



Restricted Substance List Edition 3.4

Without the use of chemicals in textile manufacturing, the performances requested by the consumer can't be attained. However, chemicals can be harmful to the workers, consumers or even the environment and the correct use of chemicals requires certain know-how to prevent any risks to workers, consumers or the environment.

The management of chemicals is very important to protect the consumer and all involved people as well as the environment during the production phase. To help suppliers, VAUDE has developed a minimum standard for suppliers regarding primarily consumer safety of chemicals on finished products. Other aspects like environmental performance in the production process are not implemented in this Restricted Substance List.

The Restricted Substance List (RSL) is a minimum requirement for suppliers to guarantee compliance with the VAUDE standards. It is recommended to adopt additional policies, particularly regarding water emission, air emission, occupational health and resource productivity in order to provide risk free products.

In this context VAUDE recommends to adopt the bluesign® standard. The independent bluesign® standard takes a solution-oriented approach that relates exclusively to problem materials and substances relevant to textiles. In particular the bluefinder™, an online chemicals components selection tool, allows to quickly find "bluesign® approved" components that will lead to end-products that comply with the RSL at hand, provided they are applied according to the suppliers recommendations.

The limits and restrictions have to be applied for each individual component of an intermediate or finished product.

Producing according to the RSL is a mandatory requirement for doing business with VAUDE.

In addition to the VAUDE RSL the supplier has to be aware of Regulation EC No 1907/2006 "REACH". The supplier shall inform VAUDE if supplied articles contain SVHCs listed in the ECHA candidate list with a concentration above 0.1%. Suppliers have to take care that they are aware of the actual ECHA candidate list see <http://echa.europa.eu/web/guest/candidate-list-table>

Date Issued: August 2014



Supplier Compliance Certificate

Company Name:

Address:

Telephone:

Fax:

Contact Person:

Please describe in short words, how compliance with the VAUDE Restricted Substance List (RSL) is guaranteed in your manufacturing site:

RSL Compliance

We certify that all materials supplied to VAUDE will meet the requirements as outlined in the attached Restricted Substance List (the "RSL") including all appendices. Our signature guarantees compliance for all current and future materials supplied to VAUDE.

Signature

Date

Printed Name

Title

SVHC Compliance

We certify that concentration of SVHCs listed in the newest ECHA candidate list is below 0.1% in all articles supplied to VAUDE.

Note: If noticeable SVHC concentration is known (esp. above a level of 0.1 %) it must be informed automatically by the supplier.

Signature

Date

Printed Name

Title

Identification of substances

The following general approach is proposed to identify whether or not substances, mentioned in the RSL are contained in your materials:

Narrow down the range of substances which could be present in the articles and thus have to be analysed by applying common knowledge about what could possibly be present in the materials (as for an example: a phthalate would never be present in a pure metal).

Exhaust options for obtaining information via the supply chain.

Only as a last resort, conduct targeted analysis to identify whether or not suspected substances listed in the RSL are present.

The testing matrix (see Annex II) may help to define the relevant items for testing procedure.

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
pH	4.0-7.5			DIN EN ISO 3071:2006-05
Odor	No unpleasant odor shall be emitted from the products			SNV 195 651
Color Fastness Properties				
Color fastness to perspiration	Textiles dyed with disperse or metal complex dyes: higher than 4			DIN EN ISO 105-E04:2013
Color fastness to saliva and perspiration	Fast			§64 LFGB; BVL B 82.10-1
Aldehydes				
Formaldehyde (CAS 50-00-0)	DL (15)	75	300	ISO 14184-1:1998 ISO 17226-1:2008 (Leather)
Alkylphenols (APs) and Alkylphenoethoxylates (APEOs) listed in Appendix A	Usage ban 10 for each Alkylphenol 100 for each Alkylphenoethoxylate			Solvent extraction // GC-MS (APs) LC-MS (APEOs)
Arylamines (as substance for example in PU, and as decomposition product of azo colorants which, by reductive cleavage of one or more azo groups, may release one or more of the aromatic amines) listed in Appendix B	Usage ban DL: 20			Textile: EN 14362-1:2012 EN 14362-3:2012 (for azo colorants which may release 4-Aminoazobenzene) Leather: EN ISO 17234-1:2010 EN ISO 17234-3:2011 (for azo colorants which may release 4-Aminoazobenzene)

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Asbestos listed in Appendix C	Usage ban not detected			REM/EDX According to BG: BGI 505-46 or U.S. EPA/600/R-93/116
Chlorinated Aromatic Hydrocarbons listed in Appendix D	Usage ban DL: 1.0 Sum of all: 5.0			DIN 54232-2010 or Solvent Extraction // GC-MS

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Chlorinated Phenols	Usage ban Sum of each group of MonoCPs, DiCPs, TriCPs, TeCPs, PCPs			Textile: BVL 82.02-8:2001 Investigation of articles – Detection and determination of pentachlorophenol in articles ISO 17070:2012 (DRAFT) Leather – Chemical tests – Determination of tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and pentachlorophenol content
Monochlorophenols (MonoCP), all isomers (CAS 25321-22-6)	0.05	0.5	0.5	
Dichlorophenols (DiCP), all isomers (CAS 25167-81-1)				
Trichlorophenols (TriCP), all isomers (CAS 25167-82-2)				
Tetrachlorophenols (TeCP), salts and compounds (CAS 25167-83-3)				
Pentachlorophenol (PCP), salts, esters and compounds (CAS 87-86-5)				
Colorants	Usage ban			DIN 54231: Textiles – Detection of disperse dyestuffs
Colorants with carcinogenic potential listed in Appendix E	DL: 20			
Colorants with allergenic potential listed in Appendix F	DL: 20			
Colorants banned for other reasons listed in Appendix G	DL: 20			

