PEAK PERFORMANCE

Restricted Substance List

February 2022

PeakPerformance®

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1.4 PEAK PERFORMANCE RESTRICTED SUBSTANCE LIST

Peak Performance is committed to operate in an environmentally sustainable manner to protect the consumers, workers, environment, and the Brand. The requirements in this document are in accordance with current national legislation and EU legislation, which includes the REACH legislation and voluntary eco-labelling schemes. The requirements reflect an awareness of how chemicals affect human health, the environment and constantly increasing quality demands of consumers.

Suppliers shall always consider the safety and suitability of any chemicals used in their products regardless of whether there are specific regulations. Manufacturers, importers and other suppliers must ensure that their products meet community safety expectations, and they must take responsibility for consequences of harmful chemicals present in a product.

Peak Performance Restricted Substance List (Peak Performance RSL) applies to all products, including but not limited to apparel, footwear and accessories. Peak Performance RSL also applies to all raw materials, parts, trims, sundries, chemicals and other goods supplied or used in the manufacturing of Peak Performance product range, including packaging materials.

Due to national legislations in some countries where we are selling our products, the limits in Peak Performance RSL in some cases are stricter than in REACH.

We require our suppliers and partners to study this document carefully and implement processes in their supply chain to comply with these requirements. Peak Performance RSL must be shared with all upstream users in the supply chain, both factories producing finished products and suppliers of raw materials, components and chemicals.

Peak Performance requires that all suppliers comply with REACH and continuously follow the updates on the website of the European Chemical Agency (ECHA). ECHA is the European Authority for REACH on behalf of the European Commission: http://ECHA.europa.eu

In case of specific question to Peak Performance Restricted Substance list, please contact the buyer or Amer Sports Sourcing Ltd Office in Hong Kong, Sourcing Director Peak Performance Terence Lo: terence.lo@peakperformance.com.

1.4.1 EU LEGISLATION REACH

The European Chemical Legislation, REACH (Registration, Evaluation, Authorization and Restriction of Chemical substances) has been in force since 1st of June 2007. The objective of REACH is to ensure a high level of safety for human health and the environment. The communication requirements of REACH ensure that not only manufacturers and importers but also their customers, i.e. downstream users and distributors, have the information they need to use products safely.

Mandatory REACH duties

Peak Performance requires that all suppliers are prepared to deliver articles which comply with the REACH regulation. The suppliers must constantly review updates of:

- The candidate list with Substances of Very High Concern, the SVHC list.

  Under EU REACH regulation, substances that are one of the following can be regarded as substance of very high concern (SVHC):
  - Carcinogenic, Mutagenic or Toxic to Reproduction (CMRs)
  - Persistent, Bio-accumulative & Toxic (PBT)
  - Very Persistent & Bio-accumulative (vPvB)
  - Seriously and/or Irreversibly Damaging the environment or human health, as substances damaging the hormone system

- The Authorization list, Annex XIV, contains priority substances recommended from the Candidate list. Those substances will not be allowed to be imported, used in the European Union after a date to be set unless the company is granted an authorization.

- List of restrictions, Annex XVII, contains those substances (on its own, in a mixture or in an article) for which manufacture, placing on the market or use is limited or banned in the European Union.

The three lists mentioned can be found on the website of the European Chemical Agency (ECHA), http://ECHA.europa.eu

SCIP[1] (Substances of Concern In articles, as such or in complex objects (Products)

Background
When articles become waste, the presence of hazardous substances can make the waste unsuitable for recycling. Within the EU, there is a goal of non-toxic material cycles. To promote such a development, the European Chemicals Agency, ECHA, has been commissioned to create the SCIP database where suppliers of articles must report the presence of **S**ubstances of **V**ery **H**igh **C**oncern (SVHC). This information of SVHC will then be available during the entire life cycle of the article, including in the waste phase. This rule is new and is found in the Waste Directive 2008/98/EC.

Enforcement from 5 January 2021
Every manufacturer, importer or distributor of an article, which is placed on the market in the EU / EEA that contains a SVHC on the candidate list in REACH in a content of more than 0.1% by weight must provide information to the SCIP database at ECHA. It applied from 5 January 2021.

This does not apply to

- Retailers, who are not EU-importers or EU-producers, that only sell articles directly to private consumers, such as stores.
- companies that import articles for their own use.

Provision of data to SCIP
The manufacturer, importer or distributor of an article that contains more than 0.1 percent of a SVHC that is on the candidate list must send the following information to ECHA:

- information on the identity of the article
- the SVHC chemical name, concentration range and where in the article the SVHC is found
- other information on how to handle the product safely.

[1] https://echa.europa.eu/sv/scip

Article definition in force from September 2015

The REACH regulation is divided into restrictions for substances, preparations and articles. Textiles and Clothing are in the REACH-regulation considered to be so-called “articles”.

The general definition of an article in REACH, Article 3 (3), is: “An article is an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition”.

Article 33 of Regulation No 1907/2006, as the judgement of the European Court of Justice of 10 September 2015, must be interpreted as meaning that, for the purposes of application of that provision, it is for the supplier of a product one or more constituent articles of which contain(s) a substance of very high concern identified in accordance with Article 59(1) of that regulation in a concentration above 0,1 % weight by weight of that article, to inform the recipient and, on request, the consumer, of the presence of that substance by providing them, as a minimum, with the name of the substance in question.

An article will always remain an article, even when it is joined together with other articles to form a larger more complex article/product. The obligation to provide information according to Article 33 is triggered as soon as an individual part, which fulfills the definition of “article”, contains 0.1% (w/w) or more of a Candidate list SVHC. SVHC’s in an article must be < 0.1% (w/w).

For Peak Performance products the article definition includes individual components in the product, e.g.:

- Zippers, labels, buttons, and other components that are attached to the garment
- Shoe laces, metal eyelets, shoe soles, insoles and other components that are attached to shoes, bags etc.

1.4.2 COMPLIANCE

The Supplier is obliged to be in full compliance with Peak Performance RSL, to be updated and in compliance with the REACH legislation, including the candidate list of SVHC's. Peak Performance requires each of our suppliers to certify their compliance to the Peak Performance RSL by signing the Production Agreement in the SOP, PART 1.2

As Peak Performance has a strict "no fault" policy related to product safety requirements, any breach of compliance with the Peak Performance RSL is considered a breach of contract, refer to Production Agreement in the SOP, PART 1.2; paragraph 16 or Nomination Agreement in the STP, PART 1.2; paragraph 5 or Supply Agreement, paragraph 4.

Please Note!
In the abovementioned paragraphs, the Manufacturer accepts responsibility to comply with Peak Performance's product safety requirements for any Raw Materials sourced by the Manufacturer; including materials for Developing Samples such as Proto Types, Selling Samples etc. and Bulk Production.

For ensuring the Suppliers compliance with the Peak Performance RSL, any testing must be executed by a nominated laboratory appointed by Peak Performance.

1.4.3 PEAK PERFORMANCE STRATEGY REGARDING CHEMICAL TESTING

The Chemical Strategy in Peak Performance applies risk assessment from design development to the final order is settled, communicating actively throughout the supply chain, from the design process to the supplier regarding risk elements. A selection of styles/components for Peak Performance RSL testing will be chosen on each season for verification of the working process and to control if Peak Performance products are complying with Peak Performance RSL requirements

The risk assessment is based on diverse criteria such as:

- High risk articles (e.g. including prints, finish, coating and padding).
- High volume (both large order sizes on volume and/or value and recurring orders on SSP).
- Supplier history (e.g. earlier fails or new supplier).

Peak Performance has developed a tool for risk assessment, the Chemical Risk Matrix, which is placed in this section.

We urge suppliers to purchase dye stuff, pigments and textile auxiliaries from reputable suppliers, such as ETAD members (www.ETAD.com), e.g. BASF, CHT-Bezema, Clariant, Dystar, Huntsman and Rudolf. Products purchased with these suppliers and applied appropriately will minimize the risk for chemical failure.

On certain chemicals, e.g. NPEO, there might be a significant difference between Peak Performance RSL and REACH regulation and/or governing law. There might also be criteria in Peak Performance RSL which are set due to common industry standards. It is at Peak Performance's sole discrepancy to decide on failed articles, when the failed chemicals are not regulated by law, or when the legal limit varies from country to country.

Peak Performance Risk Matrix

Peak Performance	**Natural fibres** incl. but not limited to:					**Synthetic fibres** incl. but not limited to:					Natural & Synthetic Blends	Natural Leather	Artificial & Coated Leather	Plastics and other synthetic materials	Coating, Print & paint	Finishes	Adhesives & Glue	Metal parts	Rhinestones & Sequins etc.	Fusion, Padding, Feather & Down	Desiccant's	Packaging material
Chemical:	Cotton	Linen	Wool	Silk	Viscose	Polyester	Polyamide	Acrylic	Acetate	Elastane												
AZO dyes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Allergenic dyes						✓	✓	✓	✓	✓	✓											
Carcinogenic dyes (CMR)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
DMFa, DMAC, NMP										✓			✓		✓							
NPEO, OPEO (APEO)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Short and Medium Chained Chlorinated Paraffin's												✓	✓	✓	✓							
Formaldehyde	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓					
Glutaraldehyde												✓				✓	✓					
Total Lead												✓	✓	✓	✓		✓	✓	✓			✓
Total Cadmium												✓	✓	✓	✓		✓	✓	✓			✓
Extractable Heavy Metals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓			
Soluble Heavy Metals														✓				✓	✓			
Nickel Release																		✓				
Cr +6 (leather)												✓	✓									

PeakPerformance	**Natural fibres** incl. but not limited to:					**Synthetic fibres** incl. but not limited to:					Natural & Synthetic Blends	Natural Leather	Artificial & Coated Leather	Plastics and other synthetic materials	Coating, Print & paint	Finishes	Adhesives & Glue	Metal parts	Rhinestones & Sequins etc.	Fusion, Padding, Feather & Down	Desiccant's	Packaging material
Chemical:	Cotton	Linen	Wool	Silk	Viscose	Polyester	Polyamide	Acrylic	Acetate	Elastane												
N-Nitrosamines														✓*								
PFAS such as PFOA, PFOS.	✓**												✓	✓**	✓	✓**						
PAH													✓	✓	✓		✓		✓			
Phthalates													✓	✓	✓		✓		✓			✓
PVC detection													✓	✓	✓							✓
Quinoline**	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓							
Volatile Organic Compounds (VOC)													✓	✓	✓	✓	✓		✓			
pH Value	✓	✓	✓	✓	✓						✓	✓	✓									
Organotin Compounds	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓					
Chlorinated Phenols	✓	✓	✓	✓	✓						✓	✓	✓		✓							✓
Dimethyle-fumerate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓				✓	✓
Cobalt Dichloride																					✓	✓
Total Cd, Hg, Pb, Cr +6 * **																						✓

* Relevant for rubber
** Relevant for stain and water repellent finishes or coatings on fabrics
***Note testing method for Cr +6 is not the same as for leather – refer to RSL for details
**** Applies only to dyed materials

Peak Performance Chemical Testing

Peak Performance reserves the right to select and test products at any stage of production.
Peak Performance has individual processes in test selection and is making chemical tests on all seasons.

