ISO 23702-1 (2018)	Single substances listed in Annex
Perfluorooctanoic acid related substances	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		1000		µg/kg	CEN/TS 15968 (2014)	Phase-out of long-chain compounds based on telomer chemistry (C8 and higher) since end of 2014.
		Leather	Usage ban		1000		µg/kg	EN ISO 23702-1 (2018)	For the sum of PFOA-related substances. Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Plasticizers									
Phthalic acid esters	Several	Textiles	Usage ban	50 each			mg/kg	EN ISO 14389 (2014) CPSC-CH-C1001-09.4	Single substances listed in Annex
		Metal parts Polymer parts Down/feather articles Leather	Usage ban	50 each			mg/kg	CPSC-CH-C1001-09.4	
Polyaromatic hydrocarbons (PAHs)									
Polyaromatic hydrocarbons (PAHs)	Several	All	Usage ban	10			mg/kg	AfPS GS 2019	For sum of all allocated PAHs
Benzo(a)anthracene	56-55-3	All	Usage ban	0.5	1.0	1.0	mg/kg		PAHs without substance specific limit are listed in Annex
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		
Polymers									
Polyvinyl chloride	9002-86-2	All	Usage ban	See comment				FTIR Beilstein test // FTIR measurement only if result of Beilstein test was positive	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