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Dioxins and Furans listed in Appendix H	Usage ban			EPA 8290A (HRGC/HRMS)
Group 1	Sum of group 1: 1 µg/kg			
Group 2	Sum of group 1 and 2: 5 µg/kg			
Group 3	Sum of group 1, 2 and 3: 100 µg/kg			
Group 4	Sum of group 4: 1 µg/kg			
Group 5	Sum of group 4 and 5: 5 µg/kg			
Flame retardants listed in Appendix I	Usage ban DL: 5			Solvent extraction // GC-MS or LC-MS
Fluorinated Greenhouse Gases listed in Appendix J	Usage ban DL: 0.1			GC-MS
Fluorinated Substances				
Perfluorooctane sulfonic acid / Perfluorooctane sulfonate (PFOS) (CAS 1763-23-1)	Usage ban 1 [µg/m ²]			Solvent extraction // GC-MS or LC-MS
Perfluorocarboxylic acid and salts (PFHxA, PFOA) (CAS 307-24-4, 335-67-1)	Usage ban 0.05			Solvent extraction // LC-MS

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Glycols				
Bis(2-methoxyethyl)-ether (CAS 111-96-6)	Usage ban DL:5			Solvent extraction, GC-MS or Multiple Headspace GC-MS
2-Ethoxyethanol (CAS 110-80-5)				
2-Ethoxyethyl acetate (CAS 111-15-9)				
Ethylene glycol dimethyl ether (CAS 110-71-4)				
2-Methoxyethanol (CAS 109-86-4)				
2-Methoxyethylacetate (CAS 110-49-6)				
2-Methoxy-1-propanol (CAS 1589-47-5)				
2-Methoxypropylacetate (CAS 70657-70-4)				
Triethylene glycol dimethyl ether (CAS 112-49-2)				
Halogenated Biphenyls, halogenated Terphenyls, halogenated Naphthalenes listed in Appendix K	Usage ban DL: 1 DL: 5 (PBBs)			Solvent extraction // GC-MS
Halogenated Diarylalkanes listed in Appendix L	Usage ban DL: 1			Solvent extraction, GC-MS
Isocyanates listed in Appendix M	Free content Sum of all: 1.0			EN 13130-8:2004 (Plastics) Extraction // Derivatisation // LC
Monomers: Acrylamide (CAS 79-06-1)	1.0	1.0	1.0	Solvent extraction or Multiple Headspace // GC-MS

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Other Chemical Substances				
Bisphenol A (CAS 80-05-7)	Usage ban for textile finishing DL: 1.0 Accessories: 50			Solvent Extraction // GC-MS or LC-MS
Cresol, all isomers (CAS 1319-77-3)	Usage ban DL:10			Solvent extraction // LC-MS
m-Cresol (CAS 108-39-4)				
o-Cresol (CAS 95-48-7)				
p-Cresol (CAS 106-44-5)				
Dimethylfumarate (CAS 624-49-7)	Usage ban DL: 0.1			Solvent extraction // GC-MS
o-Phenylphenol (CAS 90-43-7)	50	50	50	Solvent Extraction // GC-MS
2-Phenyl-2-propanol (CAS 617-94-7)	1.0	10	10	Solvent Extraction // GC-MS
Ozone Depleting Substances listed in Appendix N	Usage ban for direct use in manufacturing of articles DL: 0.1			GC-MS
Pesticides listed in Appendix O	Usage ban 0.5 applies to sum of pesticides			EPA 8081B Organochlorine pesticides by GC GC-ECD or GC-ELCD EPA 8151A Chlorinated herbicides by GC using methylation or pentafluorobenzoylation derivatization GC-ECD or GC-MS
Plasticizers listed in Appendix P	Usage ban 50			Solvent Extraction // GC-MS

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Polyaromatic Hydrocarbons (PAHs) listed in Appendix Q	Usage ban 10 sum of all PAHs 0.2 Benzo(a)pyrene 1.0 PAHs marked with (*)			EPA 8310 Polynuclear aromatic hydrocarbons EPA 8270D Semi-volatile organic compounds by GC-MS EPA 8275A Semi-volatile organic compounds (PAHs and PCBs) using thermal extraction and GC-MS ZEK 01.4-08 Testing and Validation of Polycyclic Aromatic Hydrocarbons (PAH) in the course of GS-Mark Certification
Polymers				
Polyvinyl chloride (PVC) (CAS 9002-86-2)	Usage ban for A and B Not detected			Beilstein test // FTIR
Solvents				
Benzene (71-43-2)	Usage ban DL:1.0			Solvent Extraction // GC-MS
1,2-Dichloroethane (CAS 107-06-2)	Usage ban DL:1.0			Solvent Extraction // GC-MS
Dichloromethane (CAS 75-09-2)	Usage ban DL:5			Solvent Extraction // GC-MS
N,N-Dimethylacetamide (DMAc) (CAS 127-19-5)	Usage ban in auxiliaries with exception of solvent coating DL: 5			Solvent Extraction // GC-MS or LC-MS
	Limits for residual fibre solvent:			
	10	50	50	

