



RESTRICTED SUBSTANCES LIST WIBRA

("RSL") 1.0

NOVEMBER 2019

## INTRODUCTION VERSION 1.0

The production of apparel from raw materials to finished products is a long process. It starts with fibres via spinning, weaving or knitting, bleaching, dyeing, printing, washing, cutting and sewing to a garment. These processes are not only mechanical but they can be considered as chemical intensive and complex.

WIBRA has committed itself to develop responsible chemical management procedures for all products, including accessories attached to garments, prints and packaging materials. WIBRA expects the same commitment from its suppliers and have therefore developed a Restricted Substances List (WIBRA RSL 1.0) to inform all suppliers on all chemicals that are banned or restricted in all production processes and finished products. The purpose of a Restricted Substances List (RSL) is to reduce the use of hazardous substances in the textile and apparel supply chain.

Our RSL includes;

1. The minimum legal requirements inside the EU.
2. Upcoming European Legislation
3. Responsibility of all the supplier regarding Substances of Very High Concern (SVHC) mentioned on the REACH Candidate list

A valid OEKO-TEX® Standard 100 product certificate issued by the OEKO-TEX® Association ([www.oeko-tex.com](http://www.oeko-tex.com)) covers most of requirements of this RSL. The new OEKO-TEX® certification is called Sustainable Textile Production (STeP) (replacement of OEKO-TEX® Standard 1000) and has a wider scope: it covers also environmental, social, quality management and safety aspects on the production site. Certification according to Oeko-Tex® Standard 100 or STeP can be more cost effective than single tests.

Please be prepared that your buyer could request a signature for each order to declare that the specific order complies with our RSL requirements. Also it can be possible that one of your styles will be selected for pre-delivery testing at a certified laboratory.

As matter of general principle, WIBRA reserves the right to select styles to be (counter) tested upon arrival in their warehouse. If this post-test is a "FAIL", all the cost incurred in this testing procedure shall be borne by the supplier, including all additional cost for non-marketable styles.

As a result of a dynamic process this RSL will be updated on a regular basis in order to assist in the development of responsible entrepreneurship and they can be used as a basis for the development of Quality Management Systems.

In case of any question, please contact WIBRA Corporate Social Responsibility (CSR) or Quality department.

[mailto: j.heitlager@wibra.nl](mailto:j.heitlager@wibra.nl)

Janneke Heitlager CSR department

[mailto: m.endendijk@wibra.nl](mailto:m.endendijk@wibra.nl)

Miriam Endendijk Quality department

**Table of content version 1.0**

<b>GENERAL</b>	<b>PAGE</b>
INTRODUCTION	2
TABLE OF CONTENT	3

<b>MATRIX</b>	<b>PAGE</b>
RISK MATRIX	4

<b>RESTRICTED SUBSTANCES LIST 1.0</b>	<b>PAGE</b>
ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO)	5
AZO-AMINES AND ARYLAMINE SALTS	6
BIOCIDES	7
CHLOROBENZENES AND CHLOROTOLUENES	7
CHLORINATED PARAFFINS	8
CHLOROPHENOLS	8
DISPERSE DYES WHICH ARE CLASSIFIED TO BE ALLERGENIC	9
DYES WHICH ARE CLASSIFIED TO BE CARCINOGENIC AND OTHER DYES	10
FLAME RETARDENTS	11
FORMALDEHYDE	12
HEAVY METALS EXTRACTABLE AND CHROMIUM VI	13
HEAVY METALS RELEASABLE NICKEL	14
HEAVY METALS TOTAL CONTENT	15
HEAVY METALS TOYS	16
ORGANOTIN COMPOUNDS	17
OTHER CHEMICAL RESIDUES	18
PACKAGING RESTRICTIONS	18
PERFLUORINATED CHEMICALS	19
PESTICIDES	20
PHTHALATES	21

<b>RESTRICTED SUBSTANCES LIST 1.0 CONTINUED</b>	<b>PAGE</b>
POLYCYCLIC AROMATIC HYDROCARBONS (PAH'S)	22
VOLATILE ORGANIC COMPOUNDS (VOC)	23
OTHER ATTENTION POINTS	23

<b>REACH REGULATION 1907/2006</b>	<b>PAGE</b>
REACH CANDIDATE LIST	24-33



Riskmatrix version 1.0

CHEMICAL	NATURAL FIBERS	BLENDED FIBERS	SYNTHETIC FIBERS	ARTIFICIAL LEATHER (WITH FIBER BACKING)	NATURAL LEATHER	COATING AND PRINTS	NATURAL MATERIALS	POLYMERS, PLASTICS, FOAMS, NATURAL & SYNTHETIC RUBBER	METAL	FEATHER & DOWN	GLUE
ALKYLPHENOLS AND ALKYPHENOL ETHOXYLATES	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●		●	●●●
AZO-AMINES AND ARYLAMINE SALTS	●●●	●●●	●●●	●●●	●●●	●●●	●●●			●●●	
DMFu	●	●	●	●	●	●		●			
CHLOROBENZENES AND CHLOROTOLUENES		●●	●●		●						
CHLORINATED PARAFFINS	●	●	●	●	●●●	●		●●			
CHLOROPHENOLS	●	●		●	●	●				●	
ALLERGENIC DISPERSE DYES		●●	●●	●●		●●					
CARCINOGENIC DYES	●●	●●	●●	●●		●●					
FLAME RETARDENTS	● (if finish is applied)										
FORMALDEHYDE	●●●	●●●	●●	●●	●●●	●●●	●●●				●●●
HEAVY METALS EXTRACTABLE	●●	●●	●●	●●	●●	●●					
HEAVY METALS EXTRACTABLE CHROMIUM VI	●/wool				●●●*						
HEAVY METALS RELEASABLE NICKLE									●●●		
HEAVY METALS TOTAL CONTENT CADMIUM				●		●●		●	●●		
HEAVY METALS TOTAL CONTENT LEAD				●		●●		●●/foams ●/others	●●		
ORGANOTIN COMPOUNDS	●	●	●	●	●	●		●			●
PERFLUORINATED CHEMICALS	●● (If water- or stain-repellant finish is applied)										
PESTICIDES	●	●			●						
PHTHALATES				●●●		●●●		●●●			●●●
POLYCLIC AROMATIC HYDROCARBONS				●		●●●		●●●			●●●
BISPENOL- A								●●●/polycarbonate			
QUINOLINE		●	●								
SOLVENTS				●●●		●●●		●●●			●●
VOLATILE ORGANIC COMPOUNDS (VOC'S)	●●	●●	●●	●●	●●	●●		●●			●●
pH	●●●	●●●	●●●	●●●	●●●						

- indicate that a chemical has been in widespread use and/or frequently detected in a particular material.
- indicate that a chemical has been deliberately used and/or detected in a particular material occasionally.
- indicates there is a very low but theoretical chance that a chemical could be used and/or detected.
- No dot indicates that we believe there is an almost negligible risk of a chemical being used and/or detected.

\* Vegetable tanned leather has a low risk on the formation of Chromium VI.