Furthermore, testing on development and sample stage may be executed on request from Peak Performance.

Suppliers must promptly send sufficient sample material with a completed Test Request Form to a nominated laboratory.
Testing shall always be executed on:

- Material used for sampling that is produced under same procedure as bulk production material/components
- Test has to be done before bulk production starts.
- If any after treatment is to be applied to the ready garment, this treatment has to be applied on the salesmen samples/components that are to be tested

Peak Performance will pay for this testing if the result is passed, but in case of an Peak Performance RSL failure; the supplier will be responsible to pay for any chemical failures, including:

- First test where any component fails under Peak Performance RSL, whole package test or whole test of nominated substances
- Replacement and/or retreatment of the failed component
- Retesting of the replaced and/or retreated component until a passed result is achieved
- Costs associated with any product recalls due to Peak Performance RSL or SVHC failure

Peak Performance expects that the supplier performs an investigation of the source of the failure to correct the current production and prevent repetition. The details of the investigation should be reported in the "RSL Corrective Action Plan", see Appendix 01, if requested by Peak Performance.

Peak Performance "RSL Corrective Action Plan" (CAP)

When chemical fails occur, Peak Performance will request a CAP report to be performed.
The CAP report is an investigation to locate the source of the failure, and which measures to be implemented, for correction of the current production and to prevent the same failure to be repeated in future productions.
The supplier is requested to conduct the CAP report in cooperation with Peak Performance and the laboratory if needed. Some parts are the supplier's responsibility to fill-in. See the CAP report in Appendix 01.

Making and implementing the CAP report will achieve internal transparency and an overview of the improvements at the supplier, which will enable Peak Performance to acknowledge the efforts that supplier has accomplished before placing future orders.

Supplier Initiated Testing

Peak Performance encourages suppliers to conduct their own testing to be confident in their performance and to assure compliance to Peak Performance RSL. For any supplier initiated testing, the test report will only be accepted by Peak Performance if testing is conducted with a nominated laboratory appointed by Peak Performance using the appropriate Test Request Form. The nominated laboratories undertake full confidentiality between laboratories and suppliers.

Peak Performance only accepts chemical testing conducted at a nominated laboratory for Peak Performance products/components. Peak Performance has evaluated and approved the nominated laboratories, and formed a set up regarding:

- Discount on prices, also valid when suppliers conduct own testing on Peak Performance products
- Laboratory well informed of Peak Performance RSL
- Peak Performance well informed of special test methods for all laboratories
- Layout and information in reporting

Independent on the specific test method provided in Peak Performance RSL, the nominated laboratory is obliged to use the latest version.

Nominated laboratory

Modern Testing Services, MTS – www.mts-global.com

- Hong Kong
- Dongguan
- Shanghai
- Bangladesh
- Germany

See Appendix 03 for details on contact persons, locations and mailing addresses.

1.4.4 PEAK PERFORMANCE STRATEGY REGARDING NANOTECHNOLOGY

Please see the Amer Sports Material Compliance Policy for our approach regarding Nanotechnology.

1.4.5 PEAK PERFORMANCE TABLES OF RESTRICTED SUBSTANCES

"How to read" Peak Performance tables of restricted substances

- The tables are divided into sections of Property Lending & Process Chemicals, Biocidal Agents, Restrictions on Packaging, etc.
- The substances in each section are listed in alphabetic order.
- Peak Performance limits are defined with different values or expressions. The units to the values are corresponding with the units in the related test method.
- The expressions are explained in 1.4.6 Explanatory Section & Abbreviations

1.4.6 EXPALANTORY SECTION & ABBREVIATIONS

General terms	
CAP	Corrective Action Plan
ECHA	European Chemicals Agency
REACH	**R**egistration, **E**valuation, **A**uthorisation and restriction of **Ch**emicals
SVHC	Substances of Very High Concern = Candidate list

Chemical terms	
Articles with direct skin contact:	*Any part of the product, such as collar, cuff, body or sleeves, has direct prolonged contact with the skin during normal use.*
Articles without direct skin contact:	*Only a portion of the product may occasionally contact the skin during normal use.*
Cas No:	*A unique numeric identifier designated to one substance by the CAS registry, Chemical Abstract Service.*
Test method:	*Standardized test method if such exists.* *Test equipment if no standardized test method exists. Abbreviations of recommended test equipment are explained in this in below section.*

Test method/equipment	
AAS:	*Atomic absorption spectrophotometer*
CI:	*Colour Index number*
DAD:	*Diode array detector*
ECD:	*Electron capture detector*
FTIR:	*Fourier transform infrared spectroscopy (for PVC test)*
GC:	*Gas Chromatography*
ICP:	*Inductively Coupled Plasma Spectrometry*
LC:	*Liquid Chromatography. Note sometimes the abbreviation HPLC is used. It stands for High Performance Liquid Chromatography*
MS:	*Mass selective detector*

OES:	*Optical emission spectrometer*
UV / VIS:	*Ultraviolet/visible spectrophotometer detector*
VOC	*Volatile Organic compound*
XRF:	*X-ray fluorescence*

Chemical limits	
Trace Amount (TR)	*The trace amount is identified by the TR designation in the Limit Value column. The trace amount is the allowable unavoidable trace presence of a substance that has been identified with a usage ban. While a substance may not be used in the production of a product, a small acceptable trace amount can be found on a RSL-compliant product due to minor contamination or atmospheric absorption.*
Detection Limit	*Specifies the test method detection sensitivity that a laboratory must be able to achieve when measuring the substance in the product.*
Limit value	*Limit value as agreed in business sectors or by legal requirements. The limit is specified as the amount of the substance found in a specified amount of substrate, by weight (or more specifically, in milligrams of the substance per kilogram of product [mg/kg]). Concentration limits are applicable to any single part, or homogeneous part, of a product.*
Mg/kg	*Milligram per kilogram*
Not Detected	*Indicates that the substance must not be detected in the final product.*
N/A	*Not Applicable*
ppm	*Parts per million, which is the same as milligram per kilogram*
Reporting Limit (RL)	*The reporting limit is the lowest concentration the laboratory can report. If the laboratory detects an amount of the substance below the RL, the laboratory report must state "Not Detected."*

Chemical limits	
Usage Ban	*A substance is prohibited of intentional use during all stages of product manufacturing. However, the RSL identifies an allowable trace amount due to unavoidable contamination.*
Mg/dm3	*Milligram per cubic decimeter*
µg/kg	*Microgram per kilogram*

Relation between Units		
1000 mg/kg Equals	*1000 ppm*	*Parts per million*
	1 000 000 µg/kg	*Micro gram per kilogram* *(1 µg/kg = 0,001 mg/kg = 1ppb (parts per billion)*
	0,1 % (by weight)	
	X µg/m2	*X depends on the Weight of the fabric (kg/m2)*
	X µg/cm2/week	*X is the measure of the release of a substance from a surface, and is only partly dependent on the concentration of the substance*

Miscellaneous	
Article	*An object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition.* *For Peak Performance products the article definition includes individual components in the product, e.g.:* • *Zippers, labels, buttons, and other components that are attached to the garment* • *Shoe laces, metal eyelets, shoe soles, insoles and other components that are attached to shoes, bags etc.*
Children's Products	*A children's product is that which is made for, marketed for use by, or marketed to children age 12 and under.*
Adolescent products	Category mentioned in the Eurasian Customs Union (Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia) regulations.
Packing Material	***EU:*** *According to Directive (EC) No 94/62/EC of 20 December 1994 on packaging and packaging waste. The directive regulates substances in packaging material; meaning all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer.* ***USA:*** *Means any container providing a means of marketing, protecting, or handling a product from its point of manufacture to its sale or transfer to a consumer, including a unity package, an intermediate package or a shipping container, as defined in the ASTM specification D 996. Packaging also includes, but is not limited to, unsealed receptacles, including carrying cases, crates, crates, cups, pails, rigid foil and other trays, wrapper sand wrapping films, bags, boxes, tape, and tubs.*

Miscellaneous	
Polyvinyl Chloride (PVC)	*Polyvinyl chloride, or PVC for short, is a hard plastic that may be found in packaging materials, trims, footwear, and screen printing. PVC is prohibited from use in all Peak Performances packaging and food contact products. In addition, Peak Performance prefers all products do not contain PVC and supports efforts to phase-out PVC.*
UV STABILISER	*UV Stabilizer's might be used as UV-protection agents in coatings, plastics, rubber and polyurethanes. The primary function is to protect the substance from the long-term UV degradation effects from ultraviolet radiation. These stabilizers are very persistent and very bio accumulative.*
pH	*pH is a measure of the acidity or basicity of a solution. A solution whose pH is 7 is said to be neutral, which means that it is neither acidic nor basic. pH values that do not fall within the specified limits can cause skin irritation.*
BIOCIDES GENERAL	*Biocides are biologically active substances, and their toxic and biocidal nature enables them to kill or harm living things. Since biocides by nature are used to have detrimental effects on biological organisms, they are at the same time a serious threat to living organisms that were not intended to be controlled. Biocides have adverse effects on the nervous system when entering the human body. They may irritate eyes, skin, and the respiratory system.*