PARAMETER	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
N,N-Dimethylformamide (DMF) (CAS 68-12-2)	Usage ban with exception of solvent coated articles DL:5			Solvent Extraction // GC-MS or LC-MS
	Residual fibre solvent and solvent coated articles:			
	50	50	50	
N-Ethyl-2-pyrrolidone (NEP) (CAS 2687-91-4)	10	10	100	Solvent Extraction // GC-MS or LC-MS
N-Methylpyrrolidone (NMP) (CAS 872-50-4)	10	10	100	Solvent Extraction // GC-MS or LC-MS
Tetrachloroethylene (Perchloroethylene) (CAS 127-18-4)	Usage ban DL: 1.0			Solvent extraction // GC-MS or Multiple Headspace GC-MS
Toluene (CAS 108-88-3)	10	50	50	Solvent extraction // GC-MS or Multiple Headspace GC-MS
Trichloroethylene (CAS 79-01-6)	Usage ban DL: 5			Solvent extraction // GC-MS or Multiple Headspace GC-MS
Xylene, all isomers (CAS 1330-20-7)	Usage ban in textile finishing DL:1.0			Multiple Headspace GC-MS
m-Xylene (CAS 108-38-3)	Non-textile articles Traces:			
o-Xylene (CAS 95-47-6)				
p-Xylene (CAS 106-42-3)	1.0	1.0	1.0	

SUBSTANCE	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Tin organic compounds	Usage ban			ISO 17353:2004
Monobutyltin compounds (MBT)		1.0		
Monooctyltin compounds (MOT)		2.0		
Dimethyltin compounds (DMT)		DL:0.05		
Dibutyltin compounds (DBT)		0.2		
Diocetyl tin compounds (DOT)		1.0		
Trimethyltin compounds (TMT)		DL:0.05		
Tripropyltin compounds (TPT)		DL:0.05		
Tributyltin compounds (TBT)		DL:0.05		
Triphenyltin compounds (TPhT)		DL:0.05		
Triocetyl tin compounds (TOT)		DL:0.05		
Tetrabutyltin compounds (TTBT)		DL:0.5		
Tetraocetyl tin compounds (TTOT)		DL:0.5		
Tricyclohexyltin compounds (TCyHT)		DL:0.5		

EXTRACTABLE HEAVY METALS				
METAL	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Antimony (Sb) (CAS 7440-36-0)	Usage ban as flame retardant			
	In other cases:			
	Textiles and leather:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	5	10	10	
	Metal parts and non-metal parts other than textiles and leather:			Extraction - EN 71-3:2013 (Acid solution) // ICP
60				
Arsenic (As) (CAS 7440-38-2)	Usage ban as biocide DL: 0.2			
	In other cases:			
	Non-metal parts:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	0.2			
Cadmium (Cd) (CAS 7440-43-9)	Usage ban			
	Non-metal parts:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	0.1			

METAL	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Chromium, total (Cr) (CAS 7440-47-3)	Textiles:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	0.5			
	Metal complex dyed textiles:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	1.0	2.0	2.0	
	Leather:			-
	No regulation			
	Non-metal parts other than textiles and leather:			Extraction - EN 71-3:2013 (Acid solution) // ICP
If products are covered with a metal layer, including a chromium layer, coating must be constantly in good condition				
60				
Chromium, VI	Usage ban			
	Metal parts and non-metal parts others than leather:			Extraction - DIN EN ISO 17075:2008
	DL: 0.5			
	Leather:			Extraction - DIN EN ISO 17075:2008
DL: 3.0				
Cobalt (Co) (CAS 7440-48-4)	Textiles and leather:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	1.0			
	Metal complex dyed textiles:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	1.0	4.0	4.0	
	Metal parts and non-metal parts others than textiles and leather:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
1.0	4.0	4.0		

METAL	LIMIT [mg/kg]			TEST METHOD
	A	B	C	
Copper (Cu) (CAS 7440-50-8)	Textiles, leather and metal complex dyed textiles:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	25	50	50	
	Non-metal parts others than textiles and leather:			-
No regulation				
Lead (Pb) (CAS 7439-92-1)	Usage ban			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	Textiles, plastics and leather:			
	0.2	1.0	1.0	
Mercury (Hg) (CAS 7439-97-6)	Usage ban			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	Non-metal parts:			
	0.02			
	Metal parts:			
	60			
Nickel (Ni) (CAS 7440-02-0)	Textiles and leather:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	1.0			
	Metal complex dyed textiles:			Extraction - DIN EN ISO 105-E04:2009 (Acid sweat solution) // ICP
	1.0	4.0	4.0	
	Usage ban for A and B			Release EN 12472:2005 +A1-2009; EN 1811:2011
	Metal parts and non metal parts others than textiles and leather: 0.5 [$\mu\text{g}/\text{cm}^2/\text{week}$]			

HEAVY METALS (TOTAL DIGESTION)		
METAL	LIMIT [mg/kg]	TEST METHOD
Total Cadmium (Cd)	Usage ban	
	Non-metal parts (textiles, leather and others)	Total digestion – EN 1122:2002 // ICP
	Traces: 40	
	Metal parts:	Total digestion // ICP
	Traces: 40	
Total Lead (Pb)	Usage ban	
	Textiles, plastics and leather	Total digestion // ICP
	Traces: 40	
	Metal parts	Total digestion // ICP
	Traces: 90	

