

BESTSELLER Restricted Substances List

Version 9: March 2018

Applicable on all products from 1st July 2018

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Introduction

All products supplied to BESTSELLER by suppliers must meet legal requirements in all markets that BESTSELLER brands deliver to.

BESTSELLER's Restricted Substances List (RSL) describes the limitation and prohibition of substances in products manufactured for BESTSELLER. The RSL has been developed based on the law, a concern for the health of our customers, the working conditions inside the factories producing our goods, and the preservation of the environment – both in production countries, and where our products are sold.

The listed values and additional notes in this document are applicable to all suppliers manufacturing or providing products for BESTSELLER.

The RSL applies to and covers all garments, shoes, accessories and other products of value (referred to as 'articles'). The articles include every type of supplement such as zippers, buttons, rivets and labels (list is indicative not all-inclusive). Suppliers must also ensure that all samples meet the requirements set in the RSL.

Suppliers must comply with all legislation, product requirements and manufacturing requirements in all countries where they are producing. All labour, workplace and environmental laws in the country of production must be followed.

It is the responsibility of the supplier to ensure that articles they supply to BESTSELLER meet these requirements, which must be fully communicated to and controlled by all subcontractors and suppliers of raw materials and components throughout the supply chain.

Suppliers should note that the RSL will be updated when necessary. Messages and updates regarding the RSL will be placed on the Supplier Portal news page.

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CHANGES AND ADDITIONS BESTSELLER RSL 2018

SUBSTANCE GROUP	CAS	SUBSTANCE	CHANGES OR ADDITIONS	PAGE
Acetophenone and 2-Phenyl-2-Propanol	98-86-2 617-94-7	Acetophenone 2-Phenyl-2-propanol	New addition: 50ppm for each substance	8
Acidic and Alkaline Substances (pH)	-	-	Updated limit for Leather 3.5 - 7.0, >3yrs footwear & accessories: 3.2-7.0	8
Alkylphenols (APs) + Alkylphenol Ethoxylates(APEOs) including all isomers	Various	NP, OP, NPEOs and OPEO's	Updated limit: 10ppm for NP and OP combined (same),100ppm for NPEO's and APEO's combined (previously limit of 100ppm for NP, OP, NPEOs and OPEOs combined) Updated test methods	8
Bisphenol-A (BPA)	80-05-7	-	New addition: 1ppm limit	9
Chlorinated Paraffins	85535-85-9	Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	New addition: 1000ppm limit	8
Chlororganic Carriers	1006-31-1	2,3,5,6-Tetrachlorotoluene	Added substance: 2,3,5,6-Tetrachlorotoluene Updated limit: 2ppm total COCs	10
Dyes, Forbidden and Disperse	56524-77-7 56524-76-6 61968-47-6 6300-37-4 54077-16-6 16071-86-6 60-11-7 6786-83-0 561-41-1	C.I. Disperse Blue 35A C.I. Disperse Blue 35B C.I. Disperse Red 151 C.I. Disperse Yellow 7 C.I. Disperse Yellow 56 C.I. Direct Brown 95 4-Dimethylaminoazobenzene (Solvent Yellow 2) C.I. Solvent Blue 4 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	Carcinogenic, allergenic and other banned dyes merged together under 'Forbidden and disperse dyes'. Added substances: (see list). Updated limit: 50ppm for each substance	11
Flame Retardants	Various	All other Polybrominated diphenyl ethers (PBDE)	Added substance Updated limit: 10ppm for each substance	13
Fluorinated Greenhouse Gases	Various	See Regulation (EC) No 842/2006 for a complete list.	New addition: 0.1ppm limit for each substance	13
Heavy Metals	7440-39-3 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7440-02-0	Barium (Ba) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Nickel (Ni)	Added heavy metal. Barium: extractable limit 1000ppm Updated limit total Cadmium (all ages): 40ppm Updated limit extractable Chromium in textiles: 2ppm Updated limit extractable Cobalt (for adults) 4ppm Updated limit extractable Copper (for adults) 50ppm Nickel release applicable on metal parts with prolonged skin contact. Test method update for sunglasses Sunglasses: EN16128	14

