

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO)</b>				
Nonylphenols (NP)	104-40-5 11066-49-2 25154-52-3 84852-15-3 90481-04-2	Textiles: ISO/FDIS 18254:2015-10 followed by LC-MS	< 10 mg/kg	APEOs are widely used in detergents, scouring agents, wetting agents, softeners, de-gumming for silk, Polyester padding and many other uses. APEO's can easily degrade to AP's which are considered to be toxic, persistent to the environment and bioaccumulative.
Octylphenols (OP)	140-66-9 1806-26-4 27193-28-8			
Nonylphenoethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0		< 100 mg/kg	
Octylphenoethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6			
<b>AZO DYES WHICH BY REDUCTIVE CLEAVAGE MAY RELEASE ONE OR MORE AROMATIC ARYLAMINES</b>				
4-Aminobiphenyl	92-67-1	Textiles : EN 14362-1:2015  Leather: EN ISO 17234-1:2015  Test Method for confirmation of 4-Aminoazobenzene (4AAB) Textiles: EN 14362-3: 2015 Leather: EN ISO 17234 -2 2015	< 30 mg/kg	AZO Dyes may release one or more arylamines. 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			
2-Amino-4-nitrotoluene	99-55-8			
4-Chloroaniline	106-47-8			
2,4-Diaminoanisole	615-05-4			
4,4'-Diaminodiphenylmethane	101-77-9			
3,3'-Dichlorobenzidine	91-94-1			
3,3'-Dimethoxybenzidine	119-90-4			
3,3'-Dimethylbenzidine	119-93-7			
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	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	95-80-7			
2,4,5-Trimethylaniline	137-17-7			
2-Methoxyaniline (= o-Anisidine)	90-04-0			
p-Aminoazobenzene	60-09-3			

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>BIOCIDES</b>				
Dimethylfumarate	624-49-7	ISO 16186: 2012 Extraction, GC-MS	Not detected Detection limit: < 0.1 mg/kg	Dimethyl fumarate (DMFu) is a fungicide used to prevent mould in textiles. 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
Triclosan	3380-34-5	Extraction, 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, suppresses the immune system.
<b>CHLOROBENZENES</b>				
Hexachlorobenzene	118-74-1	DIN 54232: 2010 followed by GC-MS	< 1 mg/kg (total).	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.
Pentachlorobenzenes	608-93-5			
Trichlorobenzenes	87-61-6 120-82-1 108-70-3			
<b>CHLORINATED PARAFFINS</b>				
Short-chain chlorinated paraffins (SCCP)	85535-84-8	EN ISO 18219: 2015	< 1000 mg/kg	SCCP's: used as flame retardants, in plasticizers, paints and adhesives. SCCP's may cause long-term adverse effects in the aquatic environment.
<b>CHLOROPHENOLS</b>				
Pentachlorophenol (PCP)	87-86-5	KOH extraction, 15 hours at 90 degrees C § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015	Baby articles: 0.5 mg/kg Others: < 5 mg/kg	Chlorophenols are polychlorinated compounds used to preserve wood and textiles. Chlorophenols are irritants to the skin, eyes and mouth and can cause harmful effects to the liver, kidneys, blood and lungs and are probable human carcinogens
Tetrachlorophenol (TeCP)	58-90-2 935-95-5 4901-51-3			

