RESTRICTED SUBSTANCES LIST OPEN 32

RSL version 1.0

MARCH 2019

INTRODUCTION 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. The processes are not only mechanical but they can be considered as chemical intensive and complex.

OPEN 32 has committed itself to develop responsible chemical management procedures for all products, including accessories attached to garments, prints and packaging materials that are part of your supply chain.

OPEN 32 expects the same commitment from its suppliers and have therefore developed a Restricted Substances List (OPEN 32 RSL 1.0) to inform all suppliers on all chemicals that are banned or restricted in OPEN 32 's 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.

Therefore, it is OPEN 32 ’s priority to ensure that the chemicals and all other additives used (dyes, finishes) are approved and within the limits stated in this RSL. This is not only for the sake of the final consumer, but also for people who work in our productions and for the environment.

Our RSL includes;

1. Worldwide legal requirements for textile products.
2. Attention points in requirements from Eco label organisations or mentioned by NGO’s, like Greenpeace.

A valid OEKO-TEX® Standard 100 product certificate issued by the OEKO-TEX® Association (www.oeko-tex.com) covers most of requirements of this RSL. The 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 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 contact person 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, OPEN 32 reserves the right to select styles to be (counter) tested upon arrival in our 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 Maarten ten Dam

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Product Manager OPEN 32

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Riskmatrix 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 DYES	●●●	●●●	●●●	●●●	●●●	●●●	●●●			●●●	
DMFu	●	●	●	●	●	●		●			
ORTHO-PHENYLPHENOL (OPP)	●●	●●	●●	●●	●●	●●		●			
CHLOROBENZENES AND CHLOROTOLUENES		●●	●●		●						
CHLORINATED PARAFFINS	●	●	●	●	●●●	●		●●			
CHLORINATED PHENOLS PCP & TECP	●	●		●	●	●				●	
ALLERGENIC DISPERSE DYES		●●	●●	●●		●●					
CARCINOGENIC DYES	●●	●●	●●	●●		●●					
FLAME RETARDENTS	● (if finish is applied)										
FORMALDEHYDE	●●●	●●●	●●	●●	●●●	●●●	●●●				●●●
HEAVY METALS EXTRACTABLE	●●	●●	●●	●●	●●	●●					
CHROMIUM VI	●/wool				●●●*						
HEAVY METALS TOTAL CONTENT CADMIUM				●		●●		●	●●		
HEAVY METALS TOTAL CONTENT LEAD				●		●●		●●/foams ●/others	●●		
HEAVY METALS, RELEASABLE NICKLE									●●●		
ORGANOTIN COMPOUNDS	●	●	●	●	●	●		●			●
PERFLUORINATED CHEMICALS PFOS & PFOA	**●● (If water- or stain-repellant finish is applied)**										
PESTICIDES AGRICULTURAL	●	●			●						
PHTHALATES				●●●		●●●		●●●			●●●
POLYCLIC AROMATIC HYDROCARBONS				●		●●●		●●●			●●●
PVC						●●		●●			
QUINOLINE		●	●								
SOLVENTS				●●●		●●●		●●●			●●
UV STABILIZERS								●●			
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.

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO)				
Nonylphenol (NP), mixed isomers	Various	Textiles: Extraction: 1 g sample/20 mL THF, sonication for 60 minutes at 70 degrees C Measurement: EN ISO 18857-2:2011 (with derivatization) Leather: EN ISO 18218-2:2015	Total: < 100 mg/kg	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, degumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings. APs are used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment. 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 stillbe found at levels exceeding 100 mg/kg and that more time is necessary for the supply chain to phase them out completely. This limit covers EU legislation restricting NPEOs, effective 3 February 2021, and provides advance warning to suppliers.
Octylphenol (OP), mixed isomers	Various			
Nonylphenolethoxylates (NPEO's)	Various	All materials except Leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS Leather: EN ISO 18218-1:2015	Total: < 100 mg/kg	
Octylphenolethoxylates (OPEO's)	Various			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
AZO DYES WHICH BY REDUCTIVE CLEAVAGE MAY RELEASE ONE OR MORE AROMATIC ARYLAMINES				
4-Aminobiphenyl	92-67-1	Textiles: EN 14362-1:2017 Leather: EN ISO 17234-1:2015 Test Method for confirmation of 4-Aminoazobenzene (4AAB) Textiles (EU): EN 14362-3: 2017 Leather (EU): EN ISO 17234-2: 2011	< 20 mg/kg	Azo dyes and pigments are colourants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles. The listed arylamines are considered to be carcinogenic.
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'-Methylene-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			
o-Anisidine (2-Methoxyaniline)	90-04-0			
4-Aminoazobenzene (4-AAB)	60-09-3			
2,4-Xylidine	95-68-1			
2,6-Xylidine	87-62-7			
Para-phenylenediamine (PPD)	106-50-3		Not detected Detection limit: 10 mg/kg	
Aniline	62-53-3		< 50 mg/kg	

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
BIOCIDES				
Dimethylfumarate	624-49-7	ISO/TS 16186: 2012 Extraction, GC-MS	Not detected Detection limit: 0.1 mg/kg	Dimethyl fumarate (DMFu) is a fungicide used to prevent mould in leather and textiles. . Can be used in sachets in packaging to prevent the buildup of mold, especially during shipping. DMFu can cause acute dermatitis, eczema, and general fatigue to the persons who have been in contact with this substance. Can also be used as Pesticide.
o-Phenylphenol (OPP)	90-43-7	All materials: 1 M KOH extraction, 16 hours at 90 degrees C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015)	< 1000 mg/kg	o-Phenylphenol can be used for its preservative properties in leather or as a carrier in dyeing processes. Can irritate the skin and cause in contact with eye severe irritation and burns with possible eye damage.
Triclosan (5-Chloro-2-(2,4-dichlorophenoxy)phenol)	3380-34-5	ISO 13365:2011, extraction with acetonitrile, 1h, RT, ultrasonic bath followed by GC-MS	Not detected Detection limit: 1 mg/kg	Triclosan can be used as disinfectant and as antibacterial agent in textiles. Triclosan can damage the liver, kidneys, heart and lungs, surpresses the immune system.

