Restricted Substances List

Updated December 2018
Always check supplier manual for latest version

This document describes all substances that are not allowed or restricted in all garments and accessories manufactured for PWT Group, including zippers, buttons, labels, etc. The restricted substances list (RSL) is based on the Regulation (EC) No. 1907/2006 of the European Parliament, also known as the REACH regulation, with some voluntary commitments added as well.

Suppliers must comply with this RSL at all times.

Concerning the REACH Candidate List 'Substances of Very High Concern' (SVHCs), PWT Group requires that all products and all packaging contains less than 0, 1 % for each substance on the list, unless a lower limit is specified in this document. If noticeable SVHC is known, it must be informed to PWT Group. For an updated version of the SVHC list, please follow below link: https://www.echa.europa.eu/candidate-list-table.

Regarding transportation of goods

Fumigating, gassing or spraying cargo or containers with any chemicals is banned. Levels of chemicals will be measured when the container reaches the port of destination. Levels must not exceed acceptable health and safety levels. Regardless of the source, all costs in connection with cleaning containers, damage or loss of products and any resulting lost profit may be claimed.

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses/ Comment
	Alkylphenol (AP) & Alkylphenol Ethoxylates (APEO) Surfactant			
Various	Alkylphenols (OP, NP, HpP, PeP)	10 mg/kg (Sum)	EN ISO 18254 AP Determination with GC/MS NPEO, OPEO Determination with LC/MS For leather: EN ISO 18218-2 (mod)	APEOs is used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, dispersing agents for dyes and prints. NPEO is the biggest source of NP present in the environment. NP is a potent endocrine disrupter to the aquatic environment.
Various	Alkylpghenol ehtoxylates OP, NP, HpP, PeP OP(EO) NP(EO)	Total sum 100 mg/kg		
	AZO Dyes			
92-67-1	4-Aminobiphenol	Not allowed 20 mg/kg each Aniline: 100 mg/kg	Textile: EN ISO 14362-1, EN14362-3 for PAAB Leather: ISO 17234-1; ISO 17234-2 for PAAB	Azo dyes and pigments are colourants containing at least one azo bond (-N=N-) within the molecule. They are commonly used as colorant in textile and apparel industry. Thousands of azo dyes exist, but only those that degrade to form the listed cleavable amines are restricted. These amines are classified as carcinogens and should no longer be used in colouring textiles.
92-87-5	Benzidine			
95-69-2	4-Chloro-o-toluidine			
91-59-8	2- Naphthylamine			
97-56-3	o-Aminoazotoluene			
99-55-8	2-Amino-4-nitrotoluene			
106-47-8	p-Chloroaniline			
615-05-4	2,4-Diaminoanisole			
101-77-9	4,4' –Diaminobiphenylmethane			
91-94-1	3,3' –Dichlorobenzidine			
119-90-4	3,3' –Dimethoxybenzidine			
119-93-7	3,3' –Dimethylbenzidine			
838-88-0	3,3' –Dimethyl-4,4'-diaminobiphenolmethane			
120-71-8	p-Cresidine			
101-14-4	4,4' –Methylene-bis-(2-chloroaniline)			
101-80-4	4,4' -Oxydianiline			
139-65-1	4,4' -Thiodianiline			
95-53-4	0 -Toluidine			
95-80-7	2,4 –Toluylendiamine			
137-17-7	2,4,5 –Trimethylaniline			
90-04-0	o –Anisidine (2-Methoxyaniline)			
60-09-3	4 –Aminoazobenzene			
95-68-1	2,4 –Xylidine			
87-62-7	2,6 –Xylidine			
	Bisphenol A			
80-05-7	Bisphenol A (BPA)	1000 mg/kg	Extraction with organic solvent, GC/MS	Used as a monomer in plastic, expoxy resion, flame retardents, PVC, and polycarbonate plastics.
	Chlorinated organic carriers			
Various	(Di-,Tri-,Tetra-,Penta-,Hexa)Chlorinated Benzenes	Not allowed 1.0 mg/kg sum	DIN 54232	Used as carriers in dyeing process of polyester or wool/polyester fibres. Also used as solvents.
Various	(Mono-,Di-,Tri-,Tetra-Penta)Chlorinated Toluenes			
	Chlorinated Paraffin			
85535-84-8	Short chain chlorinated paraffin's (SCCP,C10-C13)	Not allowed 1000 mg/kg	DIN EN ISO 18219 (modified)	Used as flame retardants or plasticisers in plastics, rubbers, inks, paints, adhesives and coatings. Can be found as impurities in fat-liquoring agents in leather production.