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO)</b>					
Nonylphenols (NP)	Various	EU: REACH Regulation 1907/2006 Annex XVII entry No. 46a+b	Extraction: 1 g sample/20 mL THF, sonication for 60 minutes at 70°C Measurement: EN ISO 18857-2:2011 (with derivatization)	Total: < 100 mg/kg	<p>APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, degumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings.</p> <p>APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 mg/kg and that more time is necessary for the supply chain to phase them out completely.</p> <p>This limit covers EU legislation restricting NPEOs, effective 3 February 2021, and provides advance warning to suppliers.</p>
Octylphenols (OP)	Various	NPEO will be limited in REACH Regulation 1907/2006 Annex XVII entry No. 46a			
Nonylphenoethoxylates (NPEO)	Various	Shall not be placed on the market after 3 February 2021 in textile articles which can reasonably be expected to be washed in water during their normal lifecycle in concentrations equal to or greater than 0.01% (100 mg/kg) by weight of that textile article or of each part of the textile article.	EN ISO 18254- 1:2016, determination of APEO using LC/MS or LC/MS/MS	Total: < 100 mg/kg	
Octylphenoethoxylates (OPEO)	Various				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>AZO-AMINES AND ARYLAMINE SALTS</b>					
4-Aminobiphenyl	92-67-1	EU: REACH Regulation 1907/2006 Annex XVII entry No. 43 + appendix 8	EN 14362-1:2017  Test Method for confirmation of 4-Aminoazobenzene (4AAB) EN 14362-3: 2017	< 36 months: < 20 mg/kg  > 36 months: < 30 mg/kg	<p>The azo structure is a molecular structure contained in many dyes.</p> <p>Some Azo Dyes have the potential to release carcinogenic aromatic amine(s) when reductive cleavage occurs.</p> <p>Dyes containing azo structures are a widely-used class of synthetic dyes and pigments.</p> <p>They may be used in the dyeing of a range of materials including textiles, leather, plastics and paper.</p> <p>Their uses in textiles include nylon, wool, silk, polyester, acetate, cotton, rayon and linen. However, the amine and aniline fragments listed in this document are not directly used in industry.</p> <p>Under the appropriate conditions, certain Azo dyes can break down through a process called reductive cleavage, resulting in a chemical fragment listed in this document.</p> <p>A large number of dyes that will not release the amine or aniline fragments listed in this document are readily available.</p>
Benzidine	92-87-5				
4-Chloro-o-toluidine	95-69-2				
2-Naphtylamine	91-59-8				
o-Aminoazotoluene	97-56-3				
5-Nitro-o-toluidine	99-55-8				
4-Chloroaniline	106-47-8				
2,4-Diaminoanisole	615-05-4				
4,4'-Diaminodiphenylmethane (4,4'-MDA)	101-77-9				
3,3'-Dichlorobenzidine	91-94-1				
3,3'-Dimethoxybenzidine	119-90-4				
3,3'-Dimethylbenzidine	119-93-7				
4,4'-Methylenedi-o-toluidine	838-88-0				
p-Cresidine	120-71-8				
4,4'-Methylen-bis(2-chloraniline)	101-14-4				
4,4'-Oxydianiline	101-80-4				
4,4'-Thiodianiline	139-65-1				
o-Toluidine	95-53-4				
2,4-Toluenediamine (2,4-TDA)	95-80-7				
2,4,5-Trimethylaniline	137-17-7				
2-Methoxyaniline (= o-Anisidine)	90-04-0				
4-Aminoazobenzene (4-AAB)	60-09-3	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12			
4-Chloro-o-toluidinium chloride	3165-93-3				
2-Naphthylammoniumacetate	553-00-4				
4-Methoxy-m-phenylene diammonium sulphate	39156-41-7				
2,4,5-Trimethylaniline hydrochloride	21436-97-5				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>BIOCIDES</b>					
Dimethylfumarate (DMFu)	624-49-7	EU: REACH Regulation 1907/2006 Annex XVII entry No.61	ISO 16186:2012; DIN SPEC 53280:2012	< 0.1 mg/kg	<p>Dimethyl fumarate (DMFu) is a fungicide used to prevent mould in leather and textiles.</p> <p>Can be used in sachets in packaging to prevent the buildup of mold, especially during shipping.</p> <p>DMFu can cause acute dermatitis, eczema, and general fatigue to the persons who have been in contact with this substance.</p> <p>Can also be used as Pesticide.</p>
<b>CHLOROBENZENES AND CHLOROTOLUENES</b>					
Hexachlorobenzene (HCB)	118-74-1	EU:Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004	DIN 54232:2010	< 1 mg /kg	<p>Chlorophenols are a group of man-made chemicals that historically have been used as pesticides or converted into pesticides, as well as used as preservatives to protect leather and textile materials from fungi, insects and bacteria during storage and transport.</p> <p>They have a strong, medicinal taste and smell.</p> <p>Chlorophenols are commonly used as pesticides, or converted into pesticides, and have historically been used as preservatives to for textile and leather materials during storage and transport.</p> <p>Chlorophenols may also be present as impurities from the raw materials used in the production of dyes.</p> <p>Some chlorophenols are used as in-can preservatives in print pastes and other chemical mixtures.</p> <p>Chlorophenols can be produced and found in wastewater after bleaching processes with elemental chlorine for textiles or paper, as well as during disinfection of wastewater or drinking water.</p>
Pentachlorobenzenes (PCB)	608-93-5				
Trichlorobenzenes: 1,2,3-TriCB 1,2,4-TriCB 1,3,5-TriCB	Various 87-61-6 120-82-1 108-70-3	SWITZERLAND: ORRChem annex 1.2 (Art.3)			
$\alpha,\alpha,\alpha,4$ -tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12			
$\alpha,\alpha,\alpha$ -trichlorotoluene; benzotrichloride	98-07-7				
$\alpha$ -chlorotoluene; benzyl chloride	100-44-7				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>CHLORINATED PARAFFINS</b>					
Short chain chlorinated paraffins (C10-C13)	85535-84-8	EU:Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004  REACH Regulation 1907/2006 SVHC Candidate List	ISO 18219:2015	< 36 months: < 50 mg/kg  > 36 months: < 1000 mg/kg	Within the apparel and footwear industry, SCCPs may be used as a flame retardant or plasticizer in plastics, rubbers, inks, paints, adhesives and surface coatings.  They also may be found as impurities in fat- liquoring agents in leather production.  Outside of apparel and footwear, these compounds may be used in metal operations as additives in lubricants or coolants used in cutting metal or metal forming.
<b>CHLOROPHENOLS</b>					
Pentachlorophenol (PCP) and it salts and esters	87-86-5 and others	EU:Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004	KOH extraction,15 hours at 90 degrees C	Not detected	Chlorophenols are a group of man-made chemicals that historically have been used as pesticides or converted into pesticides, as well as used as preservatives to protect leather and textile materials from fungi, insects and bacteria during storage and transport.  They have a strong, medicinal taste and smell.  Chlorophenols are commonly used as pesticides, or converted into pesticides, and have historically been used as preservatives to for textile and leather materials during storage and transport.
Tetrachlorophenol (TeCP) and its salts and esters 2,3,4,5-Tetrachlorophenol 2,3,4,5-Tetrachlorophenol 2,3,5,6-Tetrachlorophenol	25167-83-3 4901-51-3 58-90-2 935-95-5	SWITZERLAND: ORRChem annex 1.1 (Art.3)	§ 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015	(Detection limit > 0.5 mg/kg)	Chlorophenols may also be present as impurities from the raw materials used in the production of dyes.  Some chlorophenols are used as in-can preservatives in print pastes and other chemical mixtures.  Chlorophenols can be produced and found in wastewater after bleaching processes with elemental chlorine for textiles or paper, as well as during disinfection of wastewater or drinking water.