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>DISPERSE DYES WHICH ARE CLASSIFIED TO BE ALLERGENIC</b>				
C.I. Disperse Blue 1	2475-45-8	DIN 54231:2005	< 5 mg/l (= appr.75 mg/kg)	Disperse dyes 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 35	12222-75-2			
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			
C.I. Disperse Red 1	2872-52-8			
C.I. Disperse Yellow 3	2832-40-8			
<b>DYES WHICH ARE CLASSIFIED TO BE CARCINOGENIC</b>				
C.I. Disperse Blue 1	2475-45-8	DIN 54231:2005	< 5 mg/l (= appr.75 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. Direct Blue 6	2602-46-2			
C.I. Disperse Yellow 3	2832-40-8			
C.I. Disperse Orange 11	82-28-0			
C.I. Direct Red 28	573-58-0			
C.I. Direct Black 38	1937-37-7			
C.I. Basic Red 9	569-61-9			
C.I. Basic Violet 14	632-99-5			
C.I. Acid Red 26	3761-53-3			
<b>FLAME RETARDENTS</b>				
Heptabromodiphenyl ether	446255-22-7 207122-16-5	GC-MS or LC-MS	Not detected Detection limit: < 5 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.
Hexabromodiphenyl ether	68631-49-2 207122-15-4			
Tetrabromodiphenyl ether	5436-43-1			
Octabromodiphenyl Ether (OctaBDE)	32536-52-0			
Pentabromodiphenyl ether (PentaBDE)	32534-81-9 60348-60-9			
Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6			
Polybromobiphenyls (PBB)	59536-65-1			
Tris-(2,3-dibromopropyl)- phosphate (TRIS)	126-72-7			
Tris - (aziridinyl) - phosphineoxide (TEPA)	545-55-1			

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>FORMALDEHYDE</b>				
Formaldehyde	50-00-0	Textile, Wood, Paper and Leather : ISO 14184-01:2014	Baby articles: < 16 mg/kg Direct skin contact: < 75 mg/kg Indirect skin contact: < 300 mg/kg Leather & Shoes: children < 36 months: < 50 mg/kg Leather & Shoes: < 150 mg/kg	Formaldehyde: used in anti-creasing, anti-shrinking, easy-ironing and water repellence finishing. Formaldehyde is a toxic chemical which can induce irritation to eyes and nose and even cause cancer.
<b>HEAVY METALS, TOTAL CONTENT</b>				
Cadmium and its compounds	7440-43-9	EN 1122: 2001	< 100 mg/kg for plastic and coated textiles, metal plating and metal trimmings.	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
Lead and its compounds	7439-92-1	DIN EN 14602:2012, weight of sample taken 1g, acid or microwave digestion followed by ICP or AAS	< 90 mg/kg for jewellery and products which can be placed in the mouth by children such as plastic, coated textiles and garment accessories (e.g. buttons, decorative glass beads, jewellery, lead crystal glass, metal jewellery, rivets, zippers)	
<b>HEAVY METALS EXTRACTABLE</b>				
<b>APPLICABLE FOR LEATHER</b>				
Chromium VI (Cr VI)	18540-29-9	ISO 17075 aging test	Not detected Detection Limit: 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
<b>HEAVY METALS, RELEASABLE NICKEL</b>				
Nickel	7440-02-0	Nickel release: EN 1811:2015 Abrasion of coated items: EN 12472	Consumer goods such as jewellery intended to be used for body piercings must not release more than 0.2 µg nickel per cm <sup>2</sup> per week.  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 0.5 µg nickel per cm <sup>2</sup> per week.	Nickel can cause extreme allergies.
		EN 16128: 2015	In spectacle frames and sunglasses intended to come into close and prolonged contact with the skin must not release more than ≤ 0.5 µg nickel per cm <sup>2</sup> per week	