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SUBSTANCE GROUP	CAS	SUBSTANCE	CHANGES OR ADDITIONS	PAGE
Monomers	100-42-5 75-01-4	Styrene Vinyl Chloride	New addition	16
N-Nitrosamines	Various	See list	New addition	16
Organotin Compounds	Various	Tricyclohexyltin (TCyHT) Trimethyltin (TMT) Trioctyltin (TOT) Tripropyltin (TPT)	Added compounds: (see list)	17
Ozone-depleting Substances	Various	See Regulation (EC) No 1005/2009 for a complete list.	New addition	17
Perfluorinated and Polyfluorinated Chemicals (PFCs)	Various	See Appendix A	Added substances (see list in Appendix A) Intentional use of PFC technology in production is banned (since 2016).	17
Volatile Organic Compounds (VOCs)	75-15-0 56-23-5 67-66-3 107-06-2 75-35-4 127-19-5 100-41-4 76-01-7 630-20-6 79-34-5 127-18-4 79-00-5 79-01-6 1330-20-7 108-38-3 95-47-6 106-42-3	Carbon Disulfide Carbon tetrachloride Chloroform 1,2-Dichloroethane 1,1-Dichloroethylene Dimethylacetamide (DMAC) Ethylbenzene Pentachloroethane 1,1,1,2- Tetrachloroethane 1,1,1,2- Tetrachloroethane Tetrachloroethylene (PER) 1,1,2- Trichloroethane Trichloroethylene Xylenes (meta-, ortho-, para-)	Benzene limit value 5ppm All other VOC's limit value 500ppm in total VOC's listed in this table are new additions DMFa separated in table from VOC's	20

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Important points to note

EU REACH Substances of Very High Concern

Based on scientific evidence indicating potential hazards to human health or the environment, the European Commission (EC) and European Union (EU) member states propose substances of very high concern (SVHCs) for placement on the European Chemicals Agency (ECHA) "Candidate List of Substances of Very High Concern for Authorisation". Placing a substance on the Candidate List triggers specific obligations for importers, producers, and suppliers of any article that contains one or more of these substances above 0.1 percent by weight per component. The obligations include providing sufficient information to allow safe use of the article to brand and retail customers or, upon request, to a consumer within 45 days of receipt of the request.

In addition, ECHA must be notified if the substance(s) are present in article components above 0.1 percent in quantities totaling over one ton per producer or importer per year. Notification is not required if the substance has already been registered for that use or when the producer or importer of an article can exclude exposure of humans and the environment during the use and disposal of the article. In such cases, the producer or importer must supply appropriate instructions to the recipient of the article.

ECHA periodically updates the Candidate List; find the most current version at <https://www.echa.europa.eu/candidate-list-table>.

Odour

BESTSELLER expects that all products have a 'product specific smell', which can be tested with odour test SNV195 651. Strong smells from garments can occur through a possible unauthorized chemical content, or bad practice in washing or airing processes prior to shipment. A non-product specific odour will be treated as a quality issue – and even if the garment is meeting the RSL, products classed as 4 or 5 will be rejected.

CLASSIFICATION
1= odourless
2= weak
3= tolerable
4= annoying
5= intolerable

Mould

Spores and mycelia of mould should not be detected in any products. Suppliers must note key requirements on spraying of goods and containers to prevent mould during transportation of goods.

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Transportation of goods – Packaging, Containers and cargo

Fumigating, gassing or spraying cargo or containers containing BESTSELLER products with any chemicals is banned. Levels of chemicals are 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 will be claimed.

All product packaging and packaging additions used for storage, labelling and transportation of BESTSELLER articles must meet legal requirements for all countries of shipment. Please refer to BESTSELLER Supplier Manual for details on packaging standards and expectations.

Control

In order to comply with BESTSELLER's Restricted Substances List (RSL), it is important that suppliers have full control and are aware of all chemicals that are being used throughout the entire production network.

Suppliers must ensure that all subcontractors, suppliers of materials and accessories (including labels and packaging), dye-houses, print-houses, tanneries, carriers, etc., are fully aware of the RSL and agree to follow. Suppliers must ensure that all parts of their production network have the latest version of our RSL and that they assist in educating all parts of the supply chain in meeting these requirements – and only work with suppliers that are able to do so. Suppliers should work to understand the chemical aspects of the supply chain to effectively identify and control the risk areas.

Suppliers should select professional and well-run suppliers of materials and dyeing /printing facilities, and ensure the use of dyestuffs, printing chemicals and any other production-process chemicals from reputable and well-known manufacturers.

Suppliers must assume responsibility in ensuring that the production network is constantly informed of BESTSELLER's requirements – and that the materials coming into the factory are able to meet the standard set in the RSL. Material data sheets should be acquired from dye-houses and print-houses to make sure that no banned or restricted chemicals are used.

Chemical Testing Programme

BESTSELLER requires chemical tests on products and has a comprehensive chemical testing programme in place. There is further information on these testing requirements in the **Chemical Testing Programme** which is available on the supplier portal and from your local sourcing office.

Testing and monitoring is coordinated through both the local sourcing offices and buying departments in Denmark. All suppliers must meet agreed testing requirements - this is non-negotiable when producing articles for BESTSELLER.