Appendices

Appendix A: Alkylphenols and Alkylphenoethoxylates	CAS – No.
Nonylphenol (NP)	several
Octylphenol (OP)	several
Nonylphenoethoxylate (EO) ₃₋₂₀	several
Octylphenoethoxylate (EO) ₃₋₂₀	several

Appendix B: Arylamines	CAS – No.
p-Aminoazobenzene	60-09-3
o-Aminoazotoluene	97-56-3
4-Aminobiphenyl	92-67-1
2-Amino-4-nitrotoluene	99-55-8
2-Anisidine	90-04-0
Benzidine	92-87-5
4-Chloroaniline	106-47-8
4-Chlor-2-toluidine	95-69-2
p-Cresidine	120-71-8
2,4-Diaminoanisole	615-05-4
4,4'-Diaminodiphenylmethane	101-77-9
2,4-Diaminotoluene	95-80-7
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
4,4'-Methylenebis-(2-chloraniline)	101-14-4
2-Naphthylamine	91-59-8
4,4'-Oxydianiline	101-80-4
4,4'-Thiodianiline	139-65-1
2-Toluidine	95-53-4
2,4,5-Trimethylaniline	137-17-7
2,4-Xylidine	95-68-1
2,6-Xylidine	87-62-7

Appendix C: Asbestos	CAS – No.
Actinolite	77536-66-4
Amosite	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6

Appendix D: Chlorinated Aromatic Hydrocarbons	CAS – No.
Monochlorobenzene	108-90-7
Dichlorobenzenes, all isomers	Several
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Trichlorobenzenes, all isomers	Several
1,2,3-Trichlorobenzene	87-61-6
1,2,4-Trichlorobenzene	120-82-1
1,3,5-Trichlorobenzene	108-70-3
Tetrachlorobenzenes, all isomers	Several
1,2,3,4-Tetrachlorobenzene	634-66-2
1,2,3,5-Tetrachlorobenzene	634-90-2
1,2,4,5-Tetrachlorobenzene	95-94-3
Pentachlorobenzene	608-93-5
Hexachlorobenzene	118-74-1
Monochlorotoluenes, all isomers	Several
2-Chlorotoluene	95-49-8
3-Chlorotoluene	108-41-8
4-Chlorotoluene	106-43-4
Dichlorotoluenes, all isomers	Several
2,4-Dichlorotoluene	95-73-8
2,6-Dichlorotoluene	118-69-4
3,4-Dichlorotoluene	95-75-0
Trichlorotoluenes, all isomers	Several
2,3,6-Trichlorotoluene	2077-46-5
a,a,a-Trichlorotoluene	98-07-7
Tetrachlorotoluenes, all isomers	Several
a,a,a,2-Tetrachlorotoluene	2136-89-2
a,a,a,4-Tetrachlorotoluene	5216-25-1
Pentachlorotoluene	877-11-2

Appendix E: Colorants with carcinogenic potential	CAS – No.
Acid Red 26	3761-53-3
Basic Red 9	569-61-9
Basic Violet 14	632-99-5
Direct Black 38	1937-37-7
Direct Blue 6	2602-46-2
Direct Red 28	573-58-0
Direct Yellow 1	6472-91-9
Disperse Blue 1	2475-45-8
Disperse Orange 11	82-28-0
Disperse Yellow 3	2832-40-8
Pigment Yellow 34	1344-37-2
Pigment Red 104	12656-85-8

Appendix F: Colorants with allergenous potential	CAS – No.
Disperse Blue 3	2475-46-9
Disperse Blue 7	3179-90-6
Disperse Blue 26	3860-63-7
Disperse Blue 35	12222-75-2 56524-77-7
Disperse Blue 102	12222-97-8
Disperse Blue 106	12223-01-7
Disperse Blue 124	61951-51-7
Disperse Brown 1	23355-64-8
Disperse Orange 1	2581-69-3
Disperse Orange 3	730-40-5
Disperse Orange 37/59/76	12223-33-5 13301-61-6
Disperse Red 1	2872-52-8
Disperse Red 11	2872-48-2
Disperse Red 17	3179-89-3
Disperse Yellow 1	119-15-3
Disperse Yellow 9	6373-73-5
Disperse Yellow 39	12236-29-2
Disperse Yellow 49	54824-37-2

Appendix G: Colorants banned for other reasons	CAS – No.
Basic Blue 26	2580-56-5
Basic Green 4	Several
Malachit green	10309-95-2
Malachit green chloride	569-64-2
Malachit green oxalate	2437-29-8
Disperse Yellow 23	6250-23-3
Disperse Orange 149	85136-74-9
Navy Blue	Component 1: 118685-33-9 Component 2: Not allocated

Appendix H: Dioxins and Furans	CAS – No.
Group 1:	Several
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4
Group 2:	Several
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5

Appendix H: Dioxins and Furans	CAS – No.
Group 3:	Severall
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0
Group 4:	Severall
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8
2,3,7,8-Tetrabromodibenzofuran	67733-57-7
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2
Group 5:	Severall
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7
1,2,3,7,8-Pentabromodibenzofuran	107555-93-1