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CHLOROBENZENES AND CHLOROTOLUENES				
Pentachlorobenzenes (PCB)	608-93-5	DIN 54232: 2010 followed by GC-MS	< 1 mg/kg (sum)	These carriers are used in dyeing polyester and blends of wool and polyester as wool cannot be dyed at the high temperatures (130°C) required for dyeing polyester. Most of these carriers are toxic to humans and aquatic organisms, and some are even carcinogenic.
Hexachlorobenzene (HCB)	118-741			
Trichlorobenzenes, all isomers 1,2,3-TriCB 1,2,4-TriCB 1,3,5-TriCB	Severall 87-61-6 120-82-1 108-70-3			
Tetrachlorobenzenes all isomers 1,2,3,4-TeCB 1,2,3,5-TeCB 1,2,4,5-TeCB	Several 634-66-2 634-90-2 95-94-3			
Dichlorobenzenes, all isomers 1,2-DiCB 1,3-DiCB 1-4-DiCB	Several 95-50-1 541-73-1 106-46-7			
Pentachlorotoluenes	877-11-2			
Monochlorotoluenes all isomers 2-CT 3-CT 4-CT α-chlorotoluene; benzyl chloride	Several 95-49-8 108-41-8 106-43-4 100-44-7			
Dichlorotoluenes all isomers 2,3-DiCT 2,4-DiCT 2,5-DiCT 2,6-DiCT 3,4-DiCT 3,5-DiCT	Several 32768-54-0 95-73-8 19398-61-9 118-69-4 95-75-0 25186-47-4			
Trichlorotoluenes all isomers 2,3,4-TRiCT 2,3,6-TRiCT 2,4,5-TRiCT 2,4,6-TRiCT 3,4,5-TRiCT α,α,α,-TriCT; benzotrichloride	Several 7359-72-0 2077-46-5 6639-30-1 23749-65-7 21472-86-6 98-07-7			
Tetrachlorotoluenes all isomers 2,3,4,5-Tetrachlorotoluene 2,3,5,6-Tetrachlorotoluene 2,3,4,6-Tetrachlorotoluene α,α,α,4-TetraCT	Several 76057-12-0 29733-70-8 875-40-1 5216-25-1			
1,2-Dichlorobenzene	95-50-1		< 10 mg/kg	