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Definition of ages

	Age Range
Babies	0 to 36 months
Children	36 months to 14 years
Adults	14 years and older

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Tables of Restricted Substances

CAS No.	Substance	Limits Raw Material & Finished Product	Potential Uses Textile Processing for Apparel & Footwear	Test Method Sample Preparation & Measurement	Reporting Limits Limits above which test results should be reported
Acetophenone and 2-Phenyl-2-Propanol					
98-86-2	Acetophenone	50 ppm each	Potential breakdown products in EVA foam when using dicumyl peroxide as a cross-linking agent.	Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60 degrees C	25 ppm
617-94-7	2-Phenyl-2-propanol				
Acidic and alkaline substances					
N.A.	pH-value	Textiles: 4.0 - 7.5 >3yrs footwear & accessories: 4-8.5 Leather: 3.5 - 7.0 >3yrs footwear & accessories: 3.2-7.0	The pH-value is a characteristic number, ranging from pH 1 to pH 14, indirectly showing the content of acidic or alkaline substances in a product. pH-values below 7 indicate sources of acidic substances and values above 7 indicate sources of alkaline substances. To avoid irritation or chemical burns of skin the pH-value of products shall be in the range of the human skin with ca. pH 5.5.	Textiles: EN ISO 3071:2006 (KCl solution) Leather: EN ISO 4045:2008	NA
Alkylphenols (APs) + Alkylphenol Ethoxylates(APEOs) including all isomers					
Various	Nonylphenol (NP), mixed isomers	Total: 10 ppm	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, de-gumming 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.	Extraction: 1 g sample/20 mL THF, sonication for 60 minutes at 70°C Analysis EN ISO 18857-2:2011	Sum of NP & OP: 3 ppm
Various	Octylphenol (OP), mixed isomers				
Various	Nonylphenol ethoxylates (NPEOs)	Total: 100 ppm	APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes.	Textile: EN ISO 18254-1: 2016, determination of AP using LC/MS or GC/MS Leather: EN ISO 18218-1:2015	Sum of NPEO & OPEO: 20 ppm
Various	Octylphenol ethoxylates (OPEOs)				

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Azo-amines					
92-67-1	4-Aminobiphenyl	20 ppm each	Azo dyes and pigments are colorants 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.	Textile: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2015 p-Aminoazobenzene: Textile: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011	5 ppm
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-Chloraniline				
615-05-4	2,4-Diaminoanisole				
101-77-9	4,4'-Diaminodiphenylmethane				
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'-Diaminodiphenylmethane				
120-71-8	p-Cresidine				
101-14-4	4,4'-Methylen-bis(2-chloraniline)				
101-80-4	4,4'-Oxydianiline				
139-65-1	4,4'-Thiodianiline				
95-53-4	o-Toluidine				
95-80-7	2,4-Toluyldiamine				
137-17-7	2,4,5-Trimethylaniline				
95-68-1	2,4 Xylidine				
87-62-7	2,6 Xylidine				
90-04-0	2-Methoxyaniline (= o-Anisidine)				
60-09-3	p-Aminoazobenzene				
Bisphenol-A					
80-05-7	Bisphenol-A (BPA)	1 ppm	Used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC. Prohibited from use in food and drink containers, and items intended to come into contact with oral cavity.	Sample preparation: Extraction: 1 g sample/20 ml methanol, sonication for 60 minutes at 70°C. Measurement: DIN EN ISO 18857-2:2011 (mod)	1 ppm

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Chlorinated Paraffins					
85535-84-8	Short-chain chlorinated Paraffins (SCCP) (C10-C13)	100 ppm	Used as softeners, flame retardants or as fat liquoring agents in leather production. Also used as plasticizer in polymer production.	Combined CADs / ISO 18219:2015 method V1:06/17 (extraction by ISO 18219 and analysis by GC-NCI-MS)	30 ppm
85535-85-9	Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	1000 ppm			100 ppm
Chlorophenols					
15950-66-0	2,3,4-Trichlorophenol	0.5 ppm each	Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP) and tetrachlorophenol (TeCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing/transporting fabrics. PCP and TeCP can also be used as preservatives in print pastes.	1 M KOH extraction, 12-15 hours at 90 °C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015	0.05 ppm
933-78-8	2,3,5-Trichlorophenol				
933-75-5	2,3,6-Trichlorophenol				
95-95-4	2,4,5-Trichlorophenol				
88-06-2	2,4,6-Trichlorophenol				
609-19-8	3,4,5-Trichlorophenol				
4901-51-3	2,3,4,5-Tetrachlorophenol (TeCP)				
58-90-2	2,3,4,6-Tetrachlorophenol (TeCP)				
935-95-5	2,3,5,6-Tetrachlorophenol (TeCP)				
87-86-5	Pentachlorophenol (PCP)				
Chlororganic Carriers					
95-49-8	2-Chlorotoluene	Total: 2 ppm	COC may be used as carriers during the dyeing process of synthetic fibers, especially polyester and polyester blends. COC are also used as intermediates in the synthesis of other chemicals as well as solvents for dyestuffs and other chemical formulations with high melting points and therefore may be present as impurities.	DIN 54232:2010	0.2 ppm
108-41-8	3-Chlorotoluene				
106-43-4	4-Chlorotoluene				
32768-54-0	2,3-Dichlorotoluene				
95-73-8	2,4-Dichlorotoluene				
19398-61-9	2,5-Dichlorotoluene				
118-69-4	2,6-Dichlorotoluene				
95-75-0	3,4-Dichlorotoluene				
2077-46-5	2,3,6-Trichlorotoluene				
6639-30-1	2,4,5-Trichlorotoluene				
76057-12-0	2,3,4,5-Tetrachlorotoluene				
875-40-1	2,3,4,6-Tetrachlorotoluene				
1006-31-1	2,3,5,6-Tetrachlorotoluene				
877-11-2	Pentachlorotoluene				
95-50-1	1,2-Dichlorobenzene				
541-73-1	1,3-Dichlorobenzene				
106-46-7	1,4-Dichlorobenzene				
87-61-6	1,2,3-Trichlorobenzene				