**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>DISPERSE DYES WHICH ARE CLASSIFIED TO BE ALLERGENIC</b>					
C.I. Disperse Blue 1	2475-45-8	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	DIN 54231:2005	< 50 mg/kg	Disperse dyes are a class of water-insoluble dyes that penetrate synthetic fibers and are held in place by physical forces without forming chemical bonds.  Within the apparel and footwear supply chains, disperse dyes are often found in the dyeing process for synthetic textiles, including polyester, acetate, and polyamide.
C.I. Disperse Blue 35	12222-75-2 56524-76-7 56514-77-7	GERMANY:The authoritative German Federal Institute for Risk Assessment (BfR) strongly advises not to use the sensitising disperse dyes listed. Please note that in Germany findings for these substances are judged according to the Lebensmittel-, Bedarfsgegenstände-, und Futtermittelgesetzbuch (LFGB), which is somehow legally binding and considered to be best practice.			
C.I. Disperse Blue 106	12223-01-7				
C.I. Disperse Blue 124	61951-51-7				
C.I. Disperse Orange 3	730-40-5				
C.I. Disperse Orange 37/59/76	12223-33-5 13301-61-6 51811-42-8				
C.I. Disperse Red 1	2872-52-8				
C.I. Disperse Yellow 3	2832-40-8				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION	
<b>DYES WHICH ARE CLASSIFIED TO BE CARCINOGENIC AND OTHER DYES</b>						
C.I. Basic Red 9	569-61-9	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	DIN 54231:2005	< 50 mg/kg	Acid dyes are water-soluble anionic dyes mainly used on fibers such as wool, silk, and nylon.  Basic dyes are water-soluble cationic dyes mainly used on acrylic fibers.  Direct dyes are used on natural fibers such as cotton, linen, cellulose and in special treatments such as dip dyes.	
C.I. Basic Violet 3	548-62-9					
C.I. Disperse Yellow 3	2832-40-8					
C.I. Disperse orange 11	82-28-0					
C.I. Direct Blue 6	2602-46-2					
C.I. Basic Violet 14	632-99-5					
C.I. Acid Red 26	3761-53-3	EU: COMMISSION DECISION 2002 / 371 Ecological criteria for the Community eco-label to textile products				Disperse dyes are often found in the dyeing process for synthetic textiles, including polyester, acetate, and polyamide.  Solvent dyes are dyes which are soluble in organic solvents, and can be used on natural and synthetic fibers.
C.I. Basic Blue 26	2580-56-5					
C.I. Direct Red 28	573-58-0					
C.I. Direct Black 38	1937-37-7					
C.I. Solvent Blue 4	6786-83-0					
Michler's base	101-61-1					
4,4'-bis(dimethylamino)-4'' (methylamino)trityl alcohol	561-41-1	EU: REACH Regulation 1907/2006 SVHC Candidate List			< 1000 mg/kg	Pigment dyes are widely used in a variety of fiber and material types.  Navy Blue Dye is a specific dye mixture used to dye leather and textiles.
C.I. Pigment Red 104	12656-85-8					
C.I. Pigment Yellow 34	1344-37-2					
Disperse Navy Blue Component 1: Component 2:	118685-33-9	EU: REACH Regulation 1907/2006 Annex XVII entry No. 43 point 3/appendix 9				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>FLAME RETARDENTS</b>					
Heptabromodiphenyl ether (HeptaBDE)	Various 68928-80-3	EU:Regulation 2019/1021 on Persistant Organic Pollutants recasting POP 850/2004	EN ISO 17881 1&2: 2016	< 500 mg/kg	These types of flame retardents are toxic and are suspected to be carcinogenic.  They persist in the environment and food chain, and are likely to pass up the food chain.  Within the apparel and footwear supply chain, flame retardant chemicals may be incorporated into textiles or applied by sprays to decrease flammability of treated products.  Some flame retardant chemicals are widely used in plastics, adhesives, coatings and inks.
Hexabromodiphenyl ether (HexaBDE)	Various 36483-60-0				
Tetrabromodiphenyl ether (TetraBDE)	Various 40088-47-9				
Pentabromodiphenyl ether (PentaBDE)	Various 32534-81-9				
Decabromodiphenyl Ether (DecaBDE)	1163-19-5				
Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	EU: REACH Regulation 1907/2006 Annex XVII entry No. 4, 7, 8, 45 and 67		< 100 mg/kg	Historically, flame retardant chemicals were used in children's and infants' clothing – particularly sleepwear – to meet safety standards.  They are now rarely used to meet flammability requirements in children's clothing and adult products.  They should no longer be used in apparel and footwea
Tris-(2,3-dibromopropyl)- phosphate (TRIS)	126-72-7				
Tris - (aziridinyl) - phosphineoxide (TEPA)	545-55-1				
Polybromobiphenyls (PBB)	59536-65-1				
All other Polybrominated diphenyl ethers (PBDEs)	Various				
Octabromodiphenylether (OctaBDE)	32536-52-0			< 1000 mg/kg	

Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>FORMALDEHYDE</b>					
Formaldehyde	50-00-0	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	Textiles: ISO 14184-1:2014 Leather: ISO 17226-1:2017 or ISO 17226-2:2017	<p>&lt; 75 mg/kg</p> <p>By way of derogation, in relation to the placing on the market of formaldehyde [CAS No 50-00-0] in jackets, coats or upholstery, the relevant concentration for the purposes shall be 300 mg/kg during a period period of two years after the enforcement of the actual restriction.</p>	<p>Formaldehyde is a chemical with widespread uses, occurring naturally at low levels in foods and used in a variety of synthetic preparations.</p> <p>At room temperature, formaldehyde is a colorless, flammable gas that has a distinct, pungent smell.</p> <p>Small amounts of formaldehyde are naturally produced by plants, animals, and humans.</p> <p>Within the apparel and footwear supply chain, Formaldehyde may be used in the production of fertilizer, paper, plywood, and urea-formaldehyde resins.</p> <p>Formaldehyde can be used as one of the starting materials in auxiliaries imparting textile performance such as wrinkle free, dimensional stability, and stain resistant characteristics to cotton and cotton blend fabrics.</p> <p>Formaldehyde can be found in resins, binders and fixing agents for dyes and pigments (especially those with fluorescent effects).</p> <p>It can also be used as a catalyst in certain printing, adhesive and heat transfer processes.</p> <p>Classified in the EU as ""carcinogenic from category 1B and mutagen category 2"".</p>