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Solvents (continued)									
N,N-Dimethylacetamide (DMAC)	127-19-5	Textile articles including fabrics, laminates and non-wovens, garments and other finished textile article	Usage ban	5.0			mg/kg	EN 17131 (2019)	Several exceptions are defined: Exception is valid for articles produced by solvent coating, lamination or fiber manufacturing - A/B/C 50 mg/kg. Exception is valid for elastane and PAN fibers as residual fiber solvent with monitoring status - A: 10 mg/kg B: 50 mg/kg C: 50 mg/kg. Exception is valid for Aramid fibers - for special applications bluesign technologies has the right to make an individual decision.
		Metal parts Polymer parts Down/feather articles	Usage ban	5.0			mg/kg	CEN ISO/TS 16189 (2013)	
		Leather	Usage ban	5.0			mg/kg	EN ISO 19070 (2016)	
		Fibers/yarn	Usage ban	5.0			mg/kg	EN 17131 (2019)	
N,N-Dimethylformamide (DMF)	68-12-2	Textiles	Usage ban	5.0			mg/kg	EN 17131 (2019)	Several exceptions are defined: Exception is valid for articles produced by solvent coating, lamination or fiber manufacturing - A/B/C 50 mg/kg. Exception is valid for PAN fibers - for special applications BLUESIGN has the right to make an individual decision.
		Metal parts Polymer parts Down/feather articles	Usage ban	5.0			mg/kg	CEN ISO/TS 16189 (2013)	
		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 Polymer parts Down/feather articles	Usage ban	10	10	100	mg/kg	CEN ISO/TS 16189 (2013)	
		Textiles	Usage ban	10	10	100	mg/kg	EN 17131 (2019)	
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 Polymer parts Down/feather articles	Usage ban	10	10	100	mg/kg	CEN ISO/TS 16189 (2013)	
		Leather	Usage ban	10	10	100	mg/kg	EN ISO 19070 (2016)	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Solvents (continued)									
Tetrachloroethylene	127-18-4	All	Usage ban		1.0		mg/kg	GC-MS // Headspace	
Toluene	108-88-3	All	Limitation	10	50	50	mg/kg	GC-MS // Headspace	
Trichloroethylene	79-01-6	All	Usage ban		5.0		mg/kg	GC-MS // Headspace	
Xylene, all isomers	1330-20-7	Textiles Polymer parts Down/feather articles Leather	Usage ban		10		mg/kg	GC-MS // Headspace	Usage ban 10 mg/kg for sum of all isomers
		Metal parts	Limitation		10		mg/kg	GC-MS // Headspace	Limitation for sum of all isomers
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
Ethyltin compounds	Several		Usage ban						
<i>Tetraethyltin compounds (TET)</i>	Several	All	Usage ban		1.0		mg/kg		
Hexyltin compounds	Several		Usage ban						
<i>Tricyclohexyltin compounds (TCyHT)</i>	Several	All	Usage ban		0.5		mg/kg		
Butyltin compounds	Several		Usage ban						
<i>Dibutyltin compounds (DBT)</i>	Several	All	Usage ban		1.0		mg/kg		
<i>Monobutyltin compounds (MBT)</i>	Several	All	Usage ban		1.0		mg/kg		
<i>Tetrabutyltin compounds (TeBT)</i>	Several	All	Usage ban		0.5		mg/kg		
<i>Tributyltin compounds (TBT)</i>	Several	All	Usage ban		0.5		mg/kg		
Methyltin compounds	Several		Usage ban						
<i>Dimethyltin compounds (DMT)</i>	Several	All	Usage ban		0.5		mg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
Tin-organic Compounds (continued)									
<i>Monomethyltin compounds (MMT)</i>	Several	All	Usage ban		2.0		mg/kg	CEN ISO/TS 16179 (2012)	Usage ban for all allocated Members/Substances
<i>Trimethyltin compounds (TMT)</i>	Several	All	Usage ban		0.5		mg/kg		
Octyltin compounds	Several		Usage ban						
<i>Diocyltin compounds (DOT)</i>	Several	All	Usage ban		1.0		mg/kg		
<i>Monoocyltin compounds (MOT)</i>	Several	All	Usage ban		2.0		mg/kg		
<i>Tetraocyltin compounds (TeOT)</i>	Several	All	Usage ban		0.5		mg/kg		
<i>Triocyltin compounds (TOT)</i>	Several	All	Usage ban		0.5		mg/kg		
Phenyltin compounds	Several		Usage ban						
<i>Diphenyltin compounds (DPhT)</i>	Several	All	Usage ban		2.0		mg/kg		
<i>Monophenyltin compounds (MPhT)</i>	Several	All	Usage ban		1.0		mg/kg		
<i>Triphenyltin compounds (TPhT)</i>	Several	All	Usage ban		0.5		mg/kg		
Propyltin compounds	Several		Usage ban						
<i>Dipropyltin compounds (DPT)</i>	Several	All	Usage ban		1.0		mg/kg		
<i>Tripropyltin compounds (TPT)</i>	Several	All	Usage ban		0.5		mg/kg		
UV stabilizers									
2-(2H-Benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol	36437-37-3	All	Usage ban		1000		mg/kg	DIN EN 62321-6 (2016) // Extraction with THF	
2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)phenol	25973-55-1	All	Usage ban		1000		mg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method // Sample Preparation	Comment
UV stabilizers (continued)									
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)-phenol	3864-99-1	All	Usage ban		1000		mg/kg	DIN EN 62321-6 (2016) // Extraction with THF	
2-benzotriazol-2-yl-4,6-di-tert-butylphenol	3846-71-7	All	Usage ban		1000		mg/kg		

6 Annex (Compilation of single 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
- PFSA Chemicals
- PFCA Chemicals
- Plasticizers
- Polyaromatic hydrocarbons (PAHs)

are listed.

Limit values and test methods are provided in chapter 5.2.