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses/ Comment
	Chlorinated Phenols			
87-86-5	Pentachlorophenol (PCP)	0.5 mg/kg	LFGB §64 82.02.8 DIN EN ISO 17070 (Modified KOH extraction followed by derivatisation)	Chlorophenols are polychlorinated compounds used as preservatives and pesticides. PCP and TeCP are sometimes used as mould prevention for leather / hides, and as preservatives in print pastes, but are now regulated and should not be used. Some Chlorophenols are toxic when inhaled, ingested or absorbed through the skin. Long term reproductive effects, liver and kidney damage, and suspected carcinogens.
935-95-5	2,3,5,6-Tetrachlorophenol (TeCP)			
58-90-2	2,3,4,6- Tetrachlorophenol (TeCP)			
4901-51-3	2,3,4,5- Tetrachlorophenol (TeCP)			
15950-66-0	2,3,4- Trichlorophenol (TrCP)	2 mg/kg		
933-78-8	2,3,5- Trichlorophenol (TrCP)			
933-75-5	2,3,6- Trichlorophenol (TrCP)			
95-95-4	2,4,5- Trichlorophenol (TrCP)			
88-06-2	2,4,6- Trichlorophenol (TrCP)			
609-19-8	3,4,5- Trichlorophenol (TrCP)			
576-24-9	2,3- Dichlorophenol (DCP)	3 mg/kg		
120-83-2	2,4- Dichlorophenol (DCP)			
583-78-8	2,5- Dichlorophenol (DCP)			
87-65-0	2,6- Dichlorophenol (DCP)			
95-77-2	3,4- Dichlorophenol (DCP)			
591-35-5	3,5- Dichlorophenol (DCP)			
95-57-8	2- Chlorophenol (MCP)			
108-43-0	3- Chlorophenol (MCP)			
106-48-9	4- Chlorophenol (MCP)			
90-43-7	Orthophenylphenol (OPP)	25 mg/kg		
	Dimethylformamide			
68-12-2	Dimethylformamide (DMFa)	1000 mg/kg	Extraction with organic solvent, GC/MS	Mainly used as solvent in plastics, rubber, and PU coating. Water-based PU does not contain DMFa and is therefore preferable. DMFa is fatal if inhaled, toxic if swallowed, causes severe skin burns and eye damage, may cause cancer, may damage fertility, and may cause allergy or asthma symptoms.
	Dimethyl Fumerate (DMFu)			
624-49-7	Dimethyl Fumerate (DMFu)	Not allowed 0.1 mg/kg	DIN EN ISO/TS 16186	Mainly used as an anti-mold agent, applied in leather products during storage and transportation. It has been found in silica gel sachets and will evaporate onto the leather or other materials to protect them from mould. Skin irritation, redness and acute respiratory difficulties are symptoms of exposure.
	DMAc			
127-19-5	DMAc	1000 mg/kg	Extraction with organic solvent, GC/MS	Used as a solvent in textile production.
	Dyes - Allergenic			
2475-45-8	Disperse Blue 1	Not allowed 50 mg/kg each	DIN 54231	Water-insoluble dyes that penetrate synthetic fibres and are held in place by physical forces without forming chemical bonds. Used in synthetic fibers (polyester, acetate, polyamide, etc.) Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.
2475-46-9	Disperse Blue 3			
3179-90-6	Disperse Blue 7			
3860-63-7	Disperse Blue 26			
12222-75-2	Disperse Blue 35			
12222-97-8	Disperse Blue 102			
12223-01-7	Disperse Blue 106			
61951-51-7	Disperse Blue 124			
258-69-3	Disperse Orange 1			
730-40-5	Disperse Orange 3			
13301-61-6	Disperse Orange 37/76			
2872-52-8	Disperse Red 1			
2872-48-2	Disperse Red 11			
3179-89-3	Disperse Red 17			
119-15-3	Disperse Yellow 1			
2832-40-8	Disperse Yellow 3			
6373-73-5	Disperse Yellow 9			
12236-29-2	Disperse Yellow 39			
54824-37-2	Disperse Yellow 49			
23355-64-8	Disperse Brown 1			