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
CHLORINATED PARAFFINS				
Short-chain chlorinated paraffins (SCCP) (C10 - C13)	85535-84-8	EN ISO 18219: 2015	< 1000 mg/kg	SCCP's are used as flame retardants, in plasticizers, paints and adhesives. Can also be used for fat liquoring of leather. SCCP's may cause long-term adverse effects in the aquatic environment.
CHLOROPHENOLS				
Pentachlorophenol (PCP)	87-86-5	All materials: 1 M KOH extraction, 16 hours at 90 degrees C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015)	< 0.5 mg/kg	Clorophenols are polychlorinated compounds used to preserve wood, leather, and textiles. Chlorophenols are irritatants to the skin, eyes and mouth and can cause harmful effects to the liver, kidneys, blood and lungs and are probable human carcinogens.
Tetrachlorophenols	25167-83-3			
2,3,5,6- Tetrachlorophenol (TeCP)	935-95-5			
2,3,4,6- Tetrachlorphenol (TeCP)	58-90-2			
2,3,4,5- Tetrachlorphenol (TeCP)	4901-51-3			
Trichlorophenols	25167-82-2		< 2.0 mg/kg	
2,3,4-Trichlorophenol (TrCP)	15950-66-0			
2,3,5-Trichlorophenol (TrCP)	933-78-8			
2,3,6-Trichlorophenol (TrCP)	933-75-5			
2,4,5-Trichlorophenol (TrCP)	95-95-4			
2,4,6-Trichlorophenol (TrCP)	88-06-2			
3,4,5-Trichlorophenol (TrCP)	609-19-8			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
DISPERSE DYES WHICH ARE CLASSIFIED TO BE ALLERGENIC				
C.I. Disperse Blue 1	2475-45-8	DIN 54231: 2005 §64 LFGB B82.02-10	< 50 mg/kg	Disperse dyes are a class of water- insoluble dyes that penetrate the fibre system of synthetic or manufactured fibres and are held in place by physical forces without forming chemical bonds. They are mainly used for dyeing polyester, nylon and cellulose acetate. Some disperse dyes have an allergenous potential to the human skin and are a possible threat to health, especially if the dyes are not colour fast to perspiration. A number of disperse dyes are legally restricted outside the EU. Most of them appear in RSL's of international retailers.
C.I. Disperse Blue 3	2475-46-9			
C.I. Disperse Blue 7	3179-90-6			
C.I. Disperse Blue 26	3860-63-7			
C.I. Disperse Blue 35	12222-75-2			
C.I. Disperse Blue 102	12222-97-8			
C.I. Disperse Blue 106	12223-01-7			
C.I. Disperse Blue 124	61951-51-7			
C.I. Disperse Brown 1	23355-64-8			
C.I. Disperse Orange 1	2581-69-3			
C.I. Disperse Orange 3	730-40-5			
C.I. Disperse Orange 37/59/76	12223-33-5 13301-61-6			
C.I. Disperse Red 1	2872-52-8			
C.I. Disperse Red 11	2872-48-2			
C.I. Disperse Red 17	3179-89-3			
C.I. Disperse Yellow 1	119-15-3			
C.I. Disperse Yellow 3	2832-40-8			
C.I. Disperse Yellow 9	6373-73-5			
C.I. Disperse Yellow 39	12236-29-2			
C.I. Disperse Yellow 49	54824-37-2			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
DYES WHICH ARE CLASSIFIED TO BE CARCINOGENIC				
C.I. Acid Red 26	3761-53-3	DIN 54231: 2005 §64 LFGB B82.02-10	< 50 mg/kg	According to the Commission Decision these dyestuffs are not allowed in products bearing the EU Eco-label because they are considered to be carcinogenic.
C.I. Acid Red 114	6459-94-5			
C.I. Basic Blue 26 (with ≥ 0.1 % Michler's ketone or base)	2580-56-5			
C.I. Basic Red 9	569-61-9			
C.I. Basic Violet 3 (with ≥ 0.1 % Michler's ketone or base)	548-62-9			
C.I. Basic Violet 14	632-99-5			
C.I. Direct Black 38	1937-37-7			
C.I. Direct Blue 6	2602-46-2			
C.I. Direct Blue 15	2429-74-5			
C.I. Direct Brown 95	16071-86-6			
C.I. Direct Red 28	573-58-0			
C.I. Disperse Blue 1	2475-45-8			
C.I. Disperse Orange 11	82-28-0			
C.I. Disperse Yellow 3	2832-40-8			
C.I. Pigment Red 104	12656-85-8			
C.I. Pigment Yellow 34	1344-37-2			
C.I. Solvent Yellow 1 (Aniline Yellow)	60-09-3			
C.I. Solvent Yellow 3 (o-Aminoazotoluene)	97-56-3			
DYES WHICH ARE ADDITIONALLY RESTRICTED				
C.I. Disperse Navy Blue Component 1: Component 2:	118685-33-9	DIN 54231: 2005 §64 LFGB B82.02-10	< 50 mg/kg	Navy blue colorants are regulated and prohibited from use for dyeing of textiles.
C.I. Disperse Orange 149	85136-74-9			These dyestuffs are considered to be carcinogenic, harmfull to the environment, or can cause allergenic reactions.
C.I. Disperse Yellow 23	6250-23-3			
C.I. Basic Green 4 (oxalate, chloride or free)	2437-29-8, 569-64-2, 10309-95-2			
4-chloro-o-toluidinium chloride	3165-93-3	EN ISO 14362-1:2017	< 30 mg/kg	
2-Naphthylammoniumacetate	553-00-4			
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7			
2,4,5-trimethylaniline hydrochloride	21436-97-5			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
FLAME RETARDENTS				
Polybrominated biphenyls (PBBs)	59536-65-1	ISO 17881-1 (2016)	Not detected Detection limit: 5 mg/kg	Flame-retardant chemicals, including the entire class of Organohalogen flame retardants, should no longer be used. 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. Flame retardants are often applied to consumer products including textiles, plastics, foams.
All other Polybrominated diphenyl ethers (PBDEs)	Various			
Pentabromodiphenylethers (PentaBDEs)	Various, 32534-81-9			
Octabromodiphenylethers (OctaBDEs)	Various, 32536-52-0			
Decabromodiphenylether (DecaBDE)	1163-19-5			
Tri(2,3-dibromopropyl)phosphate (TRIS)	126-72-2			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8			
Hexabromocyclododecane and all main diastereomeres identified (alpha-, beta-, gamma-) (HBCDD)	various 3194-55-6 134237-50-6 134237-51-7 134237-52-8 25637-99-4			
Tetrabromobisphenol A (TBBPA)	79-94-7			
Bis(2,3-dibromopropyl)phosphate (BDBPP)	5412-25-9			
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0			
Tris(1,3-dichloro-iso-propyl)phosphate (TDCPP)	13674-87-8			
Tris(aziridinyl)phosphinoxide (TEPA)	545-55-1			
Trixylylphosphate / Trixylylphosphat (TXP)	25155-23-1			
FORMALDEHYDE				
Formaldehyde	50-00-0	ISO 14184-1: 2011 (Textiles) ISO 17226-2: 2008 (Leather)	< 75mg/kg Jackets and coats: < 300 mg/kg	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. Formaldehyde can be found in resins, binders and fixing agents for dyes and pigments (especially those with fluorescent effects). It can also be used as a catalyst in certain printing, adhesive and heat transfer processes. Classified in the EU as ""carcinogenic from category 1B and mutagen category 2"".

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
HEAVY METALS EXTRACTABLE				
Arsenic (As)	7440-38-2	Textiles and others: EN 16711-1 2016 (acidic sweat solution) Leather: ISO 17072-2 -2 2011 (acidic sweat solution) **No requirement for accessories and yarns made from inorganic materials, respecting the requirements regarding biological active products	< 1.0 mg/kg	Arsenic and its compounds can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics.
Chromium (Cr)	7440-47-3		< 2.0 mg/kg	Chromium compounds can be used as dyeing additives; dye-fixing agents; color-fastness after- treatmnts; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning.
Chromium VI (Cr VI)	18540-29-9		< 0.5 mg/kg	Though typically associated with leather tanning, Chromium VI also may be used in the "after-chroming" process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).
Cobalt (Co)	7440-48-4		< 4.0 mg/kg	Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons.
Copper (Cu)	7440-50-8		< 50.0 mg/kg**	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.
Lead (Pb)	7439-92-1		< 1.0 mg/kg	Lead may be associated with plastics, paints, inks, pigments and surface coatings.
Nickel (Ni)	7440-02--0		< 4.0 mg/kg	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.
Antimony (Sb)	7440-36-0		< 30 mg/kg	Antimony can be found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments, and alloys.
Cadmium (Cd)	7440-43-9		< 0.1 mg/kg	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints.
Mercury (Hg)	7439-97-6		< 0.02 mg/kg	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints.
Barium (Ba)	7440-39-3		< 1000 mg/kg	Barium and its compounds can be used in pigments for inks, plastics, and surface coatings, as well as in dyeing, mordants, filler in plastics, textile finishes, and leather tanning.
Selenium (Se)	7782-49-2		< 100 mg/kg	May be found in synthetic fibres, paints, inks, plastics and metal trims.
APPLICABLE FOR LEATHER				
Chromium VI (Cr VI)	18540-29-9	EN ISO 17075-1:2017 after aging, aging conditions: 24 H/ 80 degrees C./ 5% humidity. § 64 LFGB 82.02 - 11 (2008)	Leather: < 3 mg/kg	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