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

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

Chemical Name	CAS Number	Chemical Name	CAS Number
Chlorinated Benzenes and Toluenes (continued)		3,4-Dichlorophenol	95-77-2
2-Chlorotoluene	95-49-8	3,5-Dichlorophenol	591-35-5
3-Chlorotoluene	108-41-8	<i>Monochlorophenols, all isomers</i>	25167-80-0
4-Chlorotoluene	106-43-4	2-Chlorophenol	95-57-8
<i>Tetrachlorotoluenes, all isomers</i>	Several	3-Chlorophenol	108-43-0
2,3,4,5-Tetrachlorotoluene	1006-32-2	4-Chlorophenol	106-48-9
2,3,4,6-Tetrachlorotoluene	875-40-1	Colorants	
2,3,5,6-Tetrachlorotoluene	1006-31-1	Colorants banned for other reasons	
a,a,a,2-Tetrachlorotoluene	2136-89-2	Acid Orange 24	1320-07-6
a,a,a,4-Tetrachlorotoluene	5216-25-1	Acid Violet 49	1694-09-3
Chlorinated Phenols		Basic Blue 26 - with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	2580-56-5
<i>Tetrachlorophenol, its salts and compounds</i>	25167-83-3	Direct Black 91	6739-62-4
2,3,4,5-Tetrachlorophenol	4901-51-3	Direct Blue 218	28407-37-6
2,3,4,6-Tetrachlorophenol	58-90-2	Direct Blue 76	16143-79-6
2,3,5,6-Tetrachlorophenol	935-95-5	Direct Yellow 1	6472-91-9
<i>Trichlorophenol, all isomers</i>	25167-82-2	Disperse Orange 149	85136-74-9
2,3,4-Trichlorophenol	15950-66-0	Disperse Yellow 23	6250-23-3
2,3,5-Trichlorophenol	933-78-8	<i>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</i>	Several
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	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
<i>Pentachlorophenol, its salts, esters and compounds</i>	Several		
Pentachlorophenol	87-86-5	Trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromat	
Mono- and Dichlorophenols			
<i>Dichlorophenols, all isomers</i>	25167-81-1	Basic Violet 1	8004-87-3
2,3-Dichlorophenol	576-24-9		
2,4-Dichlorophenol	120-83-2	Basic Violet 3 - with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	548-62-9
2,5-Dichlorophenol	583-78-8		
2,6-Dichlorophenol	87-65-0		

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 Red 28	573-58-0
Disperse Blue 124	61951-51-7	Disperse Blue 1	2475-45-8
Disperse Blue 26	3860-63-7	Disperse Orange 11	82-28-0
Disperse Blue 3	2475-46-9	Disperse Yellow 3	2832-40-8
Disperse Blue 7	3179-90-6	Pigment Black 25	68186-89-0
Disperse Brown 1	23355-64-8	Pigment Red 104	12656-85-8
Disperse Orange 1	2581-69-3	Pigment Yellow 157	68610-24-2
Disperse Orange 3	730-40-5	Pigment Yellow 34	1344-37-2
Disperse Red 1	2872-52-8	Solvent Yellow 2	60-11-7
Disperse Red 11	2872-48-2	Solvent Violet 8 - with $\geq 0.1\%$ 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

Chemical Name	CAS Number	Chemical Name	CAS Number
Dioxins and Furans (continued), Group 4 and 5		Anthophyllite	77536-67-5
<i>Dioxins and Furans - Group 5</i>	Several	Chrysotile	12001-29-5 132207-32-0
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5	Crocidolite	12001-28-4
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6	Tremolite	77536-68-6
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7	Flame retardants	
1,2,3,7,8-Pentabromodibenzofuran	107555-93-1	2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0
<i>Dioxins and Furans - Group 4</i>	Several	Bis(2,3-dibromopropyl) phosphate	5412-25-9
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8	Tetrabromobisphenol A	79-94-7
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2	Tetrabromobisphenol A bis(2,3-dibromopropylether)	21850-44-2
2,3,7,8-Tetrabromodibenzofuran	67733-57-7	Tri(aziridin-1-yl) phosphine oxide	545-55-1
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6	Trimethyl phosphate	512-56-1
Dioxins and Furans - Group 1 and 2	Several	Tri-o-cresyl phosphate	78-30-8
<i>Dioxins and Furans - Group 2</i>	Several	Tris(2,3-dibromopropyl) phosphate	126-72-7
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	Tris-(2-chloro-1-methylethyl) phosphate	13674-84-5
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	Tris(2-chloroethyl) phosphate	115-96-8
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	Tris(methylphenyl) phosphate	1330-78-5
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	Tris-[2-chloro-1-(chloromethyl)ethyl] phosphate	13674-87-8
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	Trixylyl phosphate	25155-23-1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	Hexabromocyclododecan, all isomers - group for all major diastereoisomers identified	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	μ-Hexabromocyclododecane	134237-52-8
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
<i>Dioxins and Furans - Group 1</i>	Several	Hexabromocyclododecane	25637-99-4
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	α-Hexabromocyclododecane	134237-50-6
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	β-Hexabromocyclododecane	134237-51-7
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	Chlorinated Paraffins, all chain lengths	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	<i>Paraffin wax, chlorinated</i>	63449-39-8
Fibers		<i>Paraffin, C10-C13, chlorinated</i>	85535-84-8
Asbestos	Several	<i>Paraffin, C14-C17, chlorinated</i>	85535-85-9
Actinolite	77536-66-4		
Amosite	12172-73-5		