Appendix I: Flame retardants	CAS – No.
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0
Bis(2,3-dibromopropyl)phosphate	5412-25-9
Chlorinated paraffins, all chain lengths	Severall
Paraffin wax, chlorinated, C24	63449-39-8
Paraffin, C ₁₀ -C ₁₃ , chlorinated (SCCP)	85535-84-8
Paraffin, C ₁₄ -C ₁₇ , chlorinated (MCCP)	85535-85-9
Paraffin, C ₁₈ -C ₂₈ , chlorinated (LCCP)	85535-86-0
Hexabromocyclododecan	25637-99-4
	3194-55-6
	134237-50-6
	134237-51-7
134237-52-8	
Polybrominated diphenyl ethers (PBDE)	Severall
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9
Pentabromodiphenyl ether (PentaBDE)	32534-81-9
Hexabromodiphenyl ether (HexaBDE)	36483-60-0
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3
Octabromodiphenyl ether (OctaBDE)	32536-52-0
Decabromodiphenyl ether (DecaBDE)	1163-19-5
Tetrabromobisphenol A	79-94-7
Tetrabromobisphenol A bis(2,3-dibromopropylether)	21850-44-2
Triethylenephosphoramidate (TEPA)	545-55-1
Trimethyl phosphate	512-56-1
Tri-o-cresyl phosphate	78-30-8
Tris(chloroethyl)phosphate	115-96-8
Tris-(2-chloro-1-methylethyl)phosphate (TCPP)	13674-84-5
Tris-[2-chloro-1-(chloromethyl)ethyl]phosphate (TDCP)	13674-87-8
Tris(2,3-dibromopropyl)phosphate (TRIS)	126-72-7
Trixylyl phosphate	25155-23-1

Appendix J: Fluorinated Greenhouse Gases	CAS – No.
Sulphur hexafluoride – SF ₆	2551-62-4
Perfluoromethane	75-73-0
Perfluoroethane	76-16-4
Perfluoropropane	76-19-7
Perfluorobutane	355-25-9
Perfluoropentane	678-26-2
Perfluorohexane	355-42-0
Perfluorocyclobutane	115-25-3
HFC-23	75-46-7
HFC-32	75-10-5
HFC-41	593-53-3
HFC-43-10mee	138495-42-8
HFC-125	354-33-6
HFC-134	359-35-3
HFC-134a	811-97-2
HFC-152a	75-37-6
HFC-143	430-66-0
HFC-143a	420-46-2
HFC-227ea	431-89-0
HFC-236cb	677-56-5
HFC-236ea	431-63-0
HFC-236fa	690-39-1
HFC-245ca	679-86-7
HFC-245fa	460-73-1
HFC-365mfc	406-58-6

Appendix K: Halogenated Biphenyls, Terphenyls, Napthalenes	CAS – No.
Polybrominated biphenyls (PBBs)	Several
Polychlorinated biphenyls (PCBs)	Several
Polychlorinated terphenyls (PCTs)	Several
Polybrominated terphenyls (PBTs)	Several
Polychlorinated naphthalenes (PCNs)	Several
Polybrominated naphthalenes (PBNs)	Several

Appendix L: Halogenated Diarylalkanes	CAS – No.
Monomethyl-dibromo-diphenyl methane	99688-47-8
Monomethyl-dichloro-diphenyl methane	81161-70-8
Monomethyl-tetrachloro-diphenyl methane	76253-60-6

Appendix M: Isocyanates	CAS – No.
Diphenylmethane-4,4-diisocyanate (MDI)	101-68-8
Hexamethylene diisocyanate (HMDI)	822-06-0
Isophorone diisocyanate (IPDI)	4098-71-9
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9
Toluene-2,4-diisocyanate (2,4-TDI)	584-84-9
Toluene-2,6-diisocyanate (2,6-TDI)	91-08-7