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>HEAVY METALS EXTRACTABLE</b>					
Chromium VI compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	18540-29-9 Various	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	EN 16711-2:2016 EN ISO 17075-1:2017 if Cr is detected	< 1 mg/kg after extraction (expressed as Cr VI that can be extracted from the material)	Though typically associated with leather tanning, Chromium VI also may be used in the dyeing of wool (after the chroming process).
Arsenic compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	7440-38-2 Various		EN 16711-2: 2016	< 1 mg/kg after extraction (expressed as As metal that can be extracted from the material)	Arsenic and its compounds can be used in preservatives, pesticides, and defoliant for cotton, synthetic fibers, paints, inks, trims, and plastics.
Lead and its compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	7439-92-1 Various		Extraction with acid perspiration	< 1 mg/kg after extraction (expressed as Pb metal that can be extracted from the material)	Lead may be associated with plastics, paints, inks, pigments and surface coatings.
Cadmium and its compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	7440-43-9 Various			< 1 mg/kg after extraction (expressed as Cd metal that can be extracted from the material)	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints.
<b>HEAVY METALS EXTRACTABLE APPLICABLE FOR LEATHER ITEMS WITH DIRECT SKIN CONTACT</b>					
Chromium VI (Cr VI)	18540-29-9	EU: REACH Regulation 1907/2006 Annex XVII entry No.47 referring to leather	EN ISO 17075-1:2017 after aging, aging conditions: 24 H/ 80 degrees C./ 5% humidity. § 64 LFGB 82.02 - 11 (2008)	n.d. (detection limit: 3 mg/kg)	Although Chromium VI is typically associated with leather tanning, Chromium VI also may be found in the dyeing of wool (after the chroming process).

Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>HEAVY METALS RELEASABLE NICKEL</b>					
Nickel	7440-02-0	REACH Regulation 1907/2006 Annex XVII entry No.27	EN 1811:2011+A1:2015 for non-coated item  EN 12472:2005+A1:2009 For coated item	<p>Consumer goods such as jewellery, snap fasteners, press buttons, zip fasteners, etc., which can come into contact with the human skin for a longer period must not release more than <math>\leq 0.5 \mu\text{g}</math> nickel per <math>\text{cm}^2</math> per week.</p> <p>Metal parts of jewelry intended to be used for body piercings must not release more than <math>\leq 0.2 \mu\text{g}</math> nickel per <math>\text{cm}^2</math> per week</p> <p>Metal parts of jewellery which can come into contact with the human skin for a longer period must not release more than <math>\leq 0.5 \mu\text{g}</math> nickel per <math>\text{cm}^2</math> per week</p>	<p>Nickel and its compounds can be used for plating alloys and improving corrosion- resistance and hardness of alloys.</p> <p>Nickel can cause extreme allergies and is released through skin contact.</p> <p>* Prolonged contact with the skin is defined as contact with the skin of potentially more than ☀ 10 minutes on three or more occasions within two weeks, or ☀ 30 minutes on one or more occasions within two weeks.</p> <p>The skin contact time of 10 minutes applies when there are three or more occasions of skin contacts within a two-week time period. The skin contact time of 30 minutes applies when there is at least one occasion within a two-week time period.</p>
			EN 16128: 2015	In spectacle frames and sunglasses intended to come into close and prolonged contact with the skin must not release more than $\leq 0.5 \mu\text{g}$ nickel per $\text{cm}^2$ per week.	

Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>HEAVY METALS TOTAL CONTENT</b>					
Cadmium and its compounds	7440-43-9	EU: REACH Regulation 1907/2006 Annex XVII entry No.23	DIN EN 14602:2012	< 100 mg/kg	Heavy metals, including a cadmium and lead, may be found in pigments and dyes, metal alloys and coating, and in the PVC stabilization process.  Cadmium may be found in low quality dyes. Cadmium and lead, may be found in pigments, but have largely been phased out. Metal alloys and coatings may contain cadmium, and lead.
Lead and its compounds	7439-92-1	EU: REACH Regulation 1907/2006 Annex XVII entry No.63  DENMARK: Statutory Order no. 1082 of September 13, 2007	Non-metal: CPSC-CH-E1002-08.3  Metal: CPSC-CH-E1001-08.3  Lead in paint and surface coatings: CPSIA Section 101 16 CFR 1303	< 90 mg/kg  Rate of lead release of Lead: $\leq 0.05 \mu\text{g}/\text{cm}^2/\text{h}$ for jewellery and products which can be placed in the mouth by children	PVC stabilization may be accomplished with the use of cadmium or lead.

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>HEAVY METALS TOYS</b>					
Aluminium (Al)	7429-90-5	EN 71-3:2013+A2:2017	Extraction with simulated gastric solution acc. to EN 71.3: 2014	70000 mg/kg	<p>Many heavy metals are bio accumulative when absorbed by the human body through perspiration and give cause for concern in health terms such as chronic toxicity, allergenic reactions and cancer.</p> <p>The Method details the extraction of soluble elements from toy materials using conditions which simulate the material remaining in contact with gastric juices for a certain time after swallowing</p>
Antimony (Sb)	7440-36-0			560 mg/kg	
Arsenic (As)	7440-38-2			47 mg/kg	
Barium (Ba)	7440-39-3			18750 mg/kg	
Boron (B)	7440-42-8			15000 mg/kg	
Cadmium (Cd)	7440-43-9			17 mg/kg	
Chromium III (Cr III)	7440-47-3			460 mg/kg	
Chromium VI (Cr VI)	18540-29-9			0,2 mg/kg	
Cobalt (Co)	7440-48-4			130 mg/kg	
Copper (Cu)	7440-50-8			7700 mg/kg	
Lead (Pb)	7439-92-1			160 mg/kg	
Maganese (Mn)	7439-96-5			15000 mg/kg	
Mercury (Hg)	7439-97-6			94 mg/kg	
Nickel (Ni)	7440-02-0			930 mg/kg	
Selenium (Se)	7782-49-2			460 mg/kg	
Strontium ( Sr)	7440-24-6			56000 mg/kg	
Tin (Sn)	7440-31-5			180000 mg/kg	
Organic Tin (Sn)	various	12 mg/kg			
Zinc (Zn)	7440-66-6	46000 mg/kg			



**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>ORGANOTIN COMPOUNDS</b>					
Tributyltin (TBT) and compounds	Various	EU:REACH Regulation 1907/2006 Annex XVII entry No. 20	ISO/TS 16179:2012	< 1000 mg/kg	<p>Organotin compounds (organotins) are substances composed of tin directly bound to different organic groups.</p> <p>Generally, the mono-, di-, or tri-substituted organotins have the most applications to the apparel and footwear industry.</p> <p>Organotins are often used as a heat stabilizer in polyvinyl chloride (PVC), catalyst in the production of polymeric materials, such as polyurethane (PU)-coated fabrics, or in plastisol prints, rubber, adhesives, metallic glitter etc.</p> <p>They may also be used as biocides or preservatives in textiles, leathers and synthetic leathers like PU as well as pesticides.</p> <p>Silicone- based finishes (e.g. for elastomeric properties and water repellency) may also contain organotins.</p> <p>The most common application in apparel and footwear supply chains are plastic trims, screen prints, and PU-coated fabrics.</p>
Triphenyltin (TPHT) and compounds	Various				
Dibutyltin (DBT) and compounds	Various				
Diocetyl tin (DOT) and compounds	Various				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>OTHER CHEMICAL RESIDUES</b>					
Bisphenol-A (BPA)	80-05-7	EU: Regulation 10/2011 (as amended) on plastic materials and articles intended to come into contact with food.	Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60 degrees C, analysis with LC/MS	< 1 mg/kg	Used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC.  Prohibited from use in food and drink containers, and items intended to come into contact with the mouth.
Quinoline	91-22-5	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	AfPS GS 2014:01	< 50 mg/kg	Quinoline currently does not have a limit value. Quinoline is or can be used for the production of colorants and some other chemical auxiliaries.  The substance is classified as a CMR substance (carcinogenic, mutagenic or toxic to reproduction substance) by ECHA and is discussed in ECHA work groups under the theme "CMR substances in textiles"  Found as an impurity in polyester and some dyestuffs.
<b>PACKAGING RESTRICTIONS</b>					
Cadmium (Cd)	Various	Directive 94/62/EC on packaging and packaging waste	CEN/TR 13695-1	The sum of concentration levels of lead, cadmium, mercury and hexavalent chromium present in packaging or packaging components shall not exceed 100 mg/kg	Packaging means transportation packaging as well as product packaging, i.e., any material used for the containment, protection, handling, delivery, and presentation of finished goods (article).
Lead (Pb)					
Chromium (Cr6+)— hexavalent					
Mercury (Hg)					

Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>PERFLUORINATED CHEMICALS AND HER COMPOUNDS</b>					
Perfluorooctane Sulfonate (PFOS) and related substances	Various	EU:Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004	prISO FDIS 23702-1: 2018	< 1µg / m <sup>2</sup>	<p>Perfluorinated and Polyfluorinated Chemicals (PFCs) belong to the perfluoroalkyl family of substances. PFCs are synthetic short-chain polymers that do not occur naturally in the environment.</p> <p>PFCs are substances with special properties including fire resistance and oil, stain, grease, and water repellency that have hundreds of important manufacturing and industrial applications.</p>
Perfluorooctane acids (PFOA), its salts and esters	Various 335-67-1	PFOA and its salts will be limited in REACH Regulation 1907/2006 annex XVII by entry No. 68 Going into force from 4 July 2020 onwards		< 1µg / m <sup>2</sup> < 25 ppb total	<p>PFCs have been used for many years as repellent finishes applied to fabrics or garments.</p> <p>The fluorinated finishes provide a highly durable repellent effect against water, soil, and oil. The repellent effect has historically been achieved using chemistries which have a chain of 8 carbons, each with multiple fluorine atoms attached. These “long-chain” substances can contain trace amounts of PFOA or PFOS as impurities, which come from the manufacturing process.</p>
PFOA-related substances	Various			< 1000 ppb total	<p>PFOS is both intentionally produced and an unintended degradation product of related chemicals. PFOA is present, mainly at residual levels or as an unintended by-product.</p> <p>In recent years, shorter chain PFCs and non-fluorinated repellent chemistries have been in use as the C8 variety is phased out globally. There is still some potential for PFOA or PFOS in the shorter chain PFCs due to contamination or poor manufacturing control.</p>

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>PESTICIDES</b>					
1,1,1-Trichlor-2,2-bis-(4-chlorophenyl)ethane (DDT)	50-29-3	EU:Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004	U.S. EPA Method 8081A/8151A	Not detected  (Detection limit > 0.5 mg/kg)	<p>Pesticides are substances or mixtures of substances intended for preventing, destroying, repelling, or mitigating any pest.</p> <p>Pesticides can also include substances or mixtures of substances intended for use as a plant regulator, defoliant, or desiccant.</p> <p>Pesticides may be used in upstream agricultural processes to manage a variety of pests.</p> <p>Pesticides may also be added to animal skins such as leather, or to natural fibers such as wool.</p> <p>Pesticides may also be used to control pests or vegetation around facilities.</p>
Aldrin	309-00-2				
Chlordane	57-74-9				
Dieldrin	60-57-1				
Endosulfan	115-29-7 959-98-8 33213-65-9				
Endrine	72-20-8				
Heptachlor	76-44-8				
Hexachlorbenzene	118-74-1				
Pentachlorobenzene	608-93-5				
Hexabromobiphenyl	36355-01-8				
Hexachlorocyclohexanes, including lindane	58-89-9 319-84-6 319-85-7 608-73-1				
Chlordecone	143-50-0				
Polychlorinated Biphenyls (PCB)	1336-36-3 and others				
Polychlorinated naphthalenes	70776-03-3				
Mirex	2385-85-5				
Toxaphen (Camphechlor)	8001-35-2				
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	SWITZERLAND: ORRChem annex 1.1 (Art.3)			
2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP	93-72-1				
Dicofol	115-32-2				
Quintozene	82-68-8				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>PHthalATES</b>					
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	EU:REACH Regulation 1907/2006 Annex XVII entry No. 51	ISO14389: 2015	< 1000 mg/kg (each)	<p>Phthalates encompass many esters of phthalic acid.</p> <p>Phthalates are incorporated into plastics to improve durability, flexibility, and transparency.</p> <p>Phthalates are typically mixed into polymers as an external plasticizer with no chemical bonding. As a result, phthalates may migrate out of the material resulting in exposure to people or the environment.</p> <p>Phthalates are a class of chemicals that may be blended as an additive into plastics to manipulate the performance of the material.</p> <p>They are used to soften plastics to make them more flexible or more durable.</p> <p>Phthalates are also sometimes used to decrease the melting temperature of plastics to aid the molding process.</p> <p>Phthalates are used in hundreds of products, such as adhesives, detergents, lubricating oils, footwear, plastic clothes (raincoats).</p> <p>Phthalates are used widely in polyvinyl chloride plastics, which are used to make products such as plastic packaging film and sheets. They can be used in screen print, heat transfer inks, and plastisol inks.</p>
Butylbenzyl phthalate (BBP)	85-68-7				
Dibutyl phthalate (DBP)	84-74-2				
Di-isobutyl phthalate (DIBP)	84-69-5	EU: REACH Regulation 1907/2006 Annex XVII entry No.52 a,b,c			
Di-“isononyl” phthalate (DINP)	28553-12-0 68515-48-0				
Di-“isodecyl phthalate (DIDP)	26761-40-0 68515-49-1				
Di-n-octyl phthalate (DNOP)	117-84-0	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12			
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6				
Diisopentylphthalate (DIPP)	605-50-5				
Dipentyl phthalate (DPP)	131-18-0	EU: Regulation 1907/2006 Candidate List.			
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8				
Di-n-hexyl phthalate (DnHP)	84-75-3	EU: Regulation 1907/2006 Candidate List.			
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0				
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUPI)	68515-42-4				
N-pentyl-isopentyl phthalate (NPIPP)	776297- 69-9				
Di-cyclohexyl phthalate (DCHP)	84-61-7				
1,2- Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4				
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate	68515-51-5 68648-93-1				

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH'S)</b>					
Benzo{a}pyrene	50-32-8	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12  EU: REACH Regulation 1907/2006 Annex XVII entry No. 50	AfPS GS 2014:01	< 0.5 mg/kg each for toys and childcare articles  < 1.0 mg/kg each for clothing, footwear, gloves and sportswear	Polycyclic Aromatic Hydrocarbons (PAHs) are naturally occurring substances composed of multiple carbon and hydrogen aromatic rings.
Benzo(a)anthracene	56-55-3				They are found in fossil fuels and are often formed during incomplete combustion of organic materials.
Chrysene	218-01-9				PAHs have a characteristic smell similar to that of car tires or asphalt.
Benzo(b)fluoroanthene	205-99-2				PAHs are typically present in final products as impurities and are not intentionally added.
Benzo(k)fluoroanthene	207-08-9				Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers, and coatings.
Dibenzo(a,h)anthracene	53-70-3				PAHs are often found in the outsoles of footwear and in printing pastes for screen prints.
Benzo(e)pyrene	192-97-2				PAHs can be present as impurities in carbon black dyestuffs.
Benzo(j)fluoroanthene	205-82-3				They also may be formed from thermal decomposition of recycled materials during reprocessing.  Naphthalene is often present as an impurity from low-quality raw materials used as intermediates in the production of textile dye dispersing agents and may be found in textiles.