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HEAVY METALS, TOTAL CONTENT				
Cadmium and its compounds	7440-43-9	Textiles and others: EN 16711-1 2016 (total content) Leather: ISO 17072-2 -2 2011 (total content)	< 40mg/kg	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. Cadmium may be associated with pigments (especially in red, orange, yellow and green); as an alloy in metal; as a stabilizer for PVC; and in fertilizers, biocides and paints. Lead may be associated with metal parts, plastics, paints, inks, pigments and surface coatings. The result of the total content test indicates the quantity of metal that is a part of the plastic leather or textile material.
Lead and its compounds	7439-92-1		< 90 mg/kg	
HEAVY METALS, RELEASABLE NICKEL				
Nickel	7440-02-0	Nickel release EN 1811: 2011 + A1: 2015 and Abrasion of coated items EN 12472: 2005 + A1: 2009	0.5 µg/cm²/week	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. Nickel can cause extreme allergies and is released through skin contact.
ORGANOTIN COMPOUNDS				
Tributyltin (TBT)	Various	EN ISO/TS 16179: 2012	< 0.5 mg/kg each	Organotins are a class of chemicals combining tin and organics such as butyland phenyl groups. They are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials to prevent unpleasant odours), catalysts in plastic, for glue production, and as heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material. They can cause damage to liver, kidneys, blood forming processes and disruption of the enzyme system particularly harmfull to children.
Triphenyltin (TPhT)	Various			
Dibutyltin (DBT)	Various		< 1 mg/kg each	
Dioctyltin (DOT)	Various			
Monobutyltin (MBT)	Various			
Tricyclohexyltin (TCyHT)	Various			
Trioctyltin (TOT)	Various			
Tripropyltin (TPT)	Various			
Trimethyltin (TMT)	Various			

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OTHER CHEMICAL RESIDUES				
Quinoline	91-22-5	Extraction with Toluene followed by GC-MS	< 50 mg/kg	Quinolines are used in the manufacture of dyes.
PERFLUORINATED CHEMICALS AND HER COMPOUNDS				
Perfluoroctane Sulfonates (PFOS) and related substances	1763-23-1, et. al.	prISO FDIS 23702-1: 2018	< 1 µg / m²	PFOA and PFOS may be present as unintended byproducts in long-chain and short-chain commercial water-, oil-, and stain-repellent agents. PFOA may also be used in polymers like Polytetrafluoroethylene (PTFE). The area-based limit for PFOA will be superseded by Commission Regulation (EU) 2017/1000 and removed in 2023.
Perfluoroctanoic Acids (PFOA) and its salts	335-67-1, et. al.		< 1 µg/m2 25 µg total	
PFOA-related substances	754-91-6		< 1000 µg	