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120-82-1	1,2,4-Trichlorobenzene				
108-70-3	1,3,5-Trichlorobenzene				
634-66-2	1,2,3,4-Tetrachlorobenzene				
634-90-2	1,2,3,5-Tetrachlorobenzene				
95-94-3	1,2,4,5-Tetrachlorobenzene				
608-93-5	Pentachlorobenzene				
118-74-1	Hexachlorobenzene				
Dimethylformamide					
68-12-2	Dimethylformamide (DMFa)	500 ppm	DMFa is a solvent used in plastics, rubber, and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable.	DIN CEN ISO/TS 16189:2013	50 ppm
Dimethylfumarate					
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent the buildup of mold, especially during shipping.	CEN ISO/TS 16186:2012	0.03 ppm
Dyes, Forbidden and Disperse					
2475-45-8	C.I. Disperse Blue 1	50 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.	DIN 54231:2005	15 ppm
2475-46-9	C.I. Disperse Blue 3				
3179-90-6	C.I. Disperse Blue 7				
3860-63-7	C.I. Disperse Blue 26				
56524-77-7	C.I. Disperse Blue 35A				
56524-76-6	C.I. Disperse Blue 35B				
12222-97-8	C.I. Disperse Blue 102				
12223-01-7	C.I. Disperse Blue 106				
61951-51-7	C.I. Disperse Blue 124				
23355-64-8	C.I. Disperse Brown 1				
2581-69-3	C.I. Disperse Orange 1				
730-40-5	C.I. Disperse Orange 3				
82-28-0	C.I. Disperse Orange 11				
12223-33-5	C.I. Disperse Orange 37/76/59				
13301-61-6					
51811-42-8					

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85136-74-9	C.I. Disperse Orange 149				
2872-52-8	C.I. Disperse Red 1				
2872-48-2	C.I. Disperse Red 11				
3179-89-3	C.I. Disperse Red 17				
61968-47-6	C.I. Disperse Red 151				
119-15-3	C.I. Disperse Yellow 1				
2832-40-8	C.I. Disperse Yellow 3				
6300-37-4	C.I. Disperse Yellow 7				
6373-73-5	C.I. Disperse Yellow 9				
6250-23-3	C.I. Disperse Yellow 23				
12236-29-2	C.I. Disperse Yellow 39				
54824-37-2	C.I. Disperse Yellow 49				
54077-16-6	C.I. Disperse Yellow 56				
3761-53-3	C.I. Acid Red 26				
569-61-9	C.I. Basic Red 9				
569-64-2	C.I. Basic Green 4				
2437-29-8					
10309-95-2					
548-62-9	C.I. Basic Violet 3				
632-99-5	C.I. Basic Violet 14				
2580-56-5	C.I. Basic Blue 26				
1937-37-7	C.I. Direct Black 38				
2602-46-2	C.I. Direct Blue 6				
573-58-0	C.I. Direct Red 28				
16071-86-6	C.I. Direct Brown 95				
60-11-7	4-Dimethylaminoazobenzene (Solvent Yellow 2)				
6786-83-0	C.I. Solvent Blue 4				
561-41-1	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol				
Dyes, Navy Blue					
118685-33-9	Component 1: C39H23ClCrN7O12S:2Na	50 ppm each	Navy blue colourants are regulated and are prohibited from use for dyeing of textiles. (Index 611-070-00-2)	DIN 54231:2005	15 ppm