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	Dyes - Navy Blue			
118685-33-9	Blue color (azocolor), index no. 611-070-00-2	Not allowed 50 mg/kg each	DIN 54231	Navy blue colourants are regulated and prohibited from use for dyeing of textiles.
	Dyes - Carcinogenic			
3761-53-3	Acid Red 26	Not allowed 50 mg/kg each	DIN 54231	Used for synthetic fibers, but they might be used in a few cases for natural materials.
2580-56-5	Basic Blue 26 (with > 0,1% Michler's ketone or base)			
569-61-9	Basic Red 9			
548-62-9	Basic Violet 3 (with >> 0,1% Michler's ketone or base)			
632-99-5	Basic Violet 14			
1937-37-7	Direct Black 38			
2602-46-2	Direct Blue 6			
537-58-0	Direct Red 28			
2475-45-8	Disperse Blue 1			
82-28-0	Disperse Orange 11			
2832-40-8	Disperse Yellow 3			
12646-85-8	Pigment Red 104			
1344-37-2	Pigment Yellow 34			
60-09-3	Solvent Yellow 1 (4-Aminoazobenzene)			
97-56-3	Solvent Yellow 3 (o-Aminoazotoluene)			
16071-86-6	Direct Brown 95			
2429-74-5	Direct Blue 15			
6459-94-5	Acid Red 114			
	Dyes - other, banned			
85136-74-9	Disperse Orange 149	Not allowed 50 mg/kg each	DIN 54231	Regulated and prohibited from use for dyeing of textiles.
6250-23-3	Disperse Yellow 23			
	Flame retardants			
10043-35-3 11113-50-1	Boric acid	Not allowed 10 mg/kg each	DIN EN ISO 17881-1 &-2	Flame retardants are used in a wide range of products like automobiles, electronics and textiles because of their stability and heat resistance. These kinds of flame retardants are suspected to be carcinogenic and/or mutagenic. Some are also persistens. They should no longer be used in apparel.
1163-19-5	Decabromodiphenylether (decaBDE)			
1303-86-2	Diboron trioxide[1]			
1303-96-4 1330-43-4 12179-04-3	Disodium tetraborate, anhydrous[1]			
	Heptabromodiphenylether (heptaBDE)			
25637-99-4	Hexabromocyclododecane (HBCDD)			
36483-60-0	Hexabromodiphenylether (hexaBDE)			
32536-52-0	Octabromodiphenylether (octaBDE)			
32534-81-9	Pentabromodiphenylether (pentaBDE)			
59536-65-1	Polybrominated biphenyls (PBB)			
various	Tetrabromodiphenylether (tetraBDE)			
12267-73-1	Tetraboron disodium heptaoxide, hydrate[1]			
126-72-7	Trisphosphat (2,3-dibromopropyl) (TRIS)			
115-96-8	Tris-(2-chloroethyl)phosphate (TCEP)			
13674-87-8	Tris-(1,3-dichlor-2propyl) phosphate (TDCPP)			
545-55-1	Tri(aziridinyl)-phosphinoxid (TEPA)			
25155-23-1	Trixylylphosphate (TXP)			
	Formaldehyde			
50-00-0	Formaldehyde	Adults: 75 mg/kg	EN ISO 14184-1 (Textiles) EN ISO 17226-2 (Leather)	Used as an anti- creasing and anti-shrinking agent.It is also used in polymeric resins. In textiles, it may be found in stiffened and permanent press fabrics. When inhaled formaldehyde may cause headaches, a burning sensation in the throat, and difficulty breathing, and can trigger or aggravate asthma symptoms