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
PESTICIDES				
2,4,5-T	93-76-5	ASE or Soxhlet Extraction with Acetone/Hexane // GC-MS or LC-MC	Sum 1.0 mg/kg	A pesticide may be a chemical substance, biological agent (such as a virus or bacteria), antimicrobial, disinfectant or device used against any pest. Pesticides also have drawbacks: potential toxicity to humans and animals. In textiles and apparel, these pesticides may be found in natural fibres, primarily cotton.
2,4-D	94-75-7			
Acetamiprid	135410-20-7 160430-64-8			
Aldicarb	116-06-3			
Aldrine	309-00-2			
Azinophosethyl	2642-71-9			
Azinophosmethyl	86-50-0			
Bromophos-ethyl	4824-78-6			
Captafol	2425-06-1			
Carbaryl	63-25-2			
Chlorbenzilate	510-15-6			
Chlordane	57-74-9			
Chlordimeform	6164-98-3			
Chlorfenvinphos	470-90-6			
Clothianidin	210880-92-5			
Coumaphos	56-72-4			
Cyfluthrin	68359-37-5			
Cyhalothrin	91465-08-6			
Cypermethrin	52315-07-8			
DEF	78-48-8			
Deltamethrin	52918-63-5			
DDD	53-19-0 72-54-8			
DDE	3424-82-6 72-55-9			
DDT	50-29-3 789-02-6			
Diazinon	333-41-5			
Dichlorprop	120-36-2			
Dicrotophos	141-66-2			
Dieldrine	60-57-1			
Dimethoate	60-51-5			
Dinoseb and salts	88-85-7 et.al.			
Dinotefuran	165252-70-0			
Endosulfan, α-	959-98-8			
Endosulfan, β-	33213-65-9			
Endrine	72-20-8			
Esfenvalerate	66230-04-4			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
PESTICIDES CONTINUED				
Fenvalerate	51630-58-1	ASE or Soxhlet Extraction with Acetone/Hexane // GC-MS or LC-MC	Sum 1.0 mg/kg	A pesticide may be a chemical substance, biological agent (such as a virus or bacteria), antimicrobial, disinfectant or device used against any pest. Pesticides also have drawbacks: potential toxicity to humans and animals. In textiles and apparel, these pesticides may be found in natural fibres, primarily cotton.
Heptachlorine	76-44-8			
Heptachloroepoxide	1024-57-3 28044-83-9			
Hexachlorobenzene	118-74-1			
Hexachlorcyclohexane, α-	319-84-6			
Hexachlorcyclohexane, β-	319-85-7			
Hexachlorcyclohexane, δ-	319-86-8			
Imidacloprid	105827-78-9, 138261-41-3			
Isodrine	465-73-6			
Kelevane	4234-79-1			
Kepone	143-50-0			
Lindane	58-89-9			
Malathion	121-75-5			
MCPA	94-74-6			
MCPB	94-81-5			
Mecoprop	93-65-2			
Metamidophos	10265-92-6			
Methoxychlor	72-43-5			
Mirex	2385-85-5			
Monocrotophos	6923-22-4			
Nitenpyram	150824-47-8 120738-89-8			
Parathion	56-38-2			
Parathion-methyl	298-00-0			
Perthane	72-56-0			
Phosdrin/Mevinphos	7786-34-7			
Phosphamidone	13171-21-6			
Propethamphos	31218-83-4			
Profenophos	41198-08-7			
Strobane	8001-50-1			
Quinalphos	13593-03-8			
Telodrine	297-78-9			
Thiacloprid	111988-49-9			
Thiamethoxam	153719-23-4			
Toxaphene	8001-35-2			
Trifluralin	1582-09-8			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
PHTHALATES				
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	ISO 14389: 2014	The sum of all Phthalates < 750 mg/kg	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the moulding of plastic by decreasing its melting temperature. Phthalates can be found in: • Flexible plastic components (e.g., PVC) • Print pastes • Adhesives • Plastic buttons • Plastic sleevings • Polymeric coatings The listed Phthalates are those most commonly used and regulated across industry sectors. Find more information about additional Phthalates on the REACH substances of very high concern (SVHC) candidate list, which is updated frequently. Phthalates are reprotoxic and can cause birth defects and changes in hormone levels.
Dibutyl phthalate (DBP)	84-74-2			
Butylbenzyl phthalate (BBP)	85-68-7			
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			
Di-isobutyl phthalate (DIBP)	84-69-5			
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0			
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6			
Di-isopentylphthalate (DIPP)	605-50-5			
Dipentyl phthalate (DPP)	131-18-0			
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8			
Di-n-hexyl phthalate (DnHP)	84-75-3			
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4			
N-pentyl-isopentyl phthalate (NPIPP)	776297- 69-9			
1,2- Benzenedicarboxylic acid. Dihexyl ester. Branched and linear (DHxP)	68515-50-4			
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1			
Di-iso-hexylphthalate (DIHxP)	71850-09-4			
Di-cyclohexylphthalate (DCHP)	84-61-7			
Diethyl phthalate (DEP)	84-66-2			
Di-n-propylphthalate (DPrP)	131-16-8			
Dimethyl phthalate (DMP)	131-11-3			
Di-iso-octyl phthalate (DIOP)	27554-26-3			
Di-n-nonyl phthalate (DNP)	84-76-4			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
POLYCYCLIC AROMATIC HYDROCARBONS (PAH'S)				
Benzo(a)pyrene [BaP]	50-32-8	AfPS GS 2014:01 PAH	< 1.0 mg/kg each	PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing. Rubber or plastic components that come into direct and prolonged contact with the human skin or the oral cavity can cause severe allergenic reactions. **Naphthalene: Dispersing agents for textile dyes may contain high residual naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor- quality Naphthalene Sulphonate Formaldehyde condensation products).
Benzo(a)anthracene	56-55-3			
Chrysene	218-01-9			
Benzo(b)fluoranthene	205-99-2			
Benzo(k)fluoranthene	207-08-9			
Dibenzo(ah)anthracene	53-70-3			
Benzo(e)pyrene	192-97-2			
Benzo(j)fluoranthene	205-82-3			
Acenaphthene	83-32-9		No individual restriction The sum of 18 PAH's < 10 mg/kg	
Acenaphthylene	208-96-8			
Antracene	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			
Pyrene	129-00-0			
PVC				
Polyvinylchloride	9002-86-2	Beilstein test/Infrared Spectroscopy (FTIR)	Usage ban	The use of PVC is voluntarily restricted because it is claimed that dioxins are produced as a byproduct of vinyl chloride manufacture and from burning of waste PVC

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
RESTRICTION ON PACKAGING				
Cadmium (Cd)	Various	CEN/TR 13695-1 Acid digestion with ICP analysis	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)				
SOLVENTS				
DMFa (N,N Dimethylformamide)	68-12-2	DIN CEN ISO/TS 16189:2013	< 500 mg/kg	Solvent used in plastics, rubber, and polyurethane (PU) coating. Water- based PU does not contain DMFa and is therefore preferable.
Formamide	75-12-7		< 1000 mg/kg	Byproduct in the production of EVA foams.
DMAC (N,N-dimethylacetamide)	127-19-5			Solvent used in the production of elastane fibers and sometimes as substitute for DMFa.
1-Methyl-2-pyrrolidone (NMP)	872-50-4			Industrial solvent used in production of water-based Polyurethanes and other polymeric materials. May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper.
UV STABILIZERS				
UV-320 2-benzotriazol-2-yl-4,6-di-tert- butylphenol	3846-71-7	ADIN EN 62321-6:2016-05 (Extraction in THF, analysis by GC/MS)	< 1000 mg/kg	PU foam materials such as open cell foams for padding. Used as UV-absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber, polyurethane. UV inhibitors may be used in a variety of polymer formulations to control discoloration or physical property changes induced by UV light
UV-327 2,4-di-tert-butyl-6-(5- chlorobenzotriazol-2-yl)phenol	3864-99-1			
UV-328 2-(2H-benzotriazol-2-yl)-4,6- bis(1,1-dimethylpropyl)phenol	25973-55-1			
UV-350 2-(2H-Benzotriazol-2-yl)-4-(tert- butyl)-6-(sec-butyl)phenol	36437-37-3			