1.4.7 TABLES OF CHEMICALS

Azo Dyes (28 restricted arylamines)			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**				
101-14-4	4,4-Methylene-bis[2-chloro-aniline]	20 mg/kg for each arylamine	**For all markets except China:** For textile: EN ISO 14362-1, 2:2017 For leather: EN ISO 17234-1:2020 EN ISO 17234-2:2011 Reporting limit: 5 mg/kg (per each of the arylamine breakdown products) **Products for China market:** China standard GB 18401 For Textile: GB/T 17592 China standard GB 20400 For Leather: GB/T 19942 China standard GB/ 23344 for p-AAB Reporting limit: 5 mg/kg	Legal limit: 30 mg/kg per each of other arylamine breakdown products, in REACH, Annex XVII, entry 43. From 1 November 2020, 4-chloro-o-toluidinium chloride, 2-Naphthylammoniumacetate, 4-methoxy-m-phenylene diammonium sulphate, 2,4-diaminoanisole sulphate and 2,4,5-trimethylaniline hydrochloride have a restriction limit of 30 mg/kg in textiles (CMR fast track) according to REACH annex XVII, entry 72. Norway: Legal limit 30 mg/kg China: Legal limit: 20 mg/kg Vietnam: Legal limit ≤ 30 g/kg Japan: Legal limit ≤ 30 mg/kg India: Legal limit 30 mg/kg Egypt: Legal limit 30 mg/kg Prop 65: Several derivatives to aniline (incl aniline), are called arylamines, are	X
101-77-9	4,4-Methylenedianiline				X
101-80-4	4,4'-oxydianiline				X
106-47-8	4-chloroaniline				
119-90-4	o-Dianisidine				
119-93-7	4,4'-bi-o-toluidine				
120-71-8	p-Cresidine				X
137-17-7	2,4,5-trimethylaniline				
139-65-1	4,4'-thiodianiline				
60-09-3	4-Aminoazobenzene				X
615-05-4	4-methoxy-m-phenylenediamine				
838-88-0	4,4-Methylenedi-o-toluidine				X
87-62-7	2,6-xylidine				
90-04-0	o-Anisidine				X
91-59-8	2-Naphthylamine	20 mg/kg for each arylamine			
91-94-1	3,3-Dichlorobenzidine				
92-67-1	Biphenyl-4-ylamine				X
92-87-5	Benzidine				
95-53-4	o-Toluidine				X
95-68-1	2,4-xylidine				
95-69-2	4-Chloro-o-toluidine				
95-80-7	4-methyl-m-phenylenediamine				X
97-56-3	o-Aminoazotoluene				X
99-55-8	5-Nitro-o-toluidine				
3165-93-3	4-chloro-o-toluidinium chloride	20 mg/kg for each arylamine			
553-00-4	2-Naphthylammoniumacetate				

Azo Dyes (28 restricted arylamines)			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
39156-41-7	4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate			known and listed to the State of California to cause cancer. Safe Harbor Limit: NSRL 0.001-110 µg/day. Not detected for each arylamine should be applied.	
21436-97-5	2,4,5-trimethylaniline hydrochloride				
95-79-4	2-Amino-3-Chlorotoluene*	20 mg/kg			
106-50-3	1,4-Diaminobenzene*	20 mg/kg			X
*Banned amines that are included in GOTS ver. 5.0					

Alkylphenols (AP) , Alkylphenol ethoxylates (APEO) and its derivatives				PROCESS CHEMICALS	
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
CAS No.	**Substance**				
Various, incl. 68987-90-6, 9036-19-5, 9002-93-1	(OPEO) Octylphenol Ethoxylates	Usage ban Trace: 100 mg/kg for total NPEO/OPEO A total of all Aps and APEO's must not exceed: 100 mg/kg Trace: Not Detected for NP/OP Shall not be used in processes intendedly.	Textile: ISO 18218-1,-2:2015 (APEO), EN ISO 21084:2019 (AP) Leather: ISO 18218-1:2015 (APEO) Plastics/Polymer: THF/ I Extraction, Analyzed by GCMS / LCMS Reporting limit: NPEO/OPEO: 50 mg/kg NP/OP: 10 mg/kg	EU Legal limit: 1000 mg/kg or 0.1% by weight for nonylphenol ethoxylate as a substance or constituent of preparations (closed systems exempted). NP is in REACH, Annex XVII, entry 46 NPEO is in REACH Annex XVII, entry 46a with restriction on textiles intended to be washed in water during its lifecycle with a legal limit of 100mg/kg, effective 3 Feb 2021.	X
Various, incl. 9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	(NPEO) Nonylphenol Ethoxylates				X
Various, incl. 27193-28-8, 140-66-9, 1806-26-4, 85771-77-3	(OP) Octylphenol				X
Various including 25154-52-3, 104-40-5, 84852-15-3, 11066-49-2	(NP) Nonylphenol				X
Various	4-heptylphenol, branched and linear	Trace: 1000 mg/kg			X
80-46-6	p-(1,1-dimethylpropyl) phenol	Trace: 1000 mg/kg			X
98-54-4	4-tert-butylphenol	Trace: 1000 mg/kg			X
CAS No.	**Substance**				

Various	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from 25ligomerization, covering any individual isomers and/ or combinations thereof (PDDP)	Trace: 1000 mg/kg			X

Allergenic Disperse Dyes			PROPERTY LENDING CHEMICALS	
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
CAS No.	**Substance**	Usage Ban Trace: 50 mg/kg (3,3mg/L)	Textil : DIN 54231 :2005[2] (qualitative) EN ISO 16373–2,- 2014 (extractable dyestuff) Reporting limit: 1 mg/l per substance	Germany, South Korea and practically globally due the fact that nearly all brands and retailers have these on their RSL´s. South Korea: restriction limit 50mg/kg (Equals 3,3mg/L under DIN 54231)
2475-45-8	Disperse Blue 1*, **			
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*			
23355-64-8	Disperse Brown 1			
2581-69-3	Disperse Orange 1			
730-40-5	Disperse Orange 3*			
CAS No.	**Substance**			
12223-33-5 13301-61-6	Disperse Orange 37/59/76*			
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			
6250-23-3	Disperse Yellow 23			
85136-74-9	Disperse Orange 149			
* Disperse Dyes Banned in Germany according to: LFBG § 30 of Food and Commodities Act. **Listed in Sea Harbour list Prop 65 as carcinogen.				

[2] DIN 54231:2005 is under review by DIN Germany

Bisphenols			PROCESS CHEMICAL		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**	1 ppm	Water quality: EN ISO 18857-1:2006 EN ISO 18857-2:2011	Bisphenol A (BPA) is restricted from January 2020, REACH (Annex XVII, entry 66 in thermal paper Bisphenols are used in the production of epoxy resin, polycarbonate plastics, flame retardants and PVC. Prop 65: BPA is known to the State of California to cause birth defects or other reproductive harm. Safe Harbor Limit: MADL 3 µg/day (dermal exposure from solid materials). Settlements agreed at 3 ppm, 20 ppm or zero limit for various products.	
80-05-07	BPA (4,4'-isopropyllidenediphenol)				**X**
6807-17-6	2,2-bis(4'-hydroxyphenyl)-4-methylpentane				**X**
77-40-7	BPB 4,4'-(1-methylpropylidene)bisphenol				**X**

Carcinogenic Dyestuffs (CMR)				PROPERTY LENDING CHEMICALS	
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**				
2475-45-8	Disperse Blue 1*				
82-28-0	Disperse Orange 11				
6250-23-3	Disperse Yellow 23				
3761-53-3	Acid Red 26				
6459-94-5	Acid red 114**				
569-61-9	Basic Red 9				
632-99-5	Basic Violet 14				
1937-37-7	Direct Black 38**	Usage Ban Trace: 50mg/kg (3,3mg/L)	Textile : DIN 54231 (qualitative)	South Korea: restriction limit 50mg/kg (Equals 3,3mg/L under DIN 54231)	X
2602-46-2	Direct Blue 6**		EN ISO 16373-1.2015,-2,-3 :2014 (extractable dyestuff)		
2429-74-5	Direct blue 15**			Prop 65: Several dyestuffs are known to the State of California to cause cancer. Safe Harbor Limit: NSRL 0.09-300 µg/day.	
573-58-0	Direct Red 28		Reporting limit: 1 mg/l per substance		X
16071-86-6	Direct Brown 95**				
85136-74-9	Disperse Orange 149				
6786-83-0	Solvent Blue 4			<u>Listed January 2020</u>: C.I. Acid Red 114, C.I. Basic Red 9 Monohydrochloride, C.I Direct Black 38, C.I Direct Brown 95, Direct Blue 6, C.I. Direct Blue 15, C.I. Direct Blue 218, C.I. Disperse Yellow 3, C.I. Solvent Yellow 14, Disperse Yellow 3, Disperse Blue 1. Not detected for each dyestuff should be applied.	X
2580-56-5	Basic Blue 26				X
548-62-9	Basic Violet 3				X
101-61-1	Michler's base				X
90-94-8	Michler's ketone**				X
561-41-1	4,4'-bis(dimethylamino)-4''-(methylamine)trityl alcohol				X
118685-33-9	Navy Blue (EC. No. 405-665-4)	Usage Ban Trace: 50mg/kg	Textile : EN ISO 16373-2 :2014 (extractable dyestuff)	EU Legal limit: 30 mg/kg REACH annex XVII, entry 43.	X
* Disperse Dyes Banned in Germany according to: LFBG § 30 of Food and Commodities Act. **Listed in Sea Harbour list Prop 65 as carcinogen.					