Chemical Name	CAS Number	Chemical Name	CAS Number
Flame retardants (continued)		Toluene-di-isocyanates	Several
<i>Paraffin, C18-C28, chlorinated</i>	85535-86-0	Toluene-2,4-di-isocyanate	584-84-9
Polybrominated diphenyl ethers	Several	Toluene-2,6-di-isocyanate	91-08-7
Decabromodiphenyl ether	1163-19-5	Pesticides	
<i>Tetrabromodiphenyl ether</i>	40088-47-9	Aldrin	309-00-2
<i>Pentabromodiphenyl ether</i>	32534-81-9	Azinphos ethyl	2642-71-9
<i>Octabromodiphenyl ether</i>	32536-52-0	Azinphos methyl	86-50-0
<i>Nonabromodiphenyl ether</i>	63936-56-1	Bromophos-ethyl	4824-78-6
<i>Hexabromodiphenyl ether</i>	36483-60-0	Captafol	2425-06-1
<i>Heptabromodiphenyl ether</i>	68928-80-3	Carbaryl	63-25-2
<i>Monobromodiphenyl ether</i>	Several	Chlordane	57-74-9
2-Bromodiphenyl ether	7025-06-1	Chlordecone	143-50-0
3-Bromodiphenyl ether	6876-00-2	Chlordimeform	6164-98-3
4-Bromodiphenyl ether	101-55-3	Chlorfenvinphos	470-90-6
Polybrominated diphenyl ethanes	Several	Chlorobenzilate	510-15-6
Decabromodiphenylethane	84852-53-9	Clothianidin	210880-92-5
Halogenated Diarylalkanes		Coumaphos	56-72-4
Monomethyl-dibromo-diphenyl methane	99688-47-8	Cyfluthrin	68359-37-5
Monomethyl-dichloro-diphenyl methane	81161-70-8	Cyhalothrin, lambda	91465-08-6
Monomethyl-tetrachloro-diphenyl methane	76253-60-6	Cypermethrin	52315-07-8
Isocyanates		Deltamethrin	52918-63-5
1,3-bis(isocyanatomethyl)benzene	3634-83-1	Diazinon	333-41-5
Hexamethylene-di-isocyanate	822-06-0	Dichlorprop	120-36-5
Isophorone-di-isocyanate	4098-71-9	Dicrotophos	141-66-2
Tetramethylxylene-di-isocyanate	2778-42-9	Dieldrine	60-57-1
Diphenylmethane-di-isocyanates	Several	Dimethoate	60-51-5
Diphenylmethane-2,2-di-isocyanate	2536-05-2	Dinotefuran	165252-70-0
Diphenylmethane-2,4-di-isocyanate	5873-54-1	Endosulfan, alpha	959-98-8
Diphenylmethane-4,4-di-isocyanate	101-68-8	Endosulfan, beta	33213-65-9
Methylenediphenyl diisocyanate - mixed isomers	26447-40-5	Endrin	72-20-8

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	Thiamethoxam	153719-23-4
	138261-41-3	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	Perfluoroalkyl sulfonic acids and derivatives - PFSA	
p,p'-Dichlorodiphenyl-trichloroethane and its isomers - preparations containing DDT and its isomers	50-29-3	Perfluorooctane sulfonic acid and its derivatives	Several
		<i>Perfluorooctane sulphonic acid and its salts</i>	Several
Perthane	72-56-0	Ammonium perfluorooctane sulfonate	29081-56-9