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SUBSTANCE	CAS NUMBER	TEST METHOD	OPEN 32 RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
VOLATILE ORGANIC COMPOUNDS				
Benzene	71-43-2	Head space GC-MS	< 5 mg/kg	These VOCs should not be used in textile auxiliary chemical preparations. They are also associated with solvent-based processes such as solvent-based polyurethane coatings and glues/adhesives. They should not be used for any kind of facility cleaning or spot cleaning.
Carbon Disulfide	75-15-0		< 1000 mg/kg	
Carbon tetrachloride	56-23-5			
Chloroform	67-66-3			
Cyclohexanone	108-94-1			
1,2-Dichloroethane	107-06-2			
1,1-Dichloroethylene	75-35-4			
Ethylbenzene	100-41-4			
Pentachloroethane	76-01-7			
1,1,1,2-Tetrachloroethane	630-20-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (PERC)	127-18-4			
Toluene	108-88-3			
1,1,1- Trichloroethane	71-55-6			
1,1,2- Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
Xylenes (ortho, meta, para)	1330-20-7 95-47-6 108-38-3 106-42-3			
OTHER ATTENTION POINTS				
pH value for textiles		ISO 3071: 2005	Textiles: 4.0-7.5 Leather: 3.5 - 7.0	pH value is a characteristic number, ranging from pH 1 to pH 14, which indirectly shows the content of acidic or alkaline substances in a product. pH values less than 7 indicate sources of acidic substances, and values greater than 7 indicate sources of alkaline substances. To avoid irritation or chemical burns to the skin, the pH value of products must be in the range of human skin— approximately pH 5.5.
Odour		SNV 195651: 1968	No abnormal odour allowed. If odour rating > 3, VOC test to be performed	

REACH ANNEX: ECHA'S CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN LAST UPDATE 15-01-2019
NUMBER OF SUBSTANCES ON THE CANDIDATE LIST: 197

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

Any producer or importer of OPEN 32 articles shall submit a notification to OPEN 32 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)

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	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)
2	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	2019/01/15	Toxic for reproduction (Article 57c)
3	Benzo[k]fluoranthene	207-08-9	2019/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
4	Fluoranthene	206-44-0 93951-69-0	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
5	Phenanthrene	85-01-8	2019/01/15	vPvB (Article 57e)
6	Pyrene	129-00-0 1718-52-1	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
7	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride	552-30-7	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
8	Benzo[ghi]perylene	191-24-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
9	Decamethylcyclopentasiloxane	541-02-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
10	Dicyclohexyl phthalate (DCHP)	84-61-7	2018/06/27	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - human health)
11	Disodium octaborate	12008-41-2	2018/06/27	Toxic for reproduction (Article 57c)
12	Dodecamethylcyclohexasiloxane	540-97-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
13	Ethylenediamine	107-15-3	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
14	Lead	7439-92-1	2018/06/27	Toxic for reproduction (Article 57c)
15	Octamethylcyclotetrasiloxane	556-67-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)

REACH Candidate List version 1.0

No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
16	Terphenyl, hydrogenated	61788-32-7	2018/06/27	vPvB (Article 57e)
17	Benz[a]anthracene	56-55-3, 1718-53-2	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
18	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)
19	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)
20	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)
21	Chrysene	218-01-9 1719-03-5	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
22	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination there of]	-	2018/01/15	vPvB (Article 57e)
23	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)
24	Perfluorohexane-1-sulphonic acid and its salts PFHxS	-	2017/07/07	vPvB (Article 57 e)
25	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)
26	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)
27	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)
28	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)
29	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)
30	1,3-propanesultone	1120-71-4	2015/12/15	Carcinogenic (Article 57a);
31	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	2015/12/15	vPvB (Article 57 e)

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
32	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	2015/12/15	vPvB (Article 57 e)
33	Nitrobenzene	98-95-3	2015/12/15	Toxic for reproduction (Article 57c)
34	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)
35	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)
36	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)
37	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)
38	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)
39	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)
40	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)
41	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)
42	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)
43	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	2014/12/17	PBT (Article 57 d); vPvB (Article 57 e)
44	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)
45	Sodium peroxometaborate	.7632-04-4	2014/06/16	Toxic for reproduction (Article 57 c)
46	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	2014/06/16	Toxic for reproduction (Article 57 c)
47	Sodium perborate; perboric acid, sodium salt	-	2014/06/16	Toxic for reproduction (Article 57 c)
48	Trixylyl phosphate	25155-23-1	2013/12/16	Toxic for reproduction (Article 57 c);
49	Lead di(acetate)	301-04-2	2013/12/16	Toxic for reproduction (Article 57 c);
50	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	2013/12/16	Toxic for reproduction (Article 57 c);
51	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);
52	Cadmium sulphide	1306-23-6	2013/12/16	Carcinogenic (Article 57a);
53	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);
54	Dihexyl phthalate	84-75-3	2013/12/16	Toxic for reproduction (Article 57 c);
55	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	2013/06/20	Toxic for reproduction (Article 57 c);