Diisocyanates			PROCESS & PROPERTY LENDING CHEMICALS & RELATED MANUFACTURING IMPURITIES	
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
CAS No.	**Substance**			
101-68-8	(MDI) Diphenylmethane diisocyanate	Free: 1 Blocked: 50	Free: Solvent extraction analysis by HPLC. Blocked: Solvent extraction by GC-MS with injector block temperature of 300 °C. If detected, confirmation test at 180°C is needed to avoid false positive detection of diisocyanate from polyurethane decomposition in injector block of GC/MS device.	EU legal limit: Methylenediphenyl diisocyanates (MDI) as constituents of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI. REACH annex XVII, entry 56. Prop 65: The following isocyanates are listed: Methyl Isocyanate (MIC) is known to cause Developmental Toxicity and Female Reproductive Toxicity. Toluene Diisocyanate (TDI) is known to cause cancer
822-06-0	(HDI) Hexamethylene diisocyanate	Free: 1 Blocked: 100		
4098-71-9	(IPDI) Isophorone diisocyanate	Free: 1 Blocked: 100		
2778-42-9	(TMXDI) Tetramethylxylene diisocyanate	Free: 1 Blocked: 15		
584-84-9	(TDI) Toluene diisocyanate	Free: 1 Blocked: 50		

Flame Retardants			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)					
CAS No.	**Substance**	Usage Ban Trace: 1 mg/kg	EN 16377:2013 for brominated flame retardants (Solid waste e.g plastics) EN ISO 17881-1:2016 for brominated flame retardants in textiles.	Legal limit: 0.1% by weight PBBs are in REACH, Annex XVII, entry 8. Commercial TetraBDE, PentaBDE, HexaBDE, HeptaBDE, DecaBDE (sum 500 ppm in products) and Hexabromobiphenyl (ban) are listed in the Stockholm Convention on Persistent Organic Pollutants (POPs*) and banned by Regulation (EC) No 2019/1021 amending Regulation (EC) No 850/2004**. OctaBDE & DecaBDE are listed in REACH, Annex XVII, entry 45 & 67 Banned in REACH Regulation (EC) No 756/2010 amending Regulation (EC) No 850/2004**.	
59536-65-1	(PBBs) Polybrominated biphenyls				
5436-43-1	Tetrabromodiphenyl ether (TetraBDE)	Usage Ban Trace: 5 mg/kg			
32534-81-9	(PentaBDE) Penta-bromodiphenyl ether				
68631-49-2, 207122-15-4	Hexabromodiphenyl ether (HexaBDE)				
446255-22-7 207122-16-5	Heptabromodiphenyl ether (HeptaBDE)				
32536-52-0	(OctaBDE) Octa-bromodiphenyl ether				
1163-19-5	(DecaBDE) Decabromodiphenyl ether				X
Chlorinated paraffins (flame retardants and plasticisers)					
CAS No.	**Substance**		Textiles: EN ISO 22818:2021	Legal limit: 0.1% by weight SCCP are listed in the Stockholm Convention on Persistent Organic Pollutants (POPs*) and	

Flame Retardants			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
85535-84-8	(SCCP) Short-chain chloroparaffins, (C10-C13)	Usage Ban Trace: 0.1 % by weight	Leather: EN ISO 18219-1,-2: 2021 Reporting limit: 100 mg/kg	banned by Regulation (EC) No 2019/1021 amending Regulation (EC) No 850/2004**. Norway has a national legal restriction from 1 July 2012 for MCCP of 0.1 % by weight in homogenous individual parts in articles.	**X**
85535-85-9	(MCCP) Medium-chain chloroparaffins, (C14-C17)				X
Others					
CAS No.	**Substance**			Legal limit: 0.01% by weight HBCDD is listed in the Stockholm Convention on Persistent Organic Pollutants (POPs*) and banned by Regulation (EC) No 2019/1021 amending Regulation (EC) No 850/2004**.	**X**
25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	(HBCDD) Hexabromocyclododecane	Usage Ban Trace: 5 mg/kg	Textile: EN ISO 17881-1:2016 for brominated flame retardants		
1522-92-5 96-13-9	2,3-dibromo-1-propanol (2,3-DBPA)		Textile : EN ISO 17881-2 :2016 for phosphorous flame retardants	Legal limit: 0.1% by weight	X
78-30-8	Tri-o-cresyl phosphate	Usage Ban Trace: 5 mg/kg		Restricted in certain US states, see table below	
5412-25-9	Bis(2,3-dibromopropyl) hydrogen phosphate			Restricted in certain US states; see table below	

Flame Retardants			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
126-72-7	(TRIS) Bis (2,3-dibromopropyl) phosphate			TRIS is listed in REACH, Annex XVII, entry 4. Restricted in certain US states, see table below Prop 65: TRIS is known to the State of California to cause cancer.	
115-96-8	(TCEP) Tris(2-chloroethyl)phosphate			Legal limit: 0.1% by weight Restricted in certain US states, see table below Prop 65: TCEP is known to the State of California to cause cancer. Settlements agreed at 25 ppm TCEP for PVC rainwear.	X
545-55-1	(TEPA) Tris (1-aziridinyl)-phosphine oxide			TEPA is in REACH, Annex XVII, entry 7.	
25155-23-1	(TXP) Trixylyl phosphate			Legal limit: 0.1% by weight	X
*POPs is the Stockholm Convention on Persistent Organic Pollutants **Regulation (EC) No 850/2004 (EU regulation implementing Stockholm Convention). US and states regulation of certain flame retardants, see consecutive page below.					

US and states regulation of certain flame retardants

State	Type of product (1)	Type of FRs (2)	Concentration	Effective Date	Reference
California	Children's products, mattresses and upholstered furniture	* All FRs	1,000 ppm	January 1, 2020	Assembly Bill 2998
Hawaii	Any product	* Penta-BDE * Octa-BDE	0,1% (1,000 ppm)	January 1, 2008	HB 2013
Illinois	Any product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	January 1, 2006	HB 2572
Maine	Any product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	January 1, 2006	H.P. 1312 – L.D. 1790
	Residential upholstered furniture	* All FRs	0,1 % (1,000 ppm)	January 1, 2019	H.P 138 – L.D. 182
Maryland	Any new product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	October 1, 2008	HB 83
	Products for children less than 3 years	* TCEP	0,1 % (1,000 ppm)	October 1, 2013	HB 99
Michigan	Any product	* Penta-BDE	0,1 % (1,000 ppm)	June 1, 2006	HB 4406
Minnesota	Any product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	January 1, 2008	SF 2096
	Children's products, and residential upholstered furniture	* TDCPP * TCEP * Dece-BDE * HBCD	1,000 ppm	July 1, 2019	SF 1215
New York	Any product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	January 1, 2006	SO7621
	Products for children less than 3 years or under	* TDCPP * TCEP	Not specified	December 1, 2013	SO3703, A06195
Oregon	Any product	* Penta-BDE * Octa-BDE * Deca-BDE	0,1 % (1,000 ppm)	January 1, 2011	SB 962, SB 596
Rhode Island	Residential upholstered bedding and furniture	*Organohalogen FRs	100 ppm	July 1, 2019	H5082
Vermont	Any product	* Penta-BDE * Octa-BDE	0,1 % (1,000 ppm)	July 1, 2010 (3)	S81

State	Type of product (1)	Type of FRs (2)	Concentration	Effective Date	Reference
	Mattresses, upholstered furniture, plastic housing for TV's and computers, plastic shipping pallets, Children's products	Deca-BDE	0,1 % (1,000 ppm)	July 1, 2010	S81
	Children's products	* TDCPP * TCEP	0,1 % (1,000 ppm)	July 1, 2014	S81
Washington	Children's products and residential upholstered furniture	* TDCPP * TCEP * Deca-BDE * HBCD * Additive TBBPA	1,000 ppm	July 1, 2017	House of Bill 2545
Washington D.C	Any product	* TDCPP * TCEP	0,1 % (1,000 ppm)	January 1, 2018	B21-0143
	Children's products and residential upholstered furniture	* TDCPP * TCEP	0,1 % (1,000 ppm)	January 1, 2019	B21-0143

Glutaraldehyde (glutaral)			PROPERTY LENDING CHEMICALS	
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	SVHC
CAS No.	**Substance**			
111-30-8	Glutaraldehyde (Glutaral)	Trace: 1000 mg/kg	See formaldehyde	X

Formaldehyde			PROPERTY LENDING CHEMICALS	
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
CAS No.	**Substance**	Children < 3 yrs.: Not Detected Adults with direct skin contact*: 75 mg/kg Adults without direct skin contact**: 300 mg/kg	Textiles: EN ISO 14184-1,-2:2011 Leather: EN ISO 17226-1:2021 EN ISO 17226-2:2019 Reporting limit: 16 mg/ kg	From 1 November 2020, formaldehyde has a restriction limit of 75 mg/kg in textiles (CMR fast track) according to REACH Annex XVII), entry 72. *The CMR fast track restriction does not apply to clothing, related accessories, textiles other than clothing, or footwear within the scope of Regulation (EU) 2016/425 (PPE).* See "Formaldehyde regulations within and outside EU/EEA" for textiles below.
50-00-0	Formaldehyde			

* Products for adults where any part of the product such as collar, cuff, body or sleeves, has direct prolonged contact with the skin during normal use.
** Products for adults where only a portion of the product, occasionally may have contact with the skin during normal use.

Formaldehyde regulations within EU/EEA.		
Country	**Regulations/Requirements**	**Objection Limit / Limit**
Germany	Gefahrstoffverordnung (Hazardous Substances Ordinance) Annex III, No. 9, 26.10.1993	Textiles that normally come into contact with the skin and release more than 1500 mg/kg formaldehyde must bear the label:" Contains formaldehyde". Washing this garment is recommended prior to first time use in order to avoid irritation of the skin."
France	Official Gazette of the French Republic, Notification 97/0141/F	The regulations apply to products that are intended to come into contact with human skin, Including: textiles, leather, shoes etc. Textiles for babies: 20 mg/kg. Textiles in direct skin contact: 100 mg/kg. Textiles not in direct skin contact: 400 mg/kg.
Netherlands	The Dutch (Commodities Act) Regulations on Formaldehyde in Textiles (July 2000)	Textiles in direct skin contact must be labelled:" Wash before first use" if they contain more than 120 mg/kg formaldehyde and the product must not contain more than 120 mg/kg formaldehyde after wash
Austria	Formaldehydverordnung, BGBL Nr. 194/1990	Textiles that contain 1500 mg/kg or above must be labelled.
Finland	Decree on Maximum Amounts of Formaldehyde in Certain Textiles Products (Decree 210/1988)	Textiles for babies under 2 years: 30 mg/kg. Textiles in direct skin contact: 100 mg/kg. Textiles not in direct skin contact: 300 mg/kg.
Norway	Regulations Governing the Use of a Number of Chemicals in Textiles (April 1999)	Textiles for babies under 2 years: 30 mg/kg. Textiles in direct skin contact: 100 mg/kg. Textiles not in direct skin contact: 300 mg/kg.