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Not allocated	Component 2: C46H30CrN10O20S2.3Na				
Flame Retardants					
32534-81-9	Pentabromodiphenyl ether (PentaBDE)	10 ppm each	Flame-retardant chemicals, including the entire class of organohalogen flame retardants, should no longer be used.	EN ISO 17881-1:2016	5 ppm
32536-52-0	Octabromodiphenyl ether (OctaBDE)				
1163-19-5	Decabromodiphenyl ether (DecaBDE)				
various	All other Polybrominated diphenyl ethers (PBDE)				
79-94-7	Tetrabromobisphenol A (TBBP A)				
59536-65-1	Polybromobiphenyls (PBB)				
3194-55-6	Hexabromocyclododecane (HBCDD)			EN ISO 17881-2:2016	
3296-90-0	2,2-bis(bromomethyl)-1,3-propanediol (BBMP)				
13674-87-8	Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)				
25155-23-1	Trixylyl phosphate (TXP)				
126-72-7	Tris(2,3-dibromopropyl) phosphate (TRIS)				
545-55-1	Tris(1-aziridinyl)phosphine oxide) (TEPA)				
115-96-8	Tris(2-chloroethyl)phosphate (TCEP)				
5412-25-9	Bis(2,3-dibromopropyl) phosphate (BDBPP)				
Fluorinated Greenhouse Gases					
Various	See Regulation (EC) No 842/2006 for a complete list.	0.1 ppm each		Sample preparation: Purge and trap — thermal desorption or SPME Measurement: GC/MS	0.1 ppm each
Formaldehyde					
50-00-0	Formaldehyde	Adults and children: 75 ppm Babies: 16 ppm	Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins. Although very rare in apparel & footwear, composite wood materials, e.g., particle board and plywood, must comply with existing California and forthcoming US formaldehyde emission requirements (40 CFR 770).	Textile, wood, paper: EN ISO 14184-1:2011 Leather: ISO 17226-1:2008 with ISO 17226-2:2008 confirmation method in case of interferences.	16 ppm

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Heavy Metals					
7440-36-0	Antimony (Sb)	Extractable: 30 ppm	Found in or used as a catalyst in polymerisation of polyester, flame retardants, fixing agents, pigments and alloys.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017	Extractable: 3 ppm
7440-38-2	Arsenic (As)	Extractable: 0.2 ppm Total: 100 ppm	Arsenic and its compounds can be used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics.	Extractable: Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: Textiles: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017	Extractable: 0.1 ppm Total: 10 ppm
7440-39-3	Barium (Ba)	Extractable: 1000 ppm	Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish, and leather tanning.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017	Extractable: 100 ppm
7440-43-9	Cadmium (Cd)	Extractable: 0.1 ppm Total: 40 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints.	Extractable: Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: Textiles, plastics, metal: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017	Extractable: 0.03 ppm Total: 5 ppm
7440-47-3	Chromium (Cr)	Extractable: Textiles: 2 ppm Leather: 60 ppm	Chromium compounds can be used as dyeing additives, dye-fixing agents, colour fastness, after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning.	Textiles: DIN EN 16711-2:2016 Leather: EN ISO 17072-1:2017	Extractable: 0.5 ppm

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18540-29-9	Chromium VI	Extractable: Leather: 3 ppm Textiles: 0.5 ppm	Though typically associated with leather tanning, Chromium VI also may be used in the dyeing of wool (after the chroming process).	Textiles: DIN EN 16711-2:2016 with EN ISO 17075-1:2017 if Cr is detected Leather: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference Conditions for leather ageing: 24 hours, 80 degrees C, maximum 5% relative humidity, no ventilation	Extractable: Leather: 1 ppm Textiles: 0.5 ppm
7440-48-4	Cobalt (Co)	Extractable: Adults: 4 ppm Children/babies: 1 ppm	Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017	Extractable: 0.3 ppm
7440-50-8	Copper (Cu)	Extractable: Adults: 50 ppm Children/babies: 25 ppm	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017	Extractable: 5 ppm
7439-92-1	Lead (Pb)	Extractable: Adults and children: 1 ppm Babies: 0.2 ppm Total: 90 ppm Glass: 500ppm	May be associated with plastics, paints, inks, pigments and surface coatings.	Extractable: Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coating: CPSIA Section 101 16 CFR 1303	Extractable: 0.1 ppm Total: 10 ppm
7439-97-6	Mercury (Hg)	Extractable: 0.02 ppm Total: 0.5 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints.	Extractable: Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Total: Textiles, plastics, metal: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2017	Extractable: 0.01 ppm Total: 0.1 ppm