Chemical Name	CAS Number	Chemical Name	CAS Number
Perfluoroalkyl sulfonic acids and derivatives - PFSA (continued)		Perfluorooctanoic acid related substances	
Diethanolamine perfluorooctane sulfonate	70225-14-8	Methyl perfluorooctanoate	376-27-2
Lithium perfluorooctane sulfonate	29457-72-5	Ethyl perfluorooctanoate	3108-24-5
Perfluorooctane sulfonate	45298-90-6	<i>Perfluorooctylethyl alcohols</i>	Several
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Perfluorooctylethanol	678-39-7
Potassium heptadecafluoro-octane-1-sulphonate	2795-39-3	<i>Perfluorooctylethyl olefins</i>	Several
<i>Perfluorooctane sulfon amidoethanols</i>	Several	Perfluorooctylethene	21652-58-4
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	<i>Perfluorooctylethyl halides</i>	Several
		1H,1H,2H,2H-Perfluorodecyl iodide	2043-53-0
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-1-iodooctane	507-63-1
		Pentadecafluorooctyl fluoride	335-66-0
Heptadecafluoro-N-methyloctane sulfonamide ethanol	24448-09-7	Perfluorooctylethyl acrylate or methacrylate	Several
<i>Perfluorooctane sulfon polymers</i>	Several	<i>Perfluorooctylethyl polymers</i>	Several
<i>Perfluorooctane sulfon halides</i>	Several	Plasticizers	
1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	307-35-7	Phthalic acid esters	Several
		Bis-(2-methoxyethyl) phthalate	117-82-8
<i>Perfluorooctane sulfon amides</i>	Several	Butylbenzyl phthalate	85-68-7
Heptadecafluoro-N-methyloctane sulfonamide	31506-32-8	Dibutyl phthalate	84-74-2
Perfluorooctane sulfonamide	754-91-6	Di-cyclohexyl phthalate	84-61-7
<i>Perfluorooctane sulfon amidoethyl (meth)acrylates</i>	Several	Diethyl phthalate	84-66-2
Perfluoroalkyl carboxylic acids and derivatives - PFCA		Diethylhexyl phthalate	117-81-7
Perfluorocarboxylic acids and its salts	Several	Di-iso-butyl phthalate	84-69-5
<i>Perfluorohexanoic acid and its salts</i>	Several	Di-iso-hexyl phthalate	71850-09-4
Perfluorohexanoic acid (PFHxA)	307-24-4	Di-iso-octyl phthalate	27554-26-3
<i>Perfluorooctanoic acid and its salts</i>	Several	Di-iso-pentyl phthalate	605-50-5
Ammonium pentadecafluoro octanoate	3825-26-1	Dimethyl phthalate	131-11-3
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	Di-n-hexyl phthalate	84-75-3
		Di-n-octyl phthalate	117-84-0
Perfluorooctanoic acid (PFOA)	335-67-1	Dinonyl phthalate	84-76-4
Potassium perfluorooctanoate	2395-00-8	Di-n-pentyl phthalate	131-18-0

Chemical Name	CAS Number	Chemical Name	CAS Number
Plasticizers (continued)		Pyrene	129-00-0
Di-n-propyl phthalate	131-16-8	Dibenzo[def,p]chrysene	191-30-0
n-Pentyl-isopentyl phthalate	776297-69-9		
<i>1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters</i>	68515-40-2		
<i>1,2-Benzenedicarboxylic acid, di-C6-8-branched alkylesters, C7-rich</i>	71888-89-6		
<i>1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkylesters</i>	68515-42-4		
<i>1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear</i>	68515-50-4		
<i>1,2-Benzenedicarboxylic acid, dipentylester, branched and linear</i>	84777-06-0		
Di-iso-nonyl phthalate - iso & n-Butene based	68515-48-0		
<i>1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters</i>	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		
<i>Di-iso-decyl phthalate</i>	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(ghi)perylene	191-24-2		
Fluoranthene	206-44-0		
Fluorene	86-73-7		
Indeno(1,2,3-cd) pyrene	193-39-5		
Naphthalene	91-20-3		
Phenanthrene	85-01-8		