Formaldehyde regulations outside EU/EEA		
Country	**Regulations/Requirements**	**Objection Limit / Limit**
China	Limits of Formaldehyde Content in Textiles: GB18401, Leather: GB/T 19941	Textiles for infants and babies: ≤20 mg/kg. Textiles in direct skin contact: ≤75 mg/kg. Textiles not in direct skin contact: ≤300 mg/kg.
Japan	Japanese Law 112 Textiles: JIS L1041	Textiles for infants: Not detectable. Textiles in direct skin contact: 75 ppm.

Formaldehyde regulations outside EU/EEA		
Country	**Regulations/Requirements**	**Objection Limit / Limit**
Vietnam	Circular no 23/2016/TT-BCT	Textiles for babies under 36 months: 30 mg/kg. Textiles in direct skin contact: 75 mg/kg. Textiles not in direct skin contact: 300 mg/kg
USA	Federal Hazardous Substances Act (FHSA)	The Federal Hazardous Substances Act (FHSA) is a chemicals legislation that does not focus on products but regulates certain hazardous substances in products, such as lead in candle wicks and solvents in shoe waxes. Consumer products containing more than 1% formaldehyde must be labeled with a warning. The following states have restrictions of formaldehyde: California (cleaning products, cosmetics, wood products), Illinois, Iowa, Louisiana, Massachusetts (children's products, jewelry, toys), New Hampshire (children's products, toys), New York (electronics equipment), South Carolina and Vermont (chemical products).
Eurasian Customs Union (Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia)	Technical Regulation on the, TP TC 007/2011 On "Safety of Products intended for children and adolescents", enacted in 2011 and its amendment "Decision N° 51 (28 April 2017)", enacted in 2017. "TP TC 017/2011 On Safety of Light Industry Products enacted in 2011 and its amendment "Decision N° 60 (9 August 2016)" enacted in 2016.GOST 30386-95 (Textiles. Maximum permissible concentrations of free formaldehyde) GOST 50729-95 (Textiles. Limit permissible concentration of free formaldehyde)	Mass fraction of free Formaldehyde babies up to36 months: 20 mcg/g for 1st and 2nd layer of products and 300 mcg/g for 3rd layer Mass fraction of free Formaldehyde for children and adolescents: 75 mcg/g for 1st and 2nd layer of products and 300 mcg/g for 3rd layer *Apply less than 20 mg free formaldehyde/kg as a customs requirement*.

Foaming and processing agents for plastics and rubbers			PROCES CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**	Usage Ban			
123-77-3	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide, ADCA)	Trace: 1000 mg/kg by weight	Solvent extraction GC-MS or HPLC-MS Reporting limit: 100 mg/kg		X
7803-57-8; 302-01-2	Hydrazine				X
75-12-7	Formamide				X
119-47-1	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol				X
1067-53-4	tris(2-methoxyethoxy)vinylsilane				X
3296-90-0	2,2-bis(bromomethyl)propane1,3-				X
36483-57-5	2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);				X

Metal Restrictions – Textile & Leather				PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)		Test method & Reporting limit	Regulation & Country	SVHC
Extractable Metals		**Textile (natural & synthetic, artificial leather)**	**Leather (natural & coated)**			
CAS No.	**Substance**			Textile : EN 16711 -2 :2015 (all metals) Cr^{+6} for textiles : No standardized test method available for textiles. UV-VIS Spectrometer Reporting limit: 0.5 mg/kg Leather: For Cr^{+6}: EN ISO 17072-1:2019 For Cr^{+6}: ISO 17075-1,-2:2017* For Cr^{+6}: EN ISO 10195:2021 (ageing of leather) With reporting limit: 3 mg/kg		
7440-36-0	(Sb) Antimony	30	30			
7440-38-2	(As) Arsenic	1	1		In REACH, Annex XVII, entry 72. (textiles and imitation leather)	
7440-43-9	(Cd) Cadmium	0.1	0.1		In REACH, Annex XVII, entry 72. (textiles and imitation leather)	
7440-47-3	(Cr) Chromium	2	200			
18540-29-9	(Cr^{+6}) Chromium VI	Not Detected Trace: 0.5	Not Detected Trace: 3		In REACH, Annex XVII, entry 72. (textiles and imitation leather)	
7440-48-4	(Co) Cobalt	4	4			
7440-50-8	(Cu) Copper	50	50			
7439-92-1	(Pb) Lead	1	1		In REACH, Annex XVII, entry 72 (textiles and imitation leather)	
7439-97-6	(Hg) Mercury	0.02	0.02		In REACH, Annex XVII, entry 18A. Prop 65: Mercury is known to the State of California to cause birth defects or other reproductive harm.	
7782-49-2	(Se) Selenium	N/A	N/A			
7440-02-0	(Ni) Nickel	4	1			

Metal Restrictions – Textile & Leather				PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)		Test method & Reporting limit	Regulation & Country	SVHC
Total Metal Content		**Textile (synthetic, artificial leather)**	**Leather (natural & coated)**			
CAS No.	**Substance**			Textile: EN 16711-1: 2015	In REACH, Annex XVII, entry 23. Cadmium is restricted in Denmark. Danish legal limits: 75 mg/kg. (Bekendgørelse nr. 858 af 5. September 2009 om forbud mod import salg og fremstilling af cadmiumholdige varer). Prop 65: Cadmium and cadmium compounds are known to the State of California to cause cancer and birth defects or other reproductive harm	**X**
7440-43-9	(Cd) Cadmium	100	100			
7439-92-1	(Pb) Lead	N/A	50	Textile: EN 16711-1: 2015 Leather: EN ISO 17072-2:2019	In REACH, Annex XVII, entry 63 Danish Regulation for lead must always be considered. Prop 65: Lead and lead compounds are known to the State of California to cause cancer and birth defects or other reproductive harm. Settlements agreed at 50, 90 or 100 ppm for various products.	**X**
* Cr+6 testing must always be conducted WITH AGEING (80^{0}C, <5% humidity, 24 hours)						

Metal Restrictions – Metal & Plastic (trims, buckles, sundries* etc.)				PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)		Test method & Reporting limit	Regulation & Country	SVHC
Extractable Metals		**Children (< 12 yrs)**	**Adult**			
CAS No.	**Substance**			Metal & Plastic: Total heavy metal screening refers to: ASTM F963, when positive use EN 71-3:2019 (EU Toy Safety Directive)		
7440-36-0	(Sb) Antimony	60	N/A			
7440-38-2	(As) Arsenic	25	N/A			
7440-39-3	(Ba) Barium	1000	N/A			
7440-43-9	(Cd) Cadmium**	17	75		In REACH, Annex XVII, entry 23.	X
7440-47-3	Chromium III	60	N/A			
7440-47-3	Chromium VI******	0.2	N/A			
7439-92-1	(Pb) Lead	50	50	Textile: EN 16711-1: 2015 (also applicable for non textile accessories)	In REACH, Annex XVII, entry 63, for Jewelry & Accessories. Danish Regulation for lead must always be considered.	X
7439-97-6	(Hg) Mercury	60	N/A		In REACH, Annex XVII, entry 18A. Prop 65: Mercury is known to the State of California to cause birth defects or other reproductive harm.	
7440-02-0	Nickel release***, ******	Metal parts in direct & prolonged skin contact. Maximum release: 0,5 µg/cm²/week (non-pierced) 0,2 µg/cm²/week (pierced)		EN 12472:2020 **** EN 1811:2011+A1:2015 (for coated items) **** EN 1811:2011+A1:2015 (for non-coated item). **** EN 16128:2015*****	In REACH, Annex XVII, entry 27.	

Metal Restrictions – Metal & Plastic (trims, buckles, sundries* etc.)				PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)		Test method & Reporting limit	Regulation & Country	SVHC
Total Metal Content		**Children (< 12 yrs)**	**Adult**			
CAS No.	**Substance**					
7440-43-9	(Cd) Cadmium**, ******	50	50	EN 1122:2001 or acid digestion	In REACH, Annex XVII, entry 23. Cadmium is restricted in Denmark. Danish legal limits: 75 mg/kg. Prop 65: Cadmium and cadmium compounds are known to the State of California to cause cancer and birth defects or other reproductive harm	**X**
7439-92-1	(Pb) Lead	50	50	ASTM F2853 in paint and surface coating CPSC-CH-E1001-08 in metal CPSC-CH-E1002-08 in non-metal CPSC-CH-E1003-09 in paint & surface coating	In REACH, Annex XVII, entry 63 for Jewelry & Accessories. Danish Regulation for lead must always be considered	**X**

Metal Restrictions – Metal & Plastic (trims, buckles, sundries* etc.)		PROPERTY LENDING CHEMICALS		
Restricted Substance	Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
* Sundries: Items that are permanently attached to the garment/footwear. Includes zippers, rivets, buttons, care labels, name labels, and tags. ** Not applicable for inorganic glass. *** Nickel release restriction includes all metal trims and jewelry that are in direct and prolonged skin contact. **** For metal parts with surface coating, perform abrasion of coated surface according to EN 12472:2020 before Nickel release according to EN 1811:2011+A1:2015. For non-coated items: EN 1811:2011+A1:2015 ***** For spectacle frames and sunglasses, test according to EN 16128:2015 ****** Technical Regulation on the Eurasian Customs Union (Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia): "TP TC 007/2011 On Safety of Products intended for children and adolescents", enacted in 2011 and its amendment "Decision N° 51 (28 April 2017)" 24 enacted in 2017. "TP TC 017/2011 On Safety of Light Industry Products", enacted in 2011 and its amendment "Decision N° 60 (9 August 2016)", 225 enacted in 2016. Hamendment "Decision N° 51 (28 April 2017)", 224 enacted in 2017. "TP TC 017/2011 On Safety of Light Industry Products", enacted in 2011 and its amendment "Decision N° 60 (9 August 2016)", 225 enacted in 2016				

Metal Restrictions – Jewelry			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
Extractable Metals		**Adult***			
CAS No.	**Substance**		Metal & Plastic: Total heavy metal screening refers to: ASTM F963, when positive use EN 71-3:2019 (EU Toy Safety Directive)		
7440-36-0	(Sb) Antimony	60			
7440-38-2	(As) Arsenic	25			
7440-39-3	(Ba) Barium	1000			
7440-43-9	(Cd) Cadmium**, ******	50		In REACH, Annex XVII, entry 23. Restricted for release from textile products in Russia, should not be present in our products.******	X
7440-47-3	Chromium	60			
7439-92-1	(Pb) Lead	50		In REACH, Annex XVII, entry 63 for Jewelry & Accessories. Danish Regulation for lead must always be considered	X
7439-97-6	(Hg) Mercury	60		In REACH, Annex XVII, entry 18A.	
7782-49-2	(Se) Selenium	500			
7440-02-0	Nickel release***;******	**Metal parts in direct & prolonged skin contact**. Maximum release: 0,5 µg/cm²/week (non-pierced) 0,2 µg/cm²/week (pierced)	EN 12472:2020 **** EN 1811:2011+A1:2015 (for coated and non-coated items) **** EN 16128:2015*****	In REACH, Annex XVII, entry 27.	