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
56	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)
57	Pentadecafluorooctanoic acid (PFOA)	335-67-1	2013/06/20	Toxic for reproduction (Article 57 c);
58	Dipentyl phthalate (DPP)	131-18-0	2013/06/20	Toxic for reproduction (Article 57 c);
59	Cadmium	7440-43-9	2013/06/20	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)
60	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)
61	4,4'-methylenedi-o-toluidine	838-88-0	2012/12/19	Carcinogenic (Article 57a)
62	N-pentyl-isopentylphthalate	776297-69-9	2012/12/19	Toxic for reproduction (Article 57 c)
63	4-Aminoazobenzene	60-09-3	2012/12/19	Carcinogenic (Article 57a)
64	Orange lead (lead tetroxide)	1314-41-6	2012/12/19	Toxic for reproduction (Article 57 c)
65	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	2012/12/19	Toxic for reproduction (Article 57 c)
66	Dimethyl sulphate	77-78-1	2012/12/19	Carcinogenic (Article 57a)
67	Heptacosafluorotetradecanoic acid	376-06-7	2012/12/19	vPvB (Article 57 e)
68	Lead titanium zirconium oxide	12626-81-2	2012/12/19	Toxic for reproduction (Article 57 c)
69	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)
70	6-methoxy-m-toluidine (p-cresidine)	120-71-8	2012/12/19	Carcinogenic (Article 57a)
71	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	2012/12/19	Toxic for reproduction (Article 57 c)
72	1,2-Diethoxyethane	629-14-1	2012/12/19	Toxic for reproduction (Article 57 c)
73	Sulfurous acid, lead salt, dibasic	62229-08-7	2012/12/19	Toxic for reproduction (Article 57 c)
74	1-bromopropane (n-propyl bromide)	106-94-5	2012/12/19	Toxic for reproduction (Article 57 c)
75	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	2012/12/19	PBT (Article 57 d); vPvB (Article 57 e)
76	Biphenyl-4-ylamine	92-67-1	2012/12/19	Carcinogenic (Article 57a)
77	Pentalead tetraoxide sulphate	12065-90-6	2012/12/19	Toxic for reproduction (Article 57 c)
78	Silicic acid, lead salt	11120-22-2	2012/12/19	Toxic for reproduction (Article 57 c)
79	o-Toluidine	95-53-4	2012/12/19	Carcinogenic (Article 57a)
80	Acetic acid, lead salt, basic	51404-69-4	2012/12/19	Toxic for reproduction (Article 57 c)
81	Dioxobis(stearato)trilead	12578-12-0	2012/12/19	Toxic for reproduction (Article 57 c)
82	Lead bis(tetrafluoroborate)	13814-96-5	2012/12/19	Toxic for reproduction (Article 57 c)
83	Lead dinitrate	10099-74-8	2012/12/19	Toxic for reproduction (Article 57 c)
84	Silicic acid (H2Si2O5), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	2012/12/19	Toxic for reproduction (Article 57 c)
85	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)
86	N-methylacetamide	79-16-3	2012/12/19	Toxic for reproduction (Article 57 c)
87	Pyrochlore, antimony lead yellow	8012-00-8	2012/12/19	Toxic for reproduction (Article 57 c)
88	Lead monoxide (lead oxide)	1317-36-8	2012/12/19	Toxic for reproduction (Article 57 c)

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
89	Tetralead trioxide sulphate	12202-17-4	2012/12/19	Toxic for reproduction (Article 57 c)
90	Trilead bis(carbonate)dihydroxide	1319-46-6	2012/12/19	Toxic for reproduction (Article 57 c)
91	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)
92	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	2012/12/19	Toxic for reproduction (Article 57 c)
93	N,N-dimethylformamide	68-12-2	2012/12/19	Toxic for reproduction (Article 57 c)
94	Tetraethyllead	78-00-2	2012/12/19	Toxic for reproduction (Article 57 c)
95	Methyloxirane (Propylene oxide)	75-56-9	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
96	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)
97	Fatty acids, C16-18, lead salts	91031-62-8	2012/12/19	Toxic for reproduction (Article 57 c)
98	Trilead dioxide phosphonate	12141-20-7	2012/12/19	Toxic for reproduction (Article 57 c)
99	o-aminoazotoluene	97-56-3	2012/12/19	Carcinogenic (Article 57a)
100	[Phthalato(2-)]dioxotrilead	69011-06-9	2012/12/19	Toxic for reproduction (Article 57 c)
101	Tricosafluorododecanoic acid	307-55-1	2012/12/19	vPvB (Article 57 e)
102	Lead oxide sulfate	12036-76-9	2012/12/19	Toxic for reproduction (Article 57 c)
103	Methoxyacetic acid	625-45-6	2012/12/19	Toxic for reproduction (Article 57 c)
104	Diisopentylphthalate	605-50-5	2012/12/19	Toxic for reproduction (Article 57 c)
105	Lead cyanamidate	20837-86-9	2012/12/19	Toxic for reproduction (Article 57 c)
106	4,4'-oxydianiline and its salts	101-80-4	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
107	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	2012/12/19	Carcinogenic (Article 57a)
108	Henicosafluoroundecanoic acid	2058-94-8	2012/12/19	vPvB (Article 57 e)
109	Furan	110-00-9	2012/12/19	Carcinogenic (Article 57a)
110	Pentacosafluorotridecanoic acid	72629-94-8	2012/12/19	vPvB (Article 57 e)
111	Diethyl sulphate	64-67-5	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
112	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)
113	Dibutyltin dichloride (DBTC)	683-18-1	2012/12/19	Toxic for reproduction (Article 57 c)
114	Lead titanium trioxide	12060-00-3	2012/12/19	Toxic for reproduction (Article 57 c)
115	Formamide	75-12-7	2012/06/18	Toxic for reproduction (Article 57 c)
116	[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)
117	Diboron trioxide	1303-86-2	2012/06/18	Toxic for reproduction (Article 57 c)
118	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	2012/06/18	Carcinogenic (Article 57a)
119	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	2012/06/18	Toxic for reproduction (Article 57 c)
120	Lead(II) bis(methanesulfonate)	17570-76-2	2012/06/18	Toxic for reproduction (Article 57 c)
121	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)
122	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)