Appendix N: Ozone Depleting Substances	CAS – No.
Ozone-depleting substances (CFC's) class I	Several
Trichlorofluoromethane CFC-11	75-69-4
Dichlorofluoromethane CFC-12	75-71-8
1,1,2-Trichloro-1,2,2-trifluoroethane CFC-113	76-13-1
1,1,1-Trichloro-2,2,2-trifluoroethane CFC-113a	354-58-5
1,2-Dichloro-1,1,2,2-tetrafluoroethane CFC-114	76-14-2
1,1-Dichloro-1,2,2,2-tetrafluoroethane CFC-114a	374-07-2
Monochloropentafluoroethane CFC-115	76-15-3
Bromochlorodifluoromethane Halon-1211	353-59-3
Bromotrifluoromethane Halon-1301	75-63-8
Dibromotetrafluoroethane Halon-2402	124-73-2
Chlorotrifluoromethane CFC-13	75-72-9
Pentachlorofluoroethane CFC-111	354-56-3
1,1,2,2-Tetrachloro-1,2-difluoroethane CFC-112	76-12-0
1,1,1,2-Tetrachlorodifluoroethane CFC-112a	76-11-9
Heptachlorofluoropropane CFC-211	422-78-6
Hexachlorodifluoropropane CFC-212	3182-26-1
Pentachlorotrifluoropropane CFC-213	2354-06-5
Tetrachlorotetrafluoropropane CFC-214	29255-31-0
1,1,3-Trichloropentafluoropropane CFC-215	76-17-5
1,2,3-Trichloropentafluoropropane CFC-215	1652-81-9
1,1,1-Trichloropentafluoropropane CFC-215	4259-43-2
1,2,2-Trichloropentafluoropropane CFC-215	1599-41-3
Dichlorohexafluoropropane CFC-216	661-97-2
Monochloroheptafluoropropane CFC-217	422-86-6
Carbon tetrachloride CCl ₄	56-23-5
1,1,1-Trichloroethane (Methylchloroform)	71-55-6
Methylbromide (CH ₃ Br)	74-83-9
CHFBr ₂	1868-53-7
CHF ₂ Br	1511-62-2
CH ₂ FBr	373-52-4
C ₂ H ₂ FBr ₄	353-93-5
C ₂ H ₂ F ₂ Br ₃	353-97-9
C ₂ H ₂ F ₃ Br ₂	354-04-1
C ₂ H ₂ F ₄ Br	354-07-4
C ₂ H ₂ F ₂ Br ₃	172912-75-3
C ₂ H ₂ F ₃ Br ₂	75-82-1
C ₂ H ₂ F ₃ Br	421-06-7
C ₂ H ₃ FBr ₂	358-97-4
C ₂ H ₃ F ₂ Br	359-07-9
C ₂ H ₄ FBr	762-49-2
C ₃ H ₂ FBr ₆	-
C ₃ H ₂ F ₂ Br ₅	-
C ₃ H ₂ F ₃ Br ₄	-
C ₃ H ₂ F ₄ Br ₃	666-48-8
C ₃ H ₂ F ₅ Br ₂	431-78-7
C ₃ H ₂ F ₆ Br	2252-79-1
C ₃ H ₂ FBr ₅	-
Ozone-depleting substances (CFC's) class I	Several
C ₃ H ₂ F ₂ Br ₄	148875-98-3
C ₃ H ₂ F ₃ Br ₃	431-48-1
C ₃ H ₂ F ₄ Br ₂	460-86-6
C ₃ H ₂ F ₅ Br	460-88-8
C ₃ H ₃ FBr ₄	-
C ₃ H ₃ F ₂ Br ₃	666-25-1
C ₃ H ₃ F ₃ Br ₂	460-60-6

C3H3F4Br	460-67-3
C3H4FBr3	75372-14-4
C3H4F2Br2	51584-25-9
C3H4F3Br	460-32-2
C3H5FBr2	453-00-9
C3H5F2Br	461-49-4
C3H6FBr	1871-72-3
Chlorobromomethane CH2BrCl	74-97-5
Ozone-depleting substances (CFC's) class II	Several
Dichlorofluoromethane HCFC-21	75-43-4
Monochlorodifluoromethane HCFC-22	75-45-6
Monochlorofluoromethane HCFC-31	593-70-4
Tetrachlorofluoroethane HCFC-121	354-14-3
Trichlorodifluoroethane HCFC-122	354-21-2
Dichlorotrifluoroethane HCFC-123	306-83-2
Monochlorotetrafluoroethane HCFC-124	2837-89-0
Trichlorofluoroethane HCFC-131	359-28-4
Dichlorodifluoroethane HCFC-132	1649-08-7
Monochlorotrifluoroethane HCFC-133a	75-88-7
HCFC-141	-
Dichlorofluoroethane HCFC-141b	1717-00-6
HCFC-142	
Monochlorodifluoroethane HCFC-142b	75-68-3
HCFC-151	-
Hexachlorofluoropropane HCFC-221	422-26-4
Pentachlorodifluoropropane HCFC-222	422-49-1
Tetrachlorotrifluoropropane HCFC-223	422-52-6
Trichlorotetrafluoropropane HCFC-224	422-54-8
HCFC-225	-
Dichloropentafluoropropane HCFC-225ca	422-56-0
Dichloropentafluoropropane HCFC-225cb	507-55-1
Monochlorohexafluoropropane HCFC-226	431-87-8
Pentachlorofluoropropane HCFC-231	421-94-3
Tetrachlorodifluoropropane HCFC-232	460-89-9
Trichlorotrifluoropropane HCFC-233	7125-84-0
Dichlorotetrafluoropropane HCFC-234	425-94-5
Monochloropentafluoropropane HCFC-235	460-92-4
Tetrachlorofluoropropane HCFC-241	666-27-3
Trichlorodifluoropropane HCFC-242	460-63-9
Dichlorotrifluoropropane HCFC-243	460-69-5
Monochlorotetrafluoropropane HCFC-244	134190-50-4
Monochlorotetrafluoropropane HCFC-251	421-41-0
Ozone-depleting substances (CFC's) class II	Several
Dichlorodifluoropropane HCFC-252	819-00-1
Monochlorotrifluoropropane HCFC-253	460-35-5
Dichlorofluoropropane HCFC-261	420-97-3
Monochlorodifluoropropane HCFC-262	421-02-3
Monochlorofluoropropane HCFC-271	430-55-7

Appendix O: Pesticides	CAS – No.
Aldrine	309-00-2
Azinphos methyl	86-50-0
Azinphos ethyl	2642-71-9
Bromophos-ethyl	4824-78-6
Captafol	2425-06-1
Carbaryl	63-25-2
Chlordane	57-74-9
Chlordecone	143-50-0