**Restricted Substances List version 1.0**

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	LEGAL LIMIT	RELEVANCE OF RESTRICTION
<b>VOLATILE ORGANIC COMPOUNDS (VOC)</b>					
Benzene	71-43-2	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	GC-MS Headspace	< 5 mg/kg	VOC's are organic chemical compounds that vaporize under normal conditions and enter the atmosphere. Common artificial VOCs include thinners and dry cleaning solvents.
Hexachlorobutadiene	87-68-3	EU: Regulation 2019/1021 on Persistent Organic Pollutants recasting POP 850/2004		Not detected	
DMAC (N,N-dimethylacetamide)	127-19-5	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12  EU: Regulation 1907/2006 Candidate List.	DIN CEN ISO/TS 16189:2013	< 1000 mg/kg	DMAC is a solvent used in the production of elastane fibres and sometimes as substitute for DMFa.
1-Methyl-2pyrrolidone (NMP)	872-50-4				Industrial solvent utilized in production of water-based polyurethanes and or therpolymericmaterials. May also be used for surface treatment of textiles, resins, and metal coated plastics or as a paint stripper.
N,N-Dimethyl formamide (DMFa)	68-12-2				DMFa is a solvent used in plastics, rubber, and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable.
Odour			SNV 195651	No abnormal odour allowed. If odour rating > 3, VOC test to be performed	
<b>OTHER ATTENTION POINTS</b>					
pH value for textiles			Textiles: ISO 3071:2006	Textile: 4.0 - 7.5 No skin contact: 4.0 - 9.0  Leather 3.5 - 7.5 No skin contact: 3.5 - 9.0	

**REACH ANNEX: ECHA'S CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN LAST UPDATE 16-07-2019**

**NUMBER OF SUBSTANCES ON THE CANDIDATE LIST: 201**

Substances, preparations and articles will be assessed on their risks for health and environmental aspects

Any producer or importer of WIBRA articles shall submit a notification to WIBRA for any substance contained in those articles, if the following condition is met:

**A substance of the candidate list is present in the imported/produced articles with over 0.1% w/w (>1000 mg/kg). (European Court of Justice judgement of 10-09-2015 case C-106/14 referring to every constituent part of the article)**

This is also applicable for suppliers that are located outside the European Union.

Any producer or importer of articles shall immediately inform his client. The end consumer has to be informed on request within 45 days, if the following conditions is met:

A substance of the Candidate list is present in the imported or produced article above a concentration of 0.1% w/w.

[Candidate List of Substances of Very High Concern for authorisation](#)

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

Companies may have immediate legal obligations following such inclusion which are linked to the listed substance on its own, in preparations and articles.

Further documentation or more detailed information on the identification process of Substances of Very High Concern can be found on the web pages of ECHA's Member State Committee.

Note: The EC number includes both anhydrous and hydrated forms of a substance and consequently the entries cover both these forms. The CAS number included may be for the anhydrous form only and therefore the CAS number shown does not always describe the entry accurately.

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
1	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	-	2019/07/16	Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
2	2-methoxyethyl acetate	110-49-6	2019/07/16	Toxic for reproduction (Article 57c)
3	4-tert-butylphenol	98-54-4	2019/07/16	Endocrine disrupting properties (Article 57(f) - environment)
4	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	2019/07/16	Endocrine disrupting properties (Article 57(f) - environment)
5	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	2019/01/15	Endocrine disrupting properties (Article 57(f) - environment)
6	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	2019/01/15	Toxic for reproduction (Article 57c)
7	Benzo[k]fluoranthene	207-08-9	2019/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
8	Fluoranthene	206-44-0 93951-69-0	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
9	Phenanthrene	85-01-8	2019/01/15	vPvB (Article 57e)



**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
10	Pyrene	129-00-0 1718-52-1	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
11	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride	552-30-7	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
12	Benzo[ghi]perylene	191-24-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
13	Decamethylcyclopentasiloxane	541-02-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
14	Dicyclohexyl phthalate (DCHP)	84-61-7	2018/06/27	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - human health)
15	Disodium octaborate	12008-41-2	2018/06/27	Toxic for reproduction (Article 57c)
16	Dodecamethylcyclohexasiloxane	540-97-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
17	Ethylenediamine	107-15-3	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
18	Lead	7439-92-1	2018/06/27	Toxic for reproduction (Article 57c)
19	Octamethylcyclotetrasiloxane	556-67-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
20	Terphenyl, hydrogenated	61788-32-7	2018/06/27	vPvB (Article 57e)
21	Benz[a]anthracene	56-55-3, 1718-53-2	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
22	Cadmium carbonate	513-78-0	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
23	Cadmium hydroxide	21041-95-2	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
24	Cadmium nitrate	10022-68-1 10325-94-7	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
25	Chrysene	218-01-9 1719-03-5	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
26	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination there of]	-	2018/01/15	vPvB (Article 57e)
27	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	-	2018/01/15	Endocrine disrupting properties (Article 57(f) - environment)
28	Perfluorohexane-1-sulphonic acid and its salts	-	2017/07/07	vPvB (Article 57e)
29	4,4'-isopropylidenediphenol Bisphenol A; BPA	80-05-7	2017/01/12	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
30	4-heptylphenol, branched and linear substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	-	2017/01/12	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
31	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3830-45-3 3108-42-7 335-76-2	2017/01/12	Toxic for reproduction (Article 57 c) PBT (Article 57 d)
32	p-(1,1-dimethylpropyl)phenol	80-46-6	2017/01/12	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
33	Benzo{def}chrysene	50-32-8	2016/20/06	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); PBT (Article 57 d); vPvB (Article 57 e)
34	1,3-propanesultone	1120-71-4	2015/12/15	Carcinogenic (Article 57a);
35	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	2015/12/15	vPvB (Article 57 e)
36	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	2015/12/15	vPvB (Article 57 e)
37	Nitrobenzene	98-95-3	2015/12/15	Toxic for reproduction (Article 57c)
38	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	2015/12/15	Toxic for reproduction (Article 57c); PBT (Article 57 d)
39	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1	2015/06/15	Toxic for reproduction (Article 57 c)