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	Formamide			
75-12-7	Formamide	200 mg/kg	Extraction with organic solvent, GC/MS	Formed as a bi-product in EVA-production
	Mercaptobenzothiazol			
149-30-4	2-Mercaptobenzothiazol (2-MBT)	Not allowed 0.1 mg/kg	Extraction with acetonitrile 1h/70°c. HPLC/DAD/MS	Used for volcanisation. Might be used in rubber production.
	Metals - extractable heavy metals			
7429-90-5	Aluminium (Al)	200 mg/kg	Sample Preparation: EN ISO 105-E04:2013 , Measurement: EN ISO 17294-2:2014	
7440-36-0	Antimony (Sb)	Extractable: 30 mg/kg		Found in or used a a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments and alloys.
7440-38-2	Arsenic (As)	Extractable: 1,0 mg/kg		Used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics. Banned in textile production.
7440-43-9	Cadmium (Cd)	Extractable: 0,1 mg/kg Total: 75 mg/kg		Used as pigments (Especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints. Banned in textile production.
7440-47-3	Chromium (Cr)	Extractable for textiles: 2.0 mg/kg		Used as dyeing additives, dye-fixing agents, color fastness after-treatment, dyes for wool, silk and polyamide (especially dark shades) and leather tanning
188540-29-9	Chromium (VI) after Ageing (Leather only)	Not allowed 3 mg/kg	ISO 17075	Typically associated with leather tanning. Chromium (VI) is known to be carcinogenic and is corrosive to skin. Skin contact with certain chromium (VI) compounds can cause skin ulcer. Banned in textile production.
7440-48-4	Cobalt (Co)	Extractable: 4,0 mg/kg	Sample Preparation: EN ISO 105-E04:2013 , Measurement: EN ISO 17294-2:2014	Used in alloys, pigments, dyestuff and the production of plastic buttons.
7440-50-8	Copper (Cu)	Extractable: 50 mg/kg		Used in alloys and pigments, and in textiles as an antimicrobial agent.
7439-92-1	Lead (Pb)	Extractable: 1,0 mg/kg Total: 90 mg/kg		Associated with plastics, paints, inks, pigments and surface coatings. Lead is a suspected carcinogen and can adversely affect the central nervous system, kidneys and the immune system. Banned in textile production.
7439-97-6	Mercury (Hg)	Extract.: 0.02 mg/kg Total: Not allowed 1,0 mg/kg		Can be present in pesticides and as contaminants in caustic soda. They may also be used in paints. Banned in textile production.
7440-02-0	Nickel (Ni)	Extract: Textiles: 4.0 mg/kg Release: 0,5 µg /cm/week	Sample Preparation: EN ISO 105-E04:2013 , Measurement: EN ISO 17294-2:2014 Nickel release test EN 1811	Can be used for plating alloys and improving corrision-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.
7440-32-6	Titanium (Ti) (Leather only)	Extractable: 200 mg/kg	Sample Preparation: EN ISO 105-E04:2013 , Measurement: EN ISO 17294-2:2014	Might be used in tanning process as additional tanning salt
7440-67-7	Zirconium (Zr) (Leather only)	Extractable: 200 mg/kg		Might be used in tanning process as additional tanning salt
	Heavy metals in packaging materials; Cadmium, Chromium VI, Mercury, Lead	100 mg/kg (sum)	Others: Acid digestion. ICP analysis. Cr (VI): alkaline digestion UV-Vis analysis.	
	NMP			
872-50-4	NMP	1000 mg/kg	Extraction with organic solvent, GC/MS	NMP might be used as a solvent in some coatings.
	N-Nitrosamines			
Various	N-Nitrosamines	Not detected (detection limit: 0.5 mg/kg)	GB/T 24153	Nitrosamines are associated with rubber and latex products chemical intermediaries and finished cosmetics. Can be formed as by-product in the production of rubber. They are known to be carcionogenic.
	Odour			
	Odour	Grade 3	SNV 195651 mod.: grading 1-5	