Metal Restrictions – Jewelry			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
Total Metal Content		**Adult***			
CAS No.	**Substance**		EN 1122:2001 or acid digestion	In REACH, Annex XVII, entry 23. Restricted from release from textile products in Russia, should not be present in our products. See annex xxx	**X**
7440-43-9	(Cd) Cadmium**, ******	50			
7439-92-1	(Pb) Lead	50	ASTM F2853 in paint and surface coating CPSC-CH-E1001-08 in metal CPSC-CH-E1002-08 in non-metal CPSC-CH-E1003-09 in paint & surface coating	In REACH, Annex XVII, entry 63 for Jewelry & Accessories. Danish Regulation for lead must always be considered	

* Limits only valid for products for adults.
** Not applicable for inorganic glass
*** Nickel release restriction includes all metal trims and jewelry that are in direct and prolonged skin contact.
**** For metal parts with surface coating, perform abrasion of coated surface according to EN 12472:2005+A1:2009 before Nickel release according to EN 1811 :2011+A1:2015. For non-coated items: EN 1811:2011+A1:2015.
***** For spectacle frames and sunglasses, test according to EN 16128.
****** Technical Regulation on the Eurasian Customs Union (Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia): "TP TC 007/2011 On Safety of Products intended for children and adolescents", enacted in 2011 and its amendment "Decision N° 51 (28 April 2017)"

US states requirements of metals in various applications

- **Alabama** (cadmium and lead in children's products, cosmetics, jewelry, toys),
- **Arkansas** (mercury in electronics equipment),
- **California** (cadmium in jewelry, lead and arsenic in glass beads, arsenic, cadmium, lead and mercury in toys, cadmium, hexavalent chromium, lead, mercury in electronics equipment and packaging),
- **Connecticut** (lead in children's products, cadmium in jewelry, cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),
- **Delaware** (lead in children's products),
- **Florida** (cadmium in children's products, jewelry, toys, cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),
- **Georgia** (cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),
- **Illinois** (lead in children's products, toys, cadmium and lead in jewelry, cadmium, hexavalent chromium, lead, mercury in packaging, cadmium, hexavalent chromium, lead, mercury),
- **Indiana** (cadmium and lead in children's products, cosmetics, jewelry, toys), Iowa (cadmium, hexavalent chromium, lead, mercury in packaging),
- **Kentucky** (lead in children's products, furniture, jewelry, toys),
- **Louisiana** (lead in children's products, furniture, toys),
- **Maine** (cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),
- **Maryland** (cadmium, hexavalent chromium, lead, mercury in packaging),
- **Massachusetts** (cadmium and lead in children's products, jewelry, toys, mercury in electronics equipment),
- **Michigan** (mercury in electronics equipment),
- **Minnesota** (cadmium in jewelry, cadmium, hexavalent chromium, lead, mercury in packaging),
  Mississippi (cadmium and lead in children's products, cosmetics, jewelry, toys),
- **Missouri** (cadmium, hexavalent chromium, lead, mercury in packaging),
- **New Hampshire** (cadmium, hexavalent chromium, lead, mercury in packaging),
- **New Jersey** (cadmium, lead and mercury in children's products, cosmetics, toys, cadmium, hexavalent chromium, lead, mercury in packaging, lead, mercury, cadmium, hexavalent chromium,),
- **New York** (arsenic, cadmium, lead and mercury in children's products, toys, cadmium in jewelry, cadmium, hexavalent chromium, lead, mercury in packaging and in electronics equipment),
- **Pennsylvania** (lead in children's products, cosmetics, jewelry, toys, cadmium, hexavalent chromium, lead, mercury in packaging),
- **Rhode Island** (cadmium in jewelry, cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),

- **South Carolina** (lead in children's products, cosmetics, jewelry, toys),
- **Tennessee** (lead in children's products, toys), Vermont (cadmium, hexavalent chromium, lead, mercury in packaging),
- **Virginia** (cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment),
- **Washington** (cadmium and lead in children's products, cosmetics, jewelry, toys, cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment)
- **Wisconsin** (cadmium, hexavalent chromium, lead, mercury in packaging, mercury in electronics equipment).

Monomers					
Restricted Substance		Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**		Validated Method, Headspace GC/MS Identification.	REACH restriction 0,1 % by weight in annex XVII for acrylamide, entry 60. Prop 65: Chloroprene, 3-chloro-2-methylpropene, ethylacrylate, styrene 4-Cyanocyclohexene, N-Methylolacrylamide and 4-Vinylcyclohexene are known to the State of California to cause cancer. Prop 65: Acrylamide and 1,3-Butadiene are known to the State of California to cause birth defects or other reproductive harm	
79-06-1	Acrylamide	0.1			X
107-13-1	Acrylonitrile	1			
106-99-0	1,3-Butadiene	1			
141-32-2	Butylacrylate	50			
97-88-1	Butylmethacrylate	50			
126-99-8	Chloroprene, 2-chlorobutan-1,3-diene	50			
563-47-3	3-chloro-2-methylpropene	10			
100-45-8	4-Cyanocyclohexene	50			
103-11-7	2-Ethylhexyl acrylate	50			
4994-16-5	4-Phenylcyclohexene	50			
140-88-5	Ethylacrylate	10			
97-63-2	Ethylmethacrylate	50			
79-39-0	Methacrylamide	50			
96-33-3	Methylacrylate	50			
80-62-6	Methylmethacrylate	50			
924-42-5	N-Methylolacrylamide	5			
100-42-5	Styrene	500			
75-01-4	Vinyl chloride	1			
100-40-3	4-Vinylcyclohexene	50			

N-Nitrosamines*, 9 kinds			PROCESSING CHEMICALS	
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**
CAS No.	**Substance**			
62-75-9	N-Nitrosodimethylamine	Usage Ban Trace: 0.5 mg/kg for each	GB/T 24153-2009** Reporting Limit: 0.5 mg/kg for each	Regulated in China***
55-18-5	N-nitrosodiethylamine			
621-64-7	N-nitrosodipropylamine			
924-16-3	N-nitrosodibutylamine			
100-75-4	N-nitrosopiperidine			
930-55-2	N-nitrospyrrolidine			
59-89-2	N-nitrosomorpholine			
614-00-6	N-nitroso-N-methylaniline			
612-64-6	N-nitroso-N-ethylaniline			
* Most common in Shoe Sole Materials (Rubber). **GB/T 24153-2009 “Rubber and elastomer materials – Determination of N-nitrosamines” ***GB25038-2010 “ Rubber shoes healthy and safety specification and GB25036-2010 “ Children’s Canvas Rubber Footwear”				

Poly and Perfluorinated substances (PFAS)			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
CAS No.	**Substance**				
Various	Perfluorooctane sulphonate (PFOS) and PFOS metallic salt, halogenide, amide and other derivatives	Usage Ban Trace: 0,2 µg/m^2	Textile: CEN/TS 15968:2010 Leather: EN ISO 23702-1:2018 Reporting limit: 0,1 µg/m^2	PFOS is listed in POPs* and banned by Regulation (EC) No 850/2004**. PFOA Cas. 335-67-1 is listed in the Stockholm Convention as POP, and restricted by Regulation (EC) No 850/2004.	

Poly and Perfluorinated substances (PFAS)			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
335-67-1 (PFOA) 3825-26-1 (APFO)	Perfluorooctanoic acid (PFOA), its salts and esters Ammonium pentadecafluoro octanoate (APFO) (C8)				X
Various	Perfluorobutane sulfonate and its salts	Usage ban/10 µg/kg (incl PFOA and APFO)		The C9 to C14 PFASs including their salts and precursors are restricted in Regulation (EC) No 1907/2006 (REACH), entry 68	X
Various	Perfluorohexane sulfonate and its related substances				X
375-95-1 21049-39-8, 4149-60-4	Perfluorononanoic acid and its sodium ammonium salts, (C9)				X
335-76-2 3108-42-7 3830-45-3	Perfluorodecanoic acid its sodium and ammonium salts, (C10)				X
72629-94-8	Pentacosafluoro tridecanoic acid (C11)				X
307-55-1	Tricosafluoro dodecanoic acid (C12)				X

Poly and Perfluorinated substances (PFAS)			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
2058-94-8	Henicosafluoro undecanoic acid (C13)				X
376-06-7	Heptacosafluoro tetradecanoic acid (C14)				X
Various	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)				X

*POPs are the Stockholm Convention on Persistent Organic Pollutants
**Regulation (EC) No 850/2004 (EU regulation implementing Stockholm Convention).
***The restriction applies to both solid and liquid products, including textiles.