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
40	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	-	2015/06/15	vPvB (Article 57e)
41	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	2014/12/17 2008/10/28	Equivalent level of concern having probable serious effects to the environment (Article 57 f); Toxic for reproduction (article 57c)
42	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	2014/12/17	Toxic for reproduction (Article 57 c)
43	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	2014/12/17	PBT (Article 57 d); vPvB (Article 57 e)
44	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	2014/12/17	Toxic for reproduction (Article 57 c)
45	Cadmium fluoride	7790-79-6	2014/12/17	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
46	Cadmium sulphate	10124-36-4 31119-53-6	2014/12/17	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
47	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	2014/12/17	PBT (Article 57 d); vPvB (Article 57 e)
48	Cadmium chloride	10108-64-2	2014/06/16	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
49	Sodium peroxometaborate	7632-04-4	2014/06/16	Toxic for reproduction (Article 57 c)
50	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	2014/06/16	Toxic for reproduction (Article 57 c)
51	Sodium perborate; perboric acid, sodium salt	-	2014/06/16	Toxic for reproduction (Article 57 c)
52	Trixylyl phosphate	25155-23-1	2013/12/16	Toxic for reproduction (Article 57 c);
53	Lead di(acetate)	301-04-2	2013/12/16	Toxic for reproduction (Article 57 c);
54	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	2013/12/16	Toxic for reproduction (Article 57 c);
55	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	2013/12/16	Carcinogenic (Article 57a);
56	Cadmium sulphide	1306-23-6	2013/12/16	Carcinogenic (Article 57a);
57	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	2013/12/16	Carcinogenic (Article 57a);
58	Dihexyl phthalate	84-75-3	2013/12/16	Toxic for reproduction (Article 57 c);

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
59	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	2013/06/20	Toxic for reproduction (Article 57 c);
60	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	2013/06/20	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
61	Pentadecafluorooctanoic acid (PFOA)	335-67-1	2013/06/20	Toxic for reproduction (Article 57 c);
62	Dipentyl phthalate (DPP)	131-18-0	2013/06/20	Toxic for reproduction (Article 57 c);
63	Cadmium	7440-43-9	2013/06/20	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)
64	Cadmium oxide	1306-19-0	2013/06/20	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)
65	4,4'-methylenedi-o-toluidine	838-88-0	2012/12/19	Carcinogenic (Article 57a)
66	N-pentyl-isopentylphthalate	776297-69-9	2012/12/19	Toxic for reproduction (Article 57 c)
67	4-Aminoazobenzene	60-09-3	2012/12/19	Carcinogenic (Article 57a)
68	Orange lead (lead tetroxide)	1314-41-6	2012/12/19	Toxic for reproduction (Article 57 c)
69	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	2012/12/19	Toxic for reproduction (Article 57 c)
70	Dimethyl sulphate	77-78-1	2012/12/19	Carcinogenic (Article 57a)
71	Heptacosafuorotetradecanoic acid	376-06-7	2012/12/19	vPvB (Article 57 e)
72	Lead titanium zirconium oxide	12626-81-2	2012/12/19	Toxic for reproduction (Article 57 c)
73	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	2012/12/19	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
74	6-methoxy-m-toluidine (p-cresidine)	120-71-8	2012/12/19	Carcinogenic (Article 57a)
75	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	2012/12/19	Toxic for reproduction (Article 57 c)
76	1,2-Diethoxyethane	629-14-1	2012/12/19	Toxic for reproduction (Article 57 c)
77	Sulfurous acid, lead salt, dibasic	62229-08-7	2012/12/19	Toxic for reproduction (Article 57 c)
78	1-bromopropane (n-propyl bromide)	106-94-5	2012/12/19	Toxic for reproduction (Article 57 c)
79	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	2012/12/19	PBT (Article 57 d); vPvB (Article 57 e)
80	Biphenyl-4-ylamine	92-67-1	2012/12/19	Carcinogenic (Article 57a)
81	Pentalead tetraoxide sulphate	12065-90-6	2012/12/19	Toxic for reproduction (Article 57 c)
82	Silicic acid, lead salt	11120-22-2	2012/12/19	Toxic for reproduction (Article 57 c)
83	o-Toluidine	95-53-4	2012/12/19	Carcinogenic (Article 57a)
84	Acetic acid, lead salt, basic	51404-69-4	2012/12/19	Toxic for reproduction (Article 57 c)
85	Dioxobis(stearato)trilead	12578-12-0	2012/12/19	Toxic for reproduction (Article 57 c)
86	Lead bis(tetrafluoroborate)	13814-96-5	2012/12/19	Toxic for reproduction (Article 57 c)

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
87	Lead dinitrate	10099-74-8	2012/12/19	Toxic for reproduction (Article 57 c)
88	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	2012/12/19	Toxic for reproduction (Article 57 c)
89	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7 13149-00-3 14166-21-3	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
90	N-methylacetamide	79-16-3	2012/12/19	Toxic for reproduction (Article 57 c)
91	Pyrochlore, antimony lead yellow	8012-00-8	2012/12/19	Toxic for reproduction (Article 57 c)
92	Lead monoxide (lead oxide)	1317-36-8	2012/12/19	Toxic for reproduction (Article 57 c)
93	Tetralead trioxide sulphate	12202-17-4	2012/12/19	Toxic for reproduction (Article 57 c)
94	Trilead bis(carbonate)dihydroxide	1319-46-6	2012/12/19	Toxic for reproduction (Article 57 c)
95	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	2012/12/19	Toxic for reproduction (Article 57 c)
97	N,N-dimethylformamide	68-12-2	2012/12/19	Toxic for reproduction (Article 57 c)
98	Tetraethyllead	78-00-2	2012/12/19	Toxic for reproduction (Article 57 c)
99	Methyloxirane (Propylene oxide)	75-56-9	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
100	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	2012/12/19	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
101	Fatty acids, C16-18, lead salts	91031-62-8	2012/12/19	Toxic for reproduction (Article 57 c)
102	Trilead dioxide phosphonate	12141-20-7	2012/12/19	Toxic for reproduction (Article 57 c)
103	o-aminoazotoluene	97-56-3	2012/12/19	Carcinogenic (Article 57a)
104	[Phthalato(2-)]dioxotrilead	69011-06-9	2012/12/19	Toxic for reproduction (Article 57 c)
105	Tricosafuorododecanoic acid	307-55-1	2012/12/19	vPvB (Article 57 e)
106	Lead oxide sulfate	12036-76-9	2012/12/19	Toxic for reproduction (Article 57 c)
107	Methoxyacetic acid	625-45-6	2012/12/19	Toxic for reproduction (Article 57 c)
108	Diisopentylphthalate	605-50-5	2012/12/19	Toxic for reproduction (Article 57 c)
109	Lead cyanamidate	20837-86-9	2012/12/19	Toxic for reproduction (Article 57 c)
110	4,4'-oxydianiline and its salts	101-80-4	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
111	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	2012/12/19	Carcinogenic (Article 57a)
112	Henicosafuoroundecanoic acid	2058-94-8	2012/12/19	vPvB (Article 57 e)
113	Furan	110-00-9	2012/12/19	Carcinogenic (Article 57a)
114	Pentacosafuorotridecanoic acid	72629-94-8	2012/12/19	vPvB (Article 57 e)
115	Diethyl sulphate	64-67-5	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
116	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0 19438-60-9 48122-14-1 57110-29-9	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
117	Dibutyltin dichloride (DBTC)	683-18-1	2012/12/19	Toxic for reproduction (Article 57 c)
118	Lead titanium trioxide	12060-00-3	2012/12/19	Toxic for reproduction (Article 57 c)
119	Formamide	75-12-7	2012/06/18	Toxic for reproduction (Article 57 c)
120	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	2012/06/18	Carcinogenic (Article 57a)
121	Diboron trioxide	1303-86-2	2012/06/18	Toxic for reproduction (Article 57 c)
122	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	2012/06/18	Carcinogenic (Article 57a)
123	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	2012/06/18	Toxic for reproduction (Article 57 c)
124	Lead(II) bis(methanesulfonate)	17570-76-2	2012/06/18	Toxic for reproduction (Article 57 c)
125	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	2012/06/18	Carcinogenic (Article 57a)
126	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	2012/06/18	Mutagenic (Article 57b)
127	4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	2012/06/18	Carcinogenic (Article 57a)
128	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	2012/06/18	Carcinogenic (Article 57a)
129	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	2012/06/18	Carcinogenic (Article 57a)
130	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	2012/06/18	Mutagenic (Article 57b)
131	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2012/06/18	Toxic for reproduction (Article 57 c)
132	Lead styphnate	15245-44-0	2011/12/19	Toxic for reproduction (article 57 c)