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	Organotin Compounds			
Various	Dibutyltin (DBT)	Not allowed 2.0 mg/kg	DIN SPEC 91179/ DIN CEN ISO/TS 16179 (modified)	Chemicals combining tin and organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g. antibacterials), catalysts in plastics and glue production, and heat stabilizers in plastics/rubber. In textiles, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat-transfer material.
	Dimethyltin (DMT)			
	Dioctyltin (DOT)			
	Diphenyltin (DPhT)			
	Dipropyltin (DPT)			
	Monomethyltin (MMT)			
	Monobutyltin (MBT)			
	Monooctyltin (MOT)			
	Monophenyltin (MPhT)			
	Tetrabutyltin (TeBT)	Not allowed 1.0 mg/kg		
	Tetraethyltin (TeET)			
	Tributyltin (TBT)			
	Tricyclohexyltin (TCyHT)			
	Trimethyltin (TMT)			
	Trioctyltin (TOT)			
	Triphenyltin (TPhT)			
	Tripropyltin (TPT)			
	Perflurinated Chemicals (PFCs) - PFOA			
3825-26-1	Perflurooctanoic acid (PFOA)	Not allowed 1 µg /m²	CEN/TS 15968	Used to provide soil, oil and water resistance to textiles, apparels, leather and footwear. Also used in polymers like polytetrafluoroethylene (PTFE).
	Perflurinated Chemicals (PFCs) - PFOS			
1763-23-1	Perfluorooctane sulfonic acid	Not allowed 1 µg /m²	CEN/TS 15968	PFOS has been used to provide soil, oil and water resistance to textiles, apparels, leather and footwear. In textile processing, PFOS is also used as wetting agents to improve the coverage and penetration of substances, and enhance dyeing and as a binder in non-woven fabrics. PFOS is classified as a persistent organic pollutant
754-91-6	Perfluorooctane sulfonamide (PFOSA)			
307-35-7	Perfluorooctane sulfonifluoride (PFOSF)			
31506-32-8	N-Methyl perfluorooctane sulfonamide (N-Me-FOSA)			
4151-50-2	N-Eethyl perfluorooctane sulfonamide (N-Et-FOSA)			
24448-09-7	N-Methyl perfluorooctane sulfonamide ethanol (N-Me-FOSE)			
1691-99-2	N-Ethyl perfluorooctane sulfonamide ethano (N-Et-FOSE)			
	Perflyrinated Chemicals - Other PFCs			
2058-94-8	Perfluoroundecanoic acid / heni-cosafluoroundecanoic acid	0,1 mg/kg	CEN/TS 15968	Used in oil and water resistent treatments.
72629-94-8	Perfluorotridecanoic acid / pentacosafluorotridecanoic acid			
various	Perfluoroheptanoic acids (PFHpA)			
Various	Perfluorononanoic acids (PFNA)			
305-55-1	Perfluoroundecanoic acid / tricosafluoroundecanoic acid			
376-06-7	Perfluorotetradecanoic acid / heptacosafluorotetradecanoic acid			
various	Perfluorodecanoic acids (PFDA)			
375-22-4	Perfluorobutanoic acid			
2706-90-3	Perfluoropentonoic acid			
307-24-4	Perfluorohexanoc acid			
172155-07-6	Perfluoro(3,7-dimethyloctanoic acid			
375-73-5	Perfluorobutane sulfonic acid			
355-46-4	Perfluorohexane sulfonic acid			
375-92-8	Perfluoroheptane sulfonic acid			
335-77-3	Henicosafluorodecane sulfonic acid			
1546-95-8	7H-Perfluoro heptanoic acid			
34598-33-9	2H,2H,3H,3H-Perfluoroundecanoic acid			
27619-97-2	1H,1H,2H,2H-Perfluorooctanoic sulfonic acid			
2043-47-2	1H,1H,2H,2H-Perfluoro-1-hexanol			
647-42-7	1H,1H,2H,2H-Perfluoro-1-octanol			
678-39-7	1H,1H,2H,2H-Perfluoro-1-decanol			
865-86-1	1H,1H,2H,2H-Perfluoro-1-dodecanol			