Table overview of current and coming pending restrictions of PFAS globally (Stockholm Convention) and in EU/EEA

PFAS substances, their salts and related substances	**CAS**	**Abbr.**	**SVHC**	**REACH annex XVII**	**Regulation (EC) No 850/2004 (POP)**	**Stockholm Convention UN**
Perfluorobutane sulfonate	375-73-5	PFBS	Yes			
Perfluorohexane sulfonate	355-46-4	PFHxS	Yes	Ongoing		Ongoing
Perfluorohexanoic acid	307-24-4	PFHxA		Ongoing		
Perfluorooctane sulfonate	1763-23-1	PFOS			Yes	Yes
Perfluorononanoic acid and its sodium ammonium salts,	375-95-1 21049-39-8, 4149-60-4	PFNA	Yes	Yes		
Perfluorodecanoic acid its sodium and ammonium salts,	335-76-2 3108-42-7 3830-45-3	PFDA	Yes	Yes		
Pentacosafluoro tridecanoic acid	72629-94-8	PFTrDA	Yes	Yes		
Tricosafluoro dodecanoic acid	307-55-1	PFDoA	Yes	Yes		
Henicosafluoro undecanoic acid	2058-94-8	PFUnA	Yes	Yes		
Heptacosafluoro tetradecanoic acid	376-06-7	PFTA	Yes	Yes		
Perfluoroctanonic acid Ammonium pentadecafluoro octanoate	335-67-1 3825-26-1	PFOA APFO	Yes		Yes	Yes
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	Various	HPFO-DA**. Also known as GenX	Yes			
Broader PFAS regulation	Various			Yes		

Polycyclic Aromatic Hydrocarbons (PAH's)			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
PAH – Impurities					
CAS No.	**Substance**	Sum of all PAH's: 1 mg/kg Toys & childcare articles: 0,5 mg/kg of any of the listed PAHs	Textile: EN 17132:2019 Footwear: EN ISO 16190:2021 AfPS GS 2019-01 PAK Reporting limit: 0.2 mg/kg	BaP, BeP, BaA, CHR, BbFA, BjFA, BkFA, DBAhA, in REACH, Annex XVII, entry 50, regulated for car tires and consumer products such as clothing, footwear, gloves, sportswear, headbands, watch- straps and wrist-bands*. Also restricted in textile products since 1 November 2020, REACH annex XVII, entry 72. Prop 65: Several PAH are known to the State of California to cause cancer.	
50-32-8	(BaP) Benzo[a]pyrene*				X
192-97-2	(BeP) Benzo[e]pyrene*				
56-55-3	(BaA) Benzo[a]anthracene*				X
218-01-9	(CHR) Chrysene*				X
205-99-2	(BbFA) Benzo[b]fluoranthene*				
205-82-3	(BjFA) Benzo[j]fluoranthene*				
207-08-9	(BkFA) Benzo[k]fluoranthene*				X
53-70-3	(DBAhA) Dibenzo[a,h]anthracene*				
83-32-9	Acenaphthene	Direct & Prolonged Skin contact** Sum of all PAH's: 10 mg/kg BaP: < 1 mg/kg No Direct Skin contact*** Sum of all PAH's: 200 mg/kg BaP < 20 mg/ kg			
208-96-8	Acenaphthylene				
120-12-7	Anthracene				X
191-24-2	Benzo[ghi]perylene				X
206-44-0	Fluoranthene				X
86-73-7	Fluorene				
193-39-5	Indeno[1,2,3-cd]pyrene				
91-20-3	Naphthalene****				
85-01-8	Phenanthrene				X
129-00-0	Pyrene				X

* A restriction of 1 mg/kg per PAH for consumer products came into force the 27th of December 2013 with a 2-year phase out → Now in force
**This restriction should apply to those parts of articles that come into direct and prolonged contact with the skin or the oral cavity under normal conditions of use.
*** This restriction should apply to articles or parts which are only in short or infrequent contact with the skin or oral cavity under normal conditions of use.
**** Naphthalene alone should not be considered as PAH but as a VOC with the limit of 200 mg/kg

Polycyclic Aromatic Hydrocarbons (PAH's)			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
PAH – Oil Mixtures					
CAS No.	**Substance**	Sum of all PAH's: 50 mg/kg	Solvent extraction / GC-MS or HPLC-DAD Reporting limit: 0.1 mg/kg	Prop 65: Several PAH are known to the State of California to cause cancer.	
90640-80-5	Anthracene oil				X
91995-17-4	Anthracene oil, anthracene paste, distn. Lights				X
91995-15-2	Anthracene oil, anthracene paste, anthracene fractions				X
90640-82-7	Anthracene oil, anthracene-low				X
90640-81-6	Anthracene oil, anthracene paste				X
Others					
91-22-5	Quinoline	50mg/kg	GC-MS Reporting limit: 10 mg/kg	REACH annex XVII entry 72	

Phthalates			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**				
85-68-7	(BBP) Butyl benzyl phthalate			EU: BBP, DBP, DEHP, DINP, DIDP, DIBP and DNOP are listed in REACH, Annex XVII, entry 51 & 52.	X
84-74-2	(DBP) Dibutyl phthalate				X
117-81-7	(DEHP) Di(ethylhexyl) phthalate				X
84-66-2	(DEP) Diethyl phthalate				

Phthalates			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
68515-42-4	(DHNUP) 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	Should not be present in products The sum of esters of ortho-phthalic acid must not exceed: 0.1 % by weight	Textile: EN ISO 14389:2014 Footwear: EN ISO 16181-1, -2:2021 GC-MS, LC- MS USA: CPSC-HC-C1001-09.3 Reporting limit: 50 mg/kg for each phthalate	EU: 0.1% by weight of the plasticized material in toys and childcare articles which can be placed in the mouth. After 7 July 2020 in all articles, individually or in any combination of the phthalates BBP, DBP, DEHP and DIBP in a concentration equal to or greater than 0,1 % by weight of the plasticized material in the article. DIPP, DPP, DnHP and DMEP are restricted in textile products since 1 November 2020, REACH annex XVII, entry 72. All phthalates in toys and childcare Articles for children age 0-3 years are restricted (0,05%) in Denmark (BEK nr 855) Prop 65: BBP, DEHP, DIDP, DBP, DnHP and DINP are known to the State of California to cause birth defects or other reproductive harm.	X
84-69-5	(DIBP) Di-iso-butyl phthalate				X
26761-40-0 68515-49-1	(DIDP) Di-isodecyl phthalate				
71888-89-6	(DIHP) 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich				X
28553-12-0 68515-48-0	(DINP) Di-isononyl phthalate				
605-50-5	(DIPP) Di-isopentyl phthalate				X
117-82-8	(DMEP) Di-(2-methoxyethyl) phthalate				X
131-11-3	(DMP) Dimethyl phthalate				
84-75-3	(DnHP) Di-n-hexyl phthalate				X
117-84-0	(DNOP) Di-n-octyl phthalate				
131-18-0	(DPP) Di-n-pentyl phthalate				X
84777-06-0	N-pentyl-isopentylphthalate				X
776297-69-9	(iPnPP) N-pentyl-isopentyl-phthalate				X
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear				X

Phthalates			PROPERTY LENDING CHEMICALS		
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**				
68515-51-5	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl ester with ≥ 0,3% of dihexyl phthalate (84-75-3)				**X**
68648-93-1	1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diester with ≥ 0,3% of dihexyl phthalate (84-75-3)				**X**
84-61-7	Dicyclohexyl phthalate (DCHP)				**X**
71850-09-4	Diisohexyl phthalate (DIHXP)				**X**
Various	**All other esters of ortho-phthalic acid (o-DAP)** *				
* PEAK has a total ban of all o-DAP that include ”new” phthalates, for the lab (MTS) to report test results o-DAP substances and their concentration levels in excel, for effective handling of fails.					

PVC				POLYMER
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
CAS No. 9002-86-2	**Substance** Polyvinyl chloride	Usage Ban Negative < detection limit	Beilstein test for screening. If positive, confirmation by FTIR.	Restrictions for Russia –

Chlorinated Aromatic Hydrocarbons				PROCESS CHEMICALS
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
Chlorinated Benzenes				
CAS No.	**Substance**	Usage Ban *NOTE: Traces may be found up to 20 mg/kg*	EN 17137:2018 (textiles) Solvent Extraction / GC-MS Reporting limit: 0.1 mg/kg	Pentachlorobenzene , Hexachlorobenzene are listed in POPs* and banned by Regulation (EC) No 850/2004**. Current global and EU/EEA restrictions on chlorinated solvents, see table overview at page 46. Restricted for release from textile products in Russia. Should not be detected in our products
108-90-7	Monochlorobenzene			
Various	Dichlorobenzenes, all isomers			
Various	Trichlorobenzenes, all isomers			
Various	Tetrachlorobenzenes, all isomers			
608-93-5	Pentachlorobenzene			
118-74-1	Hexachlorobenzene			

<table>
<tr><th colspan="2">Chlorinated Aromatic Hydrocarbons</th><th colspan="2">PROCESS CHEMICALS</th></tr>
<tr><th colspan="2">Restricted Substance</th><th>Peak Performance Limit</th><th>Test method & Reporting limit</th><th>Regulation & Country</th></tr>
<tr><td colspan="5">Chlorinated Toluenes</td></tr>
<tr><td>CAS No.</td><td>Substance</td><td rowspan="10">Usage Ban

NOTE: Traces may be found up to 4 mg/kg</td><td rowspan="10">EN 17137:2018 (textiles)

Solvent Extraction / GC-MS

Reporting limit: 0.1 mg/kg</td><td rowspan="10">Restricted for release from textile products in Russia. Should not be detected in our products

Current global and EU/EEA restrictions on chlorinated solvents, see table overview at page 46.</td></tr>
<tr><td>Various</td><td>Monochlorotoluenes</td></tr>
<tr><td>Various</td><td>Dichlorotoluenes</td></tr>
<tr><td>Various</td><td>Trichlorotoluenes</td></tr>
<tr><td>Various</td><td>Tetrachlorotoluenes</td></tr>
<tr><td>877-11-2</td><td>Pentachlorotoluene</td></tr>
<tr><td>5216-25-1</td><td>α, α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride</td></tr>
<tr><td>98-07-7</td><td>α, α,α-trichlorotoluene; benzotrichloride</td></tr>
<tr><td>100-44-7</td><td>α-chlorotoluene; benzyl chloride</td></tr>
<tr><td colspan="5">*POPs is the Stockholm Convention on Persistent Organic Pollutants
**Regulation (EC) No 850/2004 (EU regulation implementing Stockholm Convention).</td></tr>
</table>