Chlordimeform	6164-98-3
Chlorfenvinphos	470-90-6
Coumaphos	56-72-4
Cyfluthrin	68359-37-5
Cyhalothrin, λ-	91465-08-6
Cypermethrin	52315-07-8
Deltamethrin	52918-63-5
Diazinon	333-41-5
o,p'-Dichlorodiphenyldichloroethane (o,p'-DDD)	53-19-0
p,p'-Dichlorodiphenyldichloroethane (p,p'-DDD)	72-54-8
o,p'-Dichlorodiphenyldichloroethylene (o,p'-DDE)	3424-82-6
p,p'-Dichlorodiphenyldichloroethylene (p,p'-DDE)	72-55-9
o,p'-Dichlorodiphenyltrichloroethane (o,p'-DDT) and its isomers; preparations containing DDT and its isomers	789-02-6
p,p'-Dichlorodiphenyltrichloroethane (p,p'-DDT) and its isomers; preparations containing DDT and its isomers	50-29-3
2,4-Dichlorophenoxyacetic acid, its salts and compounds	94-75-7
Dichlorprop	120-36-2
Dicrotophos	141-66-2
Dieldrine	60-57-1
Dimethoate	60-51-5
Dinoseb and salts	88-85-7
Endosulfan, α-	959-98-8
Endosulfan, β-	33213-65-9
Endrine	72-20-8
Esfenvalerate	66230-04-4
Fenvalerate	51630-58-1
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Hexachlorocyclohexane (HCH), all isomers	608-73-1
Isodrin	465-73-6
Kelevane	4234-79-1
Lindane	58-89-9
Malathion	121-75-5
Appendix O: Pesticides	CAS – No.
MCPA	94-74-6
MCPB	94-81-5
Mecoprop	93-65-2
Methamidophos	10265-92-6
Methoxychlor	72-43-5
Methyl parathion	298-00-0
Mevinophos	7786-34-7
Mirex	2385-85-5
Monocrotophos	6923-22-4
Ethyl parathion	56-38-2
Perthane	72-56-0
Profenophos	41198-08-7
Propetamphos	31218-83-4
Quinalphos	13593-03-8
Strobane	8001-50-1
Telodrin	297-78-9
Toxaphene	8001-35-2
Tribufos (DEF)	78-48-8
2,4,5-Trichlorophenoxyacetic acid, salts and compounds	93-76-5
Trifluralin	1582-09-8

Appendix P: Plasticizer	CAS – No.
Bis-(2-methoxyethyl) phthalate (DMEP)	117-82-8
Butylbenzyl phthalate (BBP)	85-68-7
Dibutyl phthalate (DBP)	84-74-2
Di-cyclohexyl phthalate (DCHP)	84-61-7
Diethylhexyl phthalate (DEHP)	117-81-7
Diethyl phthalate (DEP)	84-66-2
Diisobutyl phthalate (DIBP)	84-69-5
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0
Di-isooctyl phthalate (DIOP)	27554-26-3
Di-iso-pentyl phthalate (DIPP)	605-50-5
Dimethyl phthalate (DMP)	131-11-3
Di-n-hexyl phthalate (DNHP)	84-75-3
Di-n-octyl phthalate (DNOP)	117-84-0
Dinonyl phthalate (DNP)	84-76-4
Di-n-pentyl phthalate (DnPP)	131-18-0
Di-n-propyl phthalate (DPRP)	131-16-8
n-Pentyl-isopentyl phthalate	776297-69-9
1,2-Benzenedicarboxylic acid, di-C ₆₋₈ -branched alkyl esters, C ₇ -rich (DIHP)	71888-89-6
1,2-Benzenedicarboxylic acid, di-C ₇₋₁₁ -branched and linear alkyl esters (DHNUP)	68515-42-4
1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4

Appendix Q: Polyaromatic Hydrocarbons (PAHs)	CAS – No.
Acenaphthylene	208-96-8
Acenaphthene	83-32-9
Anthracene	120-12-7
Benzo(a)anthracene*	56-55-3
Benzo(b)fluoranthene*	205-99-2
Benzo(j)fluoranthene*	205-82-3
Benzo(k)fluoranthene*	207-08-9
Benzo(ghi)perylene	191-24-2
Benzo(a)pyrene	50-32-8
Benzo(e)pyrene*	192-97-2
Chrysene*	218-01-9
Dibenzo(a,h)anthracene*	53-70-3
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

Restricted Substance List Edition 3.4 - Annex I

Usage Ranges

Usage ranges classify consumer goods according to their consumer safety relevance.

Exposure scenarios concerning oral, dermal and inhalative exposure are the guiding principle for definition of limit values as consumer safety limits and basis for setting usage ranges. Dermal exposure (exposure to human skin) serves as the main allocation principle. Other exposure routes override this allocation if the need for a more stringent classification results from the respective usage situation.

Three usage ranges (A, B, C) are defined with A being the most stringent category concerning limit values/bans:

- Usage Range A: Next to skin use and baby-safe (0 to 3 years)
- Usage Range B: Occasional skin contact
- Usage Range C: No skin contact

This means a garment is at least usage range B if not wearing properties and expected consumer behavior require a classification in usage range A.

The following table lists common consumer goods and allocates usage ranges. This classification is typically valid for the complete product. Exceptions are defined in the list.