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7440-02-0	Nickel (Ni)	Extractable: 1 ppm Release (metal parts): 0.5 µg/cm ² /week Pierced part: 0.2 µg/cm ² /week	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.	Extractable: Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017 Release: EN 12472:2005+ A1:2009 and EN 1811:2015 Sunglasses: EN16128	Extractable & Release: 0.1 ppm
7782-49-2	Selenium (Se)	Extractable: 500 ppm	May be found in synthetic fibers, paints, inks, plastics and metal trims.	Textiles: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2017	Extractable: 50 ppm
Monomers					
100-42-5	Styrene	500 ppm	Styrene is a precursor for polymerization and may be present in various styrene-copolymers like plastic buttons.	GC/MS Headspace 120°C for 45 minutes; -or- Extraction in Methanol GC/MS, sonication for 60 minutes at 60°C	50 ppm
75-01-4	Vinyl Chloride	1 ppm	Vinyl Chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops, and synthetic leather.	EN ISO 6401:2008	1 ppm
N-Nitrosamines					
62-75-9	N-nitrosodimethylamine (NDMA)	0.5 ppm each	Can be formed as by-product in the production of rubber.	GB/T 24153-2009: determination using GC/MS with LC/MS/MS verification if positive. Alternatively, LC/MS/MS may be performed on its own. prEN 19577:2017	0.5 ppm
55-18-5	N-nitrosodiethylamine (NDEA)				
621-64-7	N-nitrosodipropylamine (NDPA)				
924-16-3	N-nitrosodibutylamine (NDBA)				
100-75-4	N-nitrosopiperidine (NPIP)				
930-55-2	N-nitrosopyrrolidine (NPYR)				
59-89-2	N-nitrosomorpholine (NMOR)				
614-00-6	N-nitroso N-methyl N-phenylamine (NMPHA)				
612-64-6	N-nitroso N-ethyl N-phenylamine (NEPHA)				

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Organotin Compounds					
Various	Dibutyltin (DBT)	1 ppm each	Class of 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 plastic and glue production, and 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.	CEN ISO/TS 16179: 2012	0.1 ppm each
Various	Diocetyl tin (DOT)				
Various	Monobutyltin (MBT)				
Various	Tricyclohexyltin (TCyHT)				
Various	Trimethyltin (TMT)				
Various	Triocetyl tin (TOT)				
Various	Tripopyltin (TPT)	0.5 ppm each			
Various	Tributyltin (TBT)				
Various	Triphenyltin (TPhT)				
Ortho-phenylphenol					
90-43-7	Ortho-phenylphenol (OPP)	1000 ppm	OPP can be used for its preservative properties in leather or as a carrier in dyeing processes.	1 M KOH extraction, 12-15 hours at 90 °C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015	100 ppm
Ozone-depleting Substances					
Various	See Regulation (EC) No 1005/2009 for a complete list.	5 ppm	Ozone depleting substances have been used as a foaming agent in PU foams as well as a dry-cleaning agent and are prohibited from use.	GC/MS headspace 120°C for 45 minutes	5 ppm
Perfluorinated and Polyfluorinated Chemicals (PFCs)					
Various	Perfluorooctane Sufonic Acid and Sulfonates (PFOS) and related substances	Others: 1 µg/m ² each	Intentional use of PFC technology in production is banned. Be aware that 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)	CEN/TS 15968:2014	FTOHs: 10 µg/m ² each Others: 1 µg/m ² each
Various	Perfluorooctanoic Acid (PFOA)				
375-85-9	Perfluoroheptane Acid (PFHpA)				
375-95-1	Perfluorononane Acid (PFNA)				
335-76-2	Perfluorodecane Acid (PFDA)				

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2058-94-8, <i>et al.</i>	Henicosaflluoroundecanoic acid and salts (PFUdA)				
307-55-1, <i>et al.</i>	Tricosaflluorododecanoic acid and salts (PFDoA)				
72629-94-8, <i>et al.</i>	Pentacosaflluorotridecanoic acid and salts (PFTrDA)				
376-06-7, <i>et al.</i>	Heptacosaflluorotetradecanoic acid and salts (PFTeDA)				
Various	Further Perfluorinated carboxylic acids (see appendix A)				
Various	Perfluorinated sulfonic acids (see appendix A)				
Various	Partially fluorinated carboxylic/sulfonic acids (see appendix A)				
Various	Esters of fluorinated alcohols with acrylic acid (see appendix A)				
Various	Partially fluorinated linear alcohols - FTOH (see appendix A)	FTOHs: 10 µg/m ² each			
Pesticides, Agricultural					
Various	See Appendix B for a complete list	0.5 ppm each	May be found in natural fibers (primarily cotton).	Natural fibers: ISO 15913/DIN 38407 F2 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09	0.5 ppm
Phthalates					
28553-12-0	Di-iso-nonylphthalate (DINP)	500 ppm each Total: 1000 ppm	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 sleeveings Polymeric coatings	Sample preparation: CPSC-CH-C1001-09.3 Measurement: Textile: GC-MS, EN ISO 14389:2014 (Chapter 7.1) Leather: GC-MS	50 ppm each
117-84-0	Di-n-octylphthalate (DNOP)				
117-81-7	Di(2-ethylhexyl)-phthalate (DEHP)				
26761-40-0	Diisodecylphthalate (DIDP)				
85-68-7	Butylbenzylphthalate (BBP)				
84-74-2	Dibutylphthalate (DBP)				
84-69-5	Diisobutylphthalate (DIBP)				
84-75-3	Di-n-hexylphthalate (DnHP)				
84-66-2	Diethylphthalate (DEP)				
131-11-3	Dimethylphthalate (DMP)				
131-18-0	di-n-pentyl phthalate (DPENP)				