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	Pesticides			
93-76-5	2-(2,4,5-Trichlorophenoxy) propionic acid, salts & compounds (“2,4,5-T”)	Not allowed 1 mg/kg	Extraction with acetone, silica gel clean up, analysis with GC-MS	Found in natural fibers, primarily cotton.
86-50-0	Azinophosmethyl			
309-00-2	Aldrine			
191906	Captafol			
57-74-9	Chlordane			
470-90-6	Chlorfenvinphos			
68359-37-5	Cyfluthrin			
52315-07-8	Cypermethrin			
52918-63-5	Deltamethrin			
3424-82-6, 72-55-9	DDE			
333-41-5	Diazinon			
141-66-2	Dicrotophos			
60-51-5	Dimethoate			
959-98-8	Endosulfane, alpha			
72-20-8	Endrine			
51630-58-1	Fenvalerate			
1024-57-3	Heptachloroepoxide			
319-84-6	Hexachlorcyclohexane, alpha			
319-86-8	Hexachlorcyclohexane, gamma			
4234-79-1	Kelevane			
58-89-9	Lindane			
94-74-6	MCPA			
93-65-2	Mecoprop			
72-43-5	Methoxychlor			
6923-22-4	Monocrotophos			
298-00-0	Parathion-methyl			
7786-34-7	Phosdrin/ Mevinphos			
41198-08-7	Profenophos			
8001-50-1	Strobane			
8001-35-2	Toxaphene			
94-75-7	2,4-Dichloropenoxyacetic acid, salts & compounds (“2,4-D”)			
2642-71-9	Azinophosethyl			
4824-78-6	Bromophos-ethyl			
63-25-2	Carbaryl			
6164-98-3	Chlordimeform			
56-72-4	Coumaphos			
91465-08-6	Cyhalothrin			
78-48-8	DEF			
53-19-0, 72-54-8	DDD			
50-29-3, 789-02-06	DDT			
120-36-2	Dichlorprop			
60-57-1	Dieldrine			
88-85-7	Dinoseb its salts and acetate			
33213-65-9	Endosulfane, beta			
66230-04-4	Esfenvalerate			
76-44-8	Heptachlor			
118-74-1	Hexachlorobenzene			
319-85-7	Hexachlorcyclohexane, beta			
465-73-6	Isodrin			
143-50-0	Kepone			
121-75-5	Malathion			
94-81-5	MCPB			
10265-92-6	Metamidophos			
2385-85-5	Mirex			
56-38-2	Parathion			
72-56-0	Perthrane			
31218-83-4	Propethamphos			
13583-03-8	Quinalphos			
297-78-9	Telodrin			
1582-09-8	Trifluralin			