**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
133	Calcium arsenate	7778-44-1	2011/12/19	Carcinogenic (article 57 a)
134	Bis(2-methoxyethyl) ether	111-96-6	2011/12/19	Toxic for reproduction (article 57 c)
135	Phenolphthalein	77-09-8	2011/12/19	Carcinogenic (article 57 a)
136	Arsenic acid	7778-39-4	2011/12/19	Carcinogenic (article 57 a)
137	2-Methoxyaniline; o-Anisidine	90-04-0	2011/12/19	Carcinogenic (article 57 a)
138	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	2011/12/19	Carcinogenic (article 57 a)
139	Bis(2-methoxyethyl) phthalate	117-82-8	2011/12/19	Toxic for reproduction (article 57 c)
140	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	2011/12/19	Equivalent level of concern having probable serious effects to the environment (article 57 f)
141	Dichromium tris(chromate)	24613-89-6	2011/12/19	Carcinogenic (article 57 a)
142	Pentazinc chromate octahydroxide	49663-84-5	2011/12/19	Carcinogenic (article 57 a)
143	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less	-	2011/12/19	Carcinogenic (article 57 a)
144	Lead dipicrate	6477-64-1	2011/12/19	Toxic for reproduction (article 57 c)
145	N,N-dimethylacetamide	127-19-5	2011/12/19	Toxic for reproduction (article 57 c)
146	1,2-dichloroethane	107-06-2	2011/12/19	Carcinogenic (article 57 a)
147	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	2011/12/19	Carcinogenic (article 57 a)
148	Trilead diarsenate	3687-31-8	2011/12/19	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
149	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	2011/12/19	Carcinogenic (article 57 a)
150	Lead diazide, Lead azide	13424-46-9	2011/12/19	Toxic for reproduction (article 57 c),
151	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight		2011/12/19	Carcinogenic (article 57 a)



**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
152	Cobalt dichloride	7646-79-9	2011/06/20 2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
153	1-Methyl-2-pyrrolidone	872-50-4	2011/06/20	Toxic for reproduction (article 57c)
154	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	2011/06/20	Toxic for reproduction (article 57c)
155	Hydrazine	302-01-2 7803-57-8	2011/06/20	Carcinogenic (article 57a)
156	1,2,3-Trichloropropane	96-18-4	2011/06/20	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
157	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	2011/06/20	Toxic for reproduction (article 57c)
158	Strontium chromate	7789-06-2	2011/06/20	Carcinogenic (article 57a)
159	2-Ethoxyethyl acetate	111-15-9	2011/06/20	Toxic for reproduction (article 57c)
160	2-Ethoxyethanol	110-80-5	2010/12/15	Toxic for reproduction (article 57c)
161	Cobalt(II) diacetate	71-48-7	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
162	Cobalt(II) carbonate	513-79-1	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
163	Cobalt(II) sulphate	10124-43-3	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
164	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	7738-94-5 13530-68-2	2010/12/15	Carcinogenic (article 57a)
165	Cobalt(II) dinitrate	10141-05-6	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
166	Chromium trioxide	1333-82-0	2010/12/15	Carcinogenic and mutagenic (articles 57 a and 57 b)
167	2-Methoxyethanol	109-86-4	2010/12/15	Toxic for reproduction (article 57c)
168	Trichloroethylene	79-01-6	2010/06/18	Carcinogenic (article 57 a)
169	Sodium chromate	7775-11-3	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
170	Boric acid	10043-35-3 11113-50-1	2010/06/18	Toxic for reproduction (article 57 c)
171	Potassium chromate	7789-00-6	2010/06/18	Carcinogenic and mutagenic (articles 57 a and 57 b).
172	Tetraboron disodium heptaoxide, hydrate	12267-73-1	2010/06/18	Toxic for reproduction (article 57 c)
173	Potassium dichromate	7778-50-9	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
174	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	2010/06/18	Toxic for reproduction (article 57 c)
175	Ammonium dichromate	7789-09-5	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
176	Acrylamide	79-06-1	2010/03/30	Carcinogenic and mutagenic (articles 57 a and 57 b)



**REACH Candidate List version 1.0**

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
177	2,4-Dinitrotoluene	121-14-2	2010/01/13	Carcinogenic (article 57a)
178	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
179	Anthracene oil, anthracene-low	90640-82-7	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
180	Pitch, coal tar, high temp.	65996-93-2	2010/01/13	Carcinogenic, PBT and vPvB (articles 57a, 57d and 57e)
181	Anthracene oil, anthracene paste	90640-81-6	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
182	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c))
183	Lead chromate	7758-97-6	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
184	Anthracene oil	90640-80-5	2010/01/13	Carcinogenic <sup>1</sup> , PBT and vPvB (articles 57a, 57d and 57e)
185	Diisobutyl phthalate	84-69-5	2010/01/13	Toxic for reproduction (article 57c)
186	Tris(2-chloroethyl)phosphate	115-96-8	2010/01/13	Toxic for reproduction (article 57c)
187	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
188	Anthracene oil, anthracene paste, distn. lights	91995-17-4	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
189	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	2008/10/28	Carcinogenic (article 57a)
190	Triethyl arsenate	15606-95-8	2008/10/28	Carcinogenic (article 57a)
191	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	2008/10/28	vPvB (article 57e)
192	Benzyl butyl phthalate (BBP)	85-68-7	2008/10/28	Toxic for reproduction (article 57c)
193	Sodium dichromate	7789-12-0 10588-01-9	2008/10/28	Carcinogenic, mutagenic and toxic for reproduction (articles 57a, 57b and 57c)
194	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	2008/10/28	PBT and vPvB (articles 57 d and 57 e)
195	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	2008/10/28	PBT (article 57d)
196	Anthracene	120-12-7	2008/10/28	PBT (article 57d)
197	Dibutyl phthalate (DBP)	84-74-2	2008/10/28	Toxic for reproduction (article 57c)
198	Lead hydrogen arsenate	7784-40-9	2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
199	Diarsenic trioxide	1327-53-3	2008/10/28	Carcinogenic (article 57a)
200	Diarsenic pentaoxide	1303-28-2	2008/10/28	Carcinogenic (article 57a)
201	Bis(tributyltin)oxide (TBTO)	56-35-9	2008/10/28	PBT (article 57d)