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605-50-5 776297-69-9 84777-06-0				The listed phthalates are those most commonly used and regulated across industry sectors. Find more information about additional phthalates on the REACH SVHC list, which is updated frequently.		
84-61-7	dicyclohexyl phthalate (DCHP)					
68515-42-4	Di(C7-C11 alkyl) phthalate (DHNUP), linear + branched					
71888-89-6	Di(C6-C8 alkyl) phthalate (DIHP), branched, C7 rich					
117-82-8	Di(2-methoxyethyl) phthalate (DMEP)					
Polycyclic Aromatic Hydrocarbons (PAHs)						
83-32-9	Acenaphthene	No individual restriction	Total: 10 ppm	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	AFPS GS 2014	0.2 ppm each
208-96-8	Acenaphthylene					
120-12-7	Anthracene					
191-24-2	Benzo(g,h,i)perylene					
86-73-7	Fluorene					
206-44-0	Fluoranthene					
193-39-5	Indeno(1,2,3-cd)pyrene					
91-20-3	Naphthalene**					
85-01-8	Phenanthrene					
129-00-0	Pyrene					
56-55-3	Benzo(a)anthracene	1 ppm each Babies: 0.5 ppm each		**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).		
50-32-8	Benzo(a)pyrene					
205-99-2	Benzo(b)fluoranthene					
192-97-2	Benzo[e]pyrene					
205-82-3	Benzo[j]fluoranthene					
207-08-9	Benzo(k)fluoranthene					
218-01-9	Chrysene					
53-70-3	Dibenzo(a,h)anthracene					
PVC/PVDC						
9002-85-1	Polyvinyl Chloride (PVC)	Not allowed			Belstein Test – if positive then FTIR must be performed	
9002-86-2	Polyvinylidene chloride (PVDC)					

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Volatile Organic Compounds (VOCs)					
71-43-2	Benzene	5 ppm	<p>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</p>	<p>VOC screening: GC/MS headspace 45 minutes at 120 degrees C</p>	<p>Benzene: 1 ppm Other: 20 ppm each</p>
75-15-0	Carbon Disulfide	Total: 500 ppm			
56-23-5	Carbon tetrachloride				
67-66-3	Chloroform				
108-94-1	Cyclohexanone				
107-06-2	1,2-Dichloroethane				
75-35-4	1,1-Dichloroethylene				
127-19-5	Dimethylacetamide (DMAC)				
100-41-4	Ethylbenzene				
76-01-7	Pentachloroethane				
630-20-6	1,1,1,2- Tetrachloroethane				
79-34-5	1,1,2,2- Tetrachloroethane				
127-18-4	Tetrachloroethylene (PER)				
108-88-3	Toluene				
71-55-6	1,1,1- Trichloroethane				
79-00-5	1,1,2- Trichloroethane				
79-01-6	Trichloroethylene				
1330-20-7 108-38-3 95-47-6 106-42-3	Xylenes (meta-, ortho-, para-)				