Consumer goods	Usage range	Usage range	Usage range	
	A	B	C	
Automotive			x	Seat fabric - usage range B
Baby wear and textile articles (0 – 3 years)	x			
Backpack			x	Shoulder straps, harness and backrest that have contact with the skin must be usage range A
Bed linen	x			
Bike shorts	x			
Blouse		x		
Bra	x			
Carpet		x		
Cleaning cloth		x		
Curtain			x	
Dress		x		
Furnishing fabric		x		e.g. Seat cover
Geo textiles			x	e.g. Building-/construction textiles, erosion protective textiles
Gloves/Mittens	x			
Harness		x		
Headdress	x			
Jacket		x		
Leggings	x			
Long sleeve t-shirt	x			
Mosquito net			x	
Pants		x		
Pullover		x		
Ropes & slings		x	x	Depends on use
Scarf	x			
Shirt		x		
Skirt		x		
Sleeping bag		x		Lining must be must be usage range A
Sleeping mattress	x			
Socks	x			
Sport shirt	x			
Sweatshirt		x		
Swim wear	x			
Tent			x	Tent floor must be usage range B
Tie		x		
Tights	x			
Towel		x		
T-Shirt	x			
Underpants (long/short)	x			
Undershirt	x			

Restricted Substance List Edition 3.4 - Annex II

Recommendations for testing

Test Item	Textiles from natural fibres	Textiles from synthetic fibres	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
pH Value	●	●		●	-	-
Odor	●	●		●	●	-
Color Fastness Properties						
Fastness to perspiration	●	●		●	-	-
Color fastness to saliva and perspiration (baby, mouthing)	●	●		●	●	-
Extractable Heavy Metals						
Antimony	-	PES ●		○	○	-
Arsenic	○	-		○	○	-
Cadmium	-	○	●	-	●	○
Chromium, total	Wool ● Other ○	PA ● Other ○		-	○	-
Chromium VI	○	○		●	○	-
Cobalt	○	○		○	○	-
Copper	○	○		○	○	-
Lead	●	●		●	●	○
Mercury	○	○		○	○	-
Nickel	○	○		○	○	-
Heavy Metals (total digestion)						
Total Lead	●	●		●	●	●
Total Cadmium	●	●		●	●	●
Heavy Metals (release)						
Nickel	-	-		-	-	●
Aldehydes						
Formaldehyde	●	●		●	-	-
Alkylphenols and Alkylphenoethoxylates	●	●		●	○	-
Arylamines	●	●		●	-	-
Chlorinated Aromatic Hydrocarbons	-	●		○	-	-
Chlorinated Phenols	●	●		●	-	-

Test Item	Textiles from natural fibres	Textiles from synthetic fibres	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
Colorants						
with carcinogenic potential	●	●		●	-	-
with allergenous potential	○	●		○	-	-
banned for other reasons	●	●		●	-	-
Flame Retardants (Required if sample declared with functional finishing)	○	○		-	○	-
Fluorinated Substances						
Perfluorooctane sulfonic acid / Perfluorooctane sulfonate (PFOS) (Required if sample declared with stain/water repellent finishing)	○	○		○	-	-
Perfluorocarboxylic acids and salts [PFHxA, PFOA] (Required if sample declared with stain/water repellent finishing)	○	○		○	-	-
Glycols	-	-		-	-	-
Halogenated Biphenyls, Terphenyls and Naphthalenes	○	○		○	○	-
Halogenated Diarylalkanes	○	○		-	○	-
Isocyanates (Required for PU and for relevant functional finishes)	○	○	PU ●	-	PU ●	-
Monomers						
Acrylamide	○	○		-	○	-
Other Chemical Substances						
Bisphenol A	○	○		-	●	-
Cresol, all isomers	○	○		○	-	-
Dimethylfumarate (Material with direct skin contact; required if the product is packaged with any form of anti-mold agent)	○	○		○	○	-
o-Phenylphenol	○	○		●	-	-
2-Phenyl-2-propanol	-	-		-	EVA ●	-
Pesticides	○	-		○	-	-
Plasticizers	-	-	●	-	●	-
Polyaromatic Hydrocarbons (PAHs) incl. Benzo(a)pyrene	-	-	●	-	●	-

Test Item	Textiles from natural fibres	Textiles from synthetic fibres	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
Polymers						
Polyvinylchloride (PVC)	-	-	●	-	●	-
Solvents						
Benzene	-	-		-	-	-
1,2-Dichloroethane	-	-		-	-	-
Dichloromethane	-	-		-	-	-
N,N-Dimethylacetamide [DMAc]	-	○	○	○ 1	○	-
N,N-Dimethylformamide [DMF]	-	-	●	● 1	○	-
N-Ethyl-2-pyrrolidone [NEP]	○	○		○	○	-
N-Methylpyrrolidone [NMP]	○	○		○	○	-
Tetrachloroethylene	○	○		○	○	-
Toluene	-	-	●	● 1	●	-
Trichloroethylene	○	○		●	○	-
Xylene, all isomers	-	-		-	-	-
Tin Organic Compounds	○	○	●	● 1	●	-

CAS-numbers, test methods, complete chemicals list: see RSL

- Testing strongly recommended
- Testing recommended
- Substances or group of substances with high probability not relevant
- 1 Only if finishing of leather includes coating with solvents