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	pH Value			
	pH Value	4.0 – 7.5	EN ISO 3071 (Textiles) ISO 4045 (Leather)	
	Phenol			
108-95-2	Phenol	50 mg/kg	Extraction with organic solvent, GC/MS	Phenol might be used in some plastic material.
	Phthalates			
85-68-7	Butylbenzylphthalate (BBP)	Sum and individual 1000 mg/kg	DIN EN ISO 14389, analysis by GC- MS/ LC-MS Footwear = EN ISO TS 16181	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 molding of plastic by decreasing its melting temperature. Predominantly found as plasticisers in flexible plastic products such as children toys, and coated textiles e.g. PV and PU. They are also used as fixatives, detergents, lubricatin oils and solvents. Phthalates are endocrine disruptors, impairing fertility, impacting aquatic life and are possible carcinogens.
84-74-2	Dibutylphthalate (DBP)			
117-81-7	Di-(2-ethylhexyl)-phthalate (DEHP)			
117-82-8	Di-(2-methoxyethyl)-phthalate (DMEP)			
71888-89-6	Di-C6-8-branched alkylphthalates. C7 rich (DIHP)			
68515-42-4	Di-C7-11-branched and linear alkylphthalates (DHNUP)			
68515-50-4	Di-hexylphthalate, branched and linear (DHxP)			
84-66-2	Diethyl phthalate (DEP)			
84-61-7	Dicyclohexyl phthalate			
84-76-4	Di-n-nonyl phthalate (DNP)			
84-69-5	Di-iso-butylphthalate (DIBP)			
26761-40-0 m.fl.	Di-iso-decylphthalate (DIDP)			
28553-12-0 m.fl.	Di-iso-nonylphthalate (DINP)			
84-75-3	Di-n-hexylphthalate (DHP)			
117-84-0	Di-n-octylphthalate (DNOP)			
131-18-0 m.fl.	Di-pentylphthalate, (n-, iso- or mixed) (DPP)			
68515-51-5 m.fl.	di-C6-10-alkylphthalates; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC 201-559-5)			
27554-26-3	Diisooctyl phthalate (DIOP)			
131-16-8	Di-n-propyl phthalate (DPrP)			
	Polycyclic aromatic hydrocarbons (PAHs)			
50-32-8	Benzo(a)pyrene	1.0 mg/kg		PAHs are produced by the incomplete combustion of organic materials such as wood, oil, and animal fats. PAHs are less water-soluble, evaporable and degradable and attach themselves to organic particulate matter. PAH contaminations have been found in rubber and various plastics, and as contaminants in black carbon pigments. Many of these organic molecules are considered to be carcinogenic, mutagenic and toxic to the aquatic environment.
192-97-2	Benzo(e)pyrene			
56-55-3	Benzo(a)anthracene			
218-01-9	Chrysene			
205-99-2	Benzo(b)fluoranthene			
205-82-3	Benzo(j)fluoranthene			
207-08-9	Benzo(k)fluoranthene			
53-70-3	Dibenz(a,h)anthracene			
83-32-9	Acenaphthene	Sum of all 18PAHs 10 mg/kg NAP: 2 mg/kg		
120-12-7	Anthracene			
86-73-7	Fluorene			
67580	Phenanthrene			
129-00-0	Pyrene			
56-55-3	Benzo[a]anthracene*			
50-32-8	Benzo[a]pyrene*			
205-99-2	Benzo[b]fluoranthene*			
192-97-2	Benzo[e]pyrene*			
208-96-8	Acenapphthylene			
191-24-2	Benzo(ghi)perylene			
206-44-0	Fluoranthene			
193-39-5	Indeno (1,2,3-cd)pyrene			
91-20-3	Naphthalene (NAP)			
205-82-3	Benzo[j]fluoranthene*			
207-08-9	Benzo[k]fluoranthene*			
218-01-9	Chrysene*			
53-70-3	Dibenzo[a,h]anthracene*			

CAS No.	Chemical Substance	Limit Value	Test Method	Potential Uses / Comment
	PVC			
9002-86-2	PVC	Prohibited	Beilstein and confirmation by IR	Might be used in print.
	Quinoline			
91-22-5	Quinoline	50 mg/kg	Extraction with organic solvent, GCMS or LCMS	Chemical used to produce certain dyes.
	UV stabilizer			
3846-71-7	UV 320	1000 mg/kg	Extraction with organic solvent, LC/MS	Used to stabilise certain materials against UV light. Normally used for hardline products exposed to sun light, light garden furniture.
3864-99-1	UV 327			
25973-55-1	UV 328			
36437-37-3	UV 350			
	Volatile Organic Compounds (VOCs)			
71-43-2	Benzene	Not allowed 1.0 mg/kg		Volatile organic compounds are associated with solvent- based processes like PU coatings and adhesives. They should not be used in textile chemical preparations or for industrial/ machine cleaning. VOC's can be harmful to workers health.
108-88-3	Toluene	Not allowed 10 mg/kg		
71-55-6	1,1,1-trichloroethane	10 mg/kg each		
108-94-1	Cyclohexanone			
78-59-1	Isophorone			
127-18-4	Tetrachloroethylene (perchloroethylene)			
67-64-1	Acetone			
141-78-6	Ethyl acetate			
78-93-3	Methyl ethyl ketone (MEK)			
1330-20-7	Xylenes (Dimethylbenzenes)			