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APPENDIX

Appendix A: Perfluorinated and Polyfluorinated Chemicals (PFCs)			
CAS No.	Substance Name	CAS No.	Substance Name
PFOS – Related Substances		Partially fluorinated carboxylic/ sulfonic acids	
754-91-6	Perfluorooctane sulfonamide (PFOSA)	1546-95-8, et al.	7H-Perfluoro heptanoic acid and salts (7HPFHpA)
307-35-7	Perfluorooctane sulfonyl fluoride (PFOSF/ POSF)	34598-33-9, et al.	2H,2H,3H,3H-Perfluoroundecanoic acid and salts (4HPFUnA)
31506-32-8	N-Methyl perfluorooctane sulfonamide (N-Me-FOSA)	27619-97-2, et al.	1H,1H,2H,2H-Perfluorooctane sulfonic acid and salts (1H,1H,2H,2H-PFOS)
4151-50-2	N-Ethyl perfluorooctane sulfonamide (N-Et-FOSA)	Partially Fluorinated linear alcohols	
24448-09-7	N-Methyl perfluorooctane sulfonamide ethanol (N-Me-FOSE)	2043-47-2	1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)
1691-99-2	N-Ethyl perfluorooctane sulfonamide ethanol (N-Et-FOSE)	647-42-7	1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)
Further Perfluorinated carboxylic acids		678-39-7	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)
375-22-4, et al.	Perfluorobutanoic acids and salts (PFBA)	865-86-1	1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)
2706-90-3, et al.	Perfluoropentanoic acid and salts (PFPeA)	Esters of fluorinated alcohols with acrylic acid	
307-24-4, et al.	Perfluorohexanoic acid and salts (PFHxA)	17527-29-6	1H,1H,2H,2H-Perfluorooctyl acrylate (6:2 FTA)
172155-07-6, et al.	Perfluoro(3,7-dimethyloctanoic acid) and salts (PF-3,7-DMOA)	27905-45-9	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)
Perfluorinated sulfonic acids		17741-60-5	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)
375-73-5, 59933-66-3, et al.	Perfluorobutane sulfonic acid and salts (PFBS)		
355-46-4, et al.	Perfluorohexane sulfonic acid and salts (PFHxS)		
375-92-8, et al.	Perfluoroheptane sulfonic acid and salts (PFHpS)		
335-77-3, et al.	Henicosafluorodecane sulfonic acid and salts (PFDS)		

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Appendix B: Pesticides, Agricultural					
CAS No.	Pesticide Name	CAS No.	Pesticide Name	CAS No.	Pesticide Name
93-72-1	2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP	1085-98-9	Dichlofluanide	118-74-1	Hexachlorobenzene
93-76-5	2,4,5-T	120-36-5	Dichloroprop	465-73-6	Isodrine
94-75-7	2,4-D	115-32-2	Dicofol	4234-79-1	Kelevane
309-00-2	Aldrine	141-66-2	Dicrotophos	143-50-0	Kepone
86-50-0	Azinophosmethyl	60-57-1	Dieldrine	7784-40-9	Lead hydrogen arsenate
2642-71-9	Azinophosethyl	60-51-5	Dimethoate	58-89-9	Lindane
4824-78-6	Bromophos-ethyl	88-85-7	Dinoseb, its salts and acetate	121-75-5	Malathione
2425-06-1	Captafol	63405-99-2	DTTB (4, 6-Dichloro-7 (2,4,5-trichloro-phenoxy) - 2-Trifluoro methyl benz imidazole)	94-74-6	MCPA
63-25-2	Carbaryl	115-29-7	Endosulfan	94-81-5	MCPB
510-15-6	Chlorbenzilat	959-98-8	Endosulfan I (alpha)	93-65-2	Mecoprop
57-74-9	Chlordane	33213-65-9	Endosulfan II (beta)	10265-92-6	Metamidophos
6164-98-3	Chlordimeform	72-20-8	Endrine	72-43-5	Methoxychlor
470-90-6	Chlorfenvinphos	66230-04-4	Esfenvalerate	2385-85-5	Mirex
1897-45-6	Chlorthalonil	106-93-4	Ethylendibromid	6923-22-4	Monocrotophos
56-72-4	Coumaphos	56-38-2	Ethylparathion; Parathion	298-00-0	Parathion-methyl
68359-37-5	Cyfluthrin	51630-58-1	Fenvalerate	1825-21-4	Pentachloroanisole
91465-08-6	Cyhalothrin	Various	Halogenated terphenols, including polychlorinated terphenyl (PCT)	7786-34-7	Phosdrin/Mevinphos
52315-07-8	Cypermethrin	Various	Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs)	72-56-0	Perthane
78-48-8	S,S,S-Tributyl phosphorotrithioate (Tribufos)	Various	Halogenated diarylalkanes	31218-83-4	Propethamphos
52918-63-5	Deltamethrin	99688-47-8	Halogenated diphenyl methanes, including Monomethyl-dibromo-diphenyl methane, Monomethyl-dichloro-diphenyl methane, and Monomethyl-tetrachloro-diphenyl methane	41198-08-7	Profenophos
53-19-0	DDD	81161-70-8		13593-03-8	Quinalphos
72-54-8		76253-60-6		82-68-8	Quintozene
3424-82-6	DDE	76-44-8	Heptachlor	8001-50-1	Strobane
72-55-9		1024-57-3	Heptachloroepoxide	297-78-9	Telodrine
50-29-3	DDT	319-84-6	a-Hexachlorocyclohexane with and without Lindane	8001-35-2	Toxaphene
789-02-6		319-85-7	b-Hexachlorocyclohexane with and without Lindane	731-27-1	Tolyfluanide
333-41-5	Diazinone	319-86-8	g-Hexachlorocyclohexane with and without Lindane	1582-09-8	Trifluraline