Solvents & Volatile Organic Compounds (VOC's)				PROCESS CHEMICALS	
Restricted Substance		**Peak Performance Limit (mg/kg)**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
Non-Chlorinated Aromatic Hydrocarbons					
CAS No.	**Substance**	200	Validated method, extraction or headspace GC/MS identification		
91-20-3	Naphthalene				
Non-halogenated Aliphatic Solvents					
CAS No.	**Substance**				
75-15-0	Carbon disulphide	10	EN 17131:2019 (DMFa in textiles) CEN ISO/TR 16178:2021 (DMFa in gloves) EN ISO 16189:2021 (DMFa in footwear)EN ISO 19070:2016 (NMP in leather) Validated method, extraction or headspace GC/MS identification.	From 1 November 2020, N,N- DMF,N,N -DMAC and NMP are restricted with a limit of 3000 mg/kg in textiles (CMR fast track) according to REACH, Annex XVII, entry 72 From 12 December 2024 in relation to placing DMFa on the market for use, or use, as a solvent in direct or transfer polyurethane coating processes of textiles and paper material or the production of polyurethane membranes, and from 12 December 2025 in relation to placing on the market for use, or use, as a solvent in the dry and wet spinning processes of synthetic fibres. Prop 65: N,N- DMF, N,N – DMAC and NMP are known to the State of California to cause birth defects or other reproductive harm.	
110-80-5	2-Ethoxyethanol	80			X
111-15-9	2-Ethoxyethanol acetate	80			X
109-86-4	2-Methoxyethanol	80			X
110-49-6	2-Methoxyethanolacetate	300			X
1589-47-5	2-Methoxypropanol	1000			
70657-70-4	2-Methoxypropanol acetate	1000			
122-99-6	2-Phenoxyethanol	400			
111-76-2	2-Butoxyethanol	1000			
75-12-7	Formamide	1000			X
123-91-1	1,4 dioxane	1000			X
127-19-5	(N,N-DMAC) N,N-dimethylacetamide	1000			X
68-12-2	(N,N-DMF) N,N-Dimethylformamide (DMFa)	1000			X
872-50-4	(NMP) N-Methylpyrrolidone	100			X

Solvents & Volatile Organic Compounds (VOC's)				PROCESS CHEMICALS	
Restricted Substance		**Peak Performance Limit (mg/kg)**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
143-24-8	Bis(2-(2-methoxyethoxy)ethyl)ether	10	Validated method, extraction or headspace GC/MS identification.		**X**
Non-halogenated Aromatic Solvents					
CAS No.	**Substance**				
71-43-2	Benzene	Usage Ban Trace: 5	Validated method, extraction or headspace GC/MS identification.	In REACH Annex XVII, entry 5 and entry 72 (CMR fast track) Prop 65: Benzene and ethylbenzene are known to the State of California to cause cancer.	
100-41-4	Ethylbenzene	100			
108-88-3	Toluene	1000		In REACH Annex XVII, entry 5 Prop 65: Toluene is known to the State of California to cause birth defects or other reproductive harm.	
Halogenated Aliphatic Solvents					
CAS No.	**Substance**				
127-18-4	(PERC) Tetrachloroethylene	50	Validated method, extraction or headspace GC/MS	Current global and EU/EEA restrictions on chlorinated solvents, see table overview at page 46. Prop 65: Several halogenated Aliphatic Solvents are known to the State of California to cause cancer.	
79-01-6	(TCE) Trichloroethylene	50			**X**
96-18-4	1,2,3-trichloropropane	50			**X**
76-01-7	Pentachloroethane	100			
56-23-5	(Carbon Tetrachloride) Tetrachloromethane	10			
630-20-6	1,1,1,2-Tetrachloroethane	10			

Solvents & Volatile Organic Compounds (VOC's)			PROCESS CHEMICALS		
Restricted Substance		Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
79-34-5	1,1,2,2-Tetrachloroethane	100	identification.		
67-66-3	(Chloroform) Trichloromethane	100			
79-00-5	1,1,2-Trichloroethane	100			
75-35-4	1,1-Dichloroethylene	100			
71-55-6	1,1,1-Trichloroethane	100			
75-09-2	Methylene chloride	100			

Current global and EU/EEA restrictions on chlorinated solvents.

Solvent	CAS-RN	Legal framework	Legal requirement
Chloroform	67-66-3	Annex XVII of Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH).	Shall not be placed on the market, or used as substances, as constituents of other substances or in mixtures in concentrations equal to or greater than 0.1% by weight, REACH annex XVII, entry 32
1,1,2 Trichloroethane	79-00-5		
1,1,2,2 Tetrachloroethane	79-34-5		
1,1,1,2 Tetrachloroethane	630-20-6		
Pentachloroethane	76-01-7		
1,1 Dichloroethylene	75-35-4		
1,4-dichlorobenzene	106-46-7		
Carbon tetrachloride	56-23-5	Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer	Shall not be produced, placed on the market, or used
1,1,1 Trichloroethane	71-55-6		
α,α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1	Annex XVII of Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH).	1 mg/kg in textiles (CMR fast track), REACH annex XVII entry 72 [3]
α,α,α-trichlorotoluene; benzotrichloride	98-07-7		
α-chlorotoluene; benzyl chloride	100-44-7		
Trichloroethylene	79-01-6	Authorization list. Candidate List of Substances of Very High Concern for authorization and annex XIV in Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)	0.1% by weight in articles for information duty.

[3] From 1 November 2020, the named solvents have a restriction limit of 1 mg/kg in textiles (CMR fast track) according to Annex XVII of Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH). The CMR fast track restriction does not apply to clothing, related accessories, textiles other than clothing, or footwear within the scope of Regulation (EU) 2016/425 (PPE).

Solvent	CAS-RN	Legal framework	Legal requirement
1,2,3-trichloropropane	96-18-4	Candidate List of Substances of Very High Concern for authorization in Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)	0.1% by weight in articles for information duty.

UV STABILISERS				PROPERTY LENDING CHEMICAL	
Restricted Substance		Peak Performance Limit (mg/kg)	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**				
3846-71-7	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	≤ 1000mg/kg	GC_MS, LC_MS, GC-ECD	Legal limit in REACH: 0.1% by weight	X
3864-99-1	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)				X
25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)				X
36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)				X

1.4.8 MISCELLANEOUS

pH				MISCELLANEOUS
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country
CAS No.	Substance			
	pH*	Textiles: 4.0 – 8.5 Leather: 3.5 – 6.0	Textiles : EN ISO 3071 :2020 Leather : EN ISO 4045 :2018 pH meter accuracy: 0.2 pH units	
*A pH higher than 10 or lower than 3 can cause skin irritation. The pH value can easily be corrected by washing the article.				

1.4.9 BIOCIDAL AGENTS

Organotin Compounds				STABILIZERS AND BIOCIDAL AGENTS
Restricted Substance		Peak Performance Limit	Test method & Detection limit	Regulation & Country
CAS No.	Substance			
Various	Mono-, Di-, Tri-butyltin derivates	280 mg/kg per substance*	EN ISO 22744-1,-2:2020 (textile) CEN ISO/TS 16179:2012 (footwear) Ethanol extraction, derivatization and analysis by GC-MS or LC-MS.	Organostannic compounds are listed in REACH, Annex XVII, entry 20. TBTO, Tributyltin oxide and DBT DC, Dibutyltin dichloride is on the REACH, SVHC list. Prop 65: Tributyltin Methacrylate and triphenyltin hydroxide are known to the State of California to cause birth defects or other reproductive harm.
Various	Mono-, Di-, Tri-methyltin derivates			
Various	Mono-, Di-, Tri-phenyltin derivates			

Organotin Compounds			STABILIZERS AND BIOCIDAL AGENTS	
Restricted Substance		**Peak Performance Limit**	**Test method & Detection limit**	**Regulation & Country**
Various	Mono-, Di-, Tri-octyltin derivates		Reporting limit: 0.02 mg/kg	
*Including but not limited to: (DBT) Dibutyltin, (TBT)** Tributyltin, (TBTO) Tributyltin oxide, (DMT) Dimethyltin, (TMT) Trimethyltin, (TPhT)** Triphenyltin, (DOT) Dioctyltin. ** Oeko-Tex & Japan have a limit of 1ppm for TBT & TPhT				

Phenols (Chlorinated Phenols)			BIOCIDAL AGENTS	
Restricted Substance		**Peak Performance Limit**	**Test method & Detection limit**	**Regulation & Country**
CAS No.	**Substance**	Usage Ban Trace: 0.5 mg/kg	Textile: § 64 LFGB 82.02.8 GC/MS Identification Reporting limit: 0.1 mg/kg Leather: EN ISO 17070:2015	On February 23, 2021, the EU published Regulation (EU) 2021/277 with a retriction limit of no more than 5 mg/kg for PCP, its salts and esters under 'Specific exemption on intermediate use or other specification' in Part A to Annex I of the POP Regulation PCP is banned in Norway and Germany in textiles and leather. Legal limit: 5 mg/kg PCP is listed in the Rotterdam convention.
87-86-5	(PCP) Pentachlorophenol, its salts and compounds			
25167-83-3 4901-51-3 58-90-2 935-95-5	(TeCP) Tetrachlorophenol, its salts and compounds 2,3,4,5 TetraCP 2,3,4,6 TetraCP 2,3,5,6 TetraCP			

Phenols (Chlorinated Phenols)			BIOCIDAL AGENTS	
Restricted Substance		Peak Performance Limit	Test method & Detection limit	Regulation & Country
88-06-2 933-75-5 933-78-8 95-95-4 15950-66-0 609-19-8	(TriCP) Trichlorophenols 2,4,6 TriCP 2,3,6 TriCP 2,3,5 TriCP 2,4,5 TriCP 2,3,4 TriCP 3,4,5 TriCP	Adult: Sum 2,0 mg/kg mg/kg	Reporting limit: 0.1mg/kg	Prop 65: PCP and derivatives are known to the State