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
123	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)
124	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)
125	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	2012/06/18	Carcinogenic (Article 57a)
126	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)
127	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2012/06/18	Toxic for reproduction (Article 57 c)
128	Lead styphnate	15245-44-0	2011/12/19	Toxic for reproduction (article 57 c)
129	Calcium arsenate	7778-44-1	2011/12/19	Carcinogenic (article 57 a)
130	Bis(2-methoxyethyl) ether	111-96-6	2011/12/19	Toxic for reproduction (article 57 c)
131	Phenolphthalein	77-09-8	2011/12/19	Carcinogenic (article 57 a)
132	Arsenic acid	7778-39-4	2011/12/19	Carcinogenic (article 57 a)
133	2-Methoxyaniline; o-Anisidine	90-04-0	2011/12/19	Carcinogenic (article 57 a)
134	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	2011/12/19	Carcinogenic (article 57 a)
135	Bis(2-methoxyethyl) phthalate	117-82-8	2011/12/19	Toxic for reproduction (article 57 c)
136	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)
137	Dichromium tris(chromate)	24613-89-6	2011/12/19	Carcinogenic (article 57 a)
138	Pentazinc chromate octahydroxide	49663-84-5	2011/12/19	Carcinogenic (article 57 a)
139	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	-	2011/12/19	Carcinogenic (article 57 a)
140	Lead dipicrate	6477-64-1	2011/12/19	Toxic for reproduction (article 57 c)
141	N,N-dimethylacetamide	127-19-5	2011/12/19	Toxic for reproduction (article 57 c)
142	1,2-dichloroethane	107-06-2	2011/12/19	Carcinogenic (article 57 a)
143	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	2011/12/19	Carcinogenic (article 57 a)
144	Trilead diarsenate	3687-31-8	2011/12/19	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
145	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	2011/12/19	Carcinogenic (article 57 a)
146	Lead diazide, Lead azide	13424-46-9	2011/12/19	Toxic for reproduction (article 57 c),

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
147	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight		2011/12/19	Carcinogenic (article 57 a)
148	Cobalt dichloride	7646-79-9	2011/06/20 - 2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
149	1-Methyl-2-pyrrolidone	872-50-4	2011/06/20	Toxic for reproduction (article 57c)
150	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	2011/06/20	Toxic for reproduction (article 57c)
151	Hydrazine	302-01-2, 7803-57-8	2011/06/20	Carcinogenic (article 57a)
152	1,2,3-Trichloropropane	96-18-4	2011/06/20	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
153	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	2011/06/20	Toxic for reproduction (article 57c)
154	Strontium chromate	7789-06-2	2011/06/20	Carcinogenic (article 57a)
155	2-Ethoxyethyl acetate	111-15-9	2011/06/20	Toxic for reproduction (article 57c)
156	2-Ethoxyethanol	110-80-5	2010/12/15	Toxic for reproduction (article 57c)
157	Cobalt(II) diacetate	71-48-7	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
158	Cobalt(II) carbonate	513-79-1	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
159	Cobalt(II) sulphate	10124-43-3	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
160	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)
161	Cobalt(II) dinitrate	10141-05-6	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
162	Chromium trioxide	1333-82-0	2010/12/15	Carcinogenic and mutagenic (articles 57 a and 57 b)
163	2-Methoxyethanol	109-86-4	2010/12/15	Toxic for reproduction (article 57c)
164	Trichloroethylene	79-01-6	2010/06/18	Carcinogenic (article 57 a)
165	Sodium chromate	7775-11-3	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
166	Boric acid	10043-35-3, 11113-50-1	2010/06/18	Toxic for reproduction (article 57 c)
167	Potassium chromate	7789-00-6	2010/06/18	Carcinogenic and mutagenic (articles 57 a and 57 b).
168	Tetraboron disodium heptaoxide, hydrate	12267-73-1	2010/06/18	Toxic for reproduction (article 57 c)
169	Potassium dichromate	7778-50-9	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
170	Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	2010/06/18	Toxic for reproduction (article 57 c)
171	Ammonium dichromate	7789-09-5	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
172	Acrylamide	79-06-1	2010/03/30	Carcinogenic and mutagenic (articles 57 a and 57 b)
173	2,4-Dinitrotoluene	121-14-2	2010/01/13	Carcinogenic (article 57a)
174	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)

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No.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
175	Anthracene oil, anthracene-low	90640-82-7	2010/01/13	Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e)
176	Pitch, coal tar, high temp.	65996-93-2	2010/01/13	Carcinogenic, PBT and vPvB (articles 57a, 57d and 57e)
177	Anthracene oil, anthracene paste	90640-81-6	2010/01/13	Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e)
178	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))
179	Lead chromate	7758-97-6	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
180	Anthracene oil	90640-80-5	2010/01/13	Carcinogenic1, PBT and vPvB (articles 57a, 57d and 57e)
181	Diisobutyl phthalate	84-69-5	2010/01/13	Toxic for reproduction (article 57c)
182	Tris(2-chloroethyl)phosphate	115-96-8	2010/01/13	Toxic for reproduction (article 57c)
183	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	2010/01/13	Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e)
184	Anthracene oil, anthracene paste,distn. lights	91995-17-4	2010/01/13	Carcinogenic2, mutagenic3, PBT and vPvB (articles 57a, 57b, 57d and 57e)
185	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	2008/10/28	Carcinogenic (article 57a)
186	Triethyl arsenate	15606-95-8	2008/10/28	Carcinogenic (article 57a)
187	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	2008/10/28	vPvB (article 57e)
188	Benzyl butyl phthalate (BBP)	85-68-7	2008/10/28	Toxic for reproduction (article 57c)
189	Sodium dichromate	7789-12-0, 10588-01-9	2008/10/28	Carcinogenic, mutagenic and toxic for reproduction (articles 57a, 57b and 57c)
190	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	2008/10/28	PBT and vPvB (articles 57 d and 57 e)
191	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)
192	Anthracene	120-12-7	2008/10/28	PBT (article 57d)
193	Dibutyl phthalate (DBP)	84-74-2	2008/10/28	Toxic for reproduction (article 57c)
194	Lead hydrogen arsenate	7784-40-9	2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
195	Diarsenic trioxide	1327-53-3	2008/10/28	Carcinogenic (article 57a)
196	Diarsenic pentaoxide	1303-28-2	2008/10/28	Carcinogenic (article 57a)
197	Bis(tributyltin)oxide (TBTO)	56-35-9	2008/10/28	PBT (article 57d)