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>ORGANOTIN COMPOUNDS</b>				
Dibutyltin (DBT)	14488-53-0	ISO/TS 16179: 2012	Baby articles: < 1 mg/kg < 1000 mg/kg each  Others	Organotin compounds are used as biocides (antibacterials), and/or heat stabilizers in plastics, inks, paints, and heat transfer material. It is also used to prevent unpleasant odours. Damage to liver, kidneys, blood forming processes and disruption of the enzyme system are possible, particularly to children.
Diocetyl tin (DOT)	15231-44-4 3542-36-7			
Tributyltin (TBT)	56573-85-4			
Triphenyltin (TPHT)	668-34-8			
<b>PERFLUORINATED CHEMICALS AND HER COMPOUNDS</b>				
Perfluorooctanesulfonates (PFOS)	2795-39-3 1763-23-1	CEN/TS 15968: 2010	Usage ban Detection limit: < 1 g / m <sup>2</sup>	PFOS can be used as impregnation agents and cleaning products. PFOS is persistent, bioaccumulative, poisonous and possibly carcinogenic. PFOA is mainly used as a surfactant and have the same risk profile as PFOS.
Perfluorooctane acids (PFOA)	335-67-1 3825-26-1 335-95-5 2395-00-8 335-66-0 376-27-2 3108-24-5			
<b>PHTHALATES</b>				
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	ISO 14389: 2014	< 1000 mg/kg each The sum of all Phthalates < 1000 mg/kg	Phthalates are added to plastics to increase flexibility. In textiles and apparel, phthalates can be found in coated textiles, plastic components, trims and plastisol prints. Phthalates are reprotoxic and can cause birth defects and changes in hormone levels. A complete ban of Phthalates is recommended by NGO's and many retailers.
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			

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH'S)</b>				
Benzo{a}pyrene	50-32-8	AfPS GS 2014:01 PAH	PAH for toys and childcare articles: <0.5 (each) Others: <1 (each)	Rubber or plastic components that come into direct and prolonged contact with the human skin or the oral cavity can cause severe allergenic reactions.
Benzo(a)anthracene	56-55-3			
Chrysene	218-01-9			
Benzo(b)fluoroanthene	205-99-2			
Benzo(k)fluoroanthene	207-08-9			
Dibenzo(a,h)anthracene	53-70-3			
Benzo(e)pyrene	192-97-2			
Benzo(j)fluoroanthene	205-82-3			
<b>PVC</b>				
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
<b>RESTRICTION ON PACKAGING</b>				
Cadmium (Cd)	Various	CEN/TR 13695-1 Acid digestion with ICP analysis	Usage Ban, Trace results: 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)				
Dimethyl fumarate (DMFu)	624-49-7	ISO 16186: 2012 Extraction, GC-MS	Usage ban, Trace results: 0.1 mg/kg	
<b>SOLVENTS HALOGENATED - VOLATILE ORGANIC COMPOUNDS</b>				
Hexachlorobutadiene	87-68-3	Head space GC-MS	Not detected Detection Limit: < 1mg/kg	Halogenated solvents are a general class of chemicals that have a variety of different properties and therefore end uses. Some of the more common uses include chemical intermediate (including dyes and pesticides), industrial cleaning (processing equipment, boilers, etc), spot cleaning, textile processing (scouring solvent, carrier solvent for preparations and functional finishes), urethane foam blowing agents and can be used as in the manufacture of plastics and PVC
Pentachloroethane	76-01-7		< 50 mg/kg	
1,1,2,2-Tetrachlorethan	79-34-5		< 20 mg/kg	
1,1,1,2-Tetrachloroethane	630-20-6		< 1000 mg/kg	
Carbon Tetra Chloride	56-23-5			
1,1,1-Trichloroethane	71-55-6			

SUBSTANCE	CAS NUMBER	TEST METHOD	ZEEMAN RESTRICTED LIMIT	RELEVANCE OF RESTRICTION
<b>SOLVENTS OTHER - VOLATILE ORGANIC COMPOUNDS</b>				
Benzene	71-43-2	Head space GC-MS	< 1 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
Toluene	108-88-3		< 5 mg/kg	
N,N-Dimethyl formamide (DMFa)	68-12-2		< 300 mg/kg	
<b>OTHER ATTENTION POINTS</b>				
pH value for textiles		ISO 3071:2005	4.0 – 7.5	pH is a measure of the acidity or basicity of a solution. A solution with pH is 7 is neutral. pH values that do not fall within the specified limits can cause skin irritation
Odour		SNV 195651:1968	No abnormal odour allowed. If odour rating 3, VOC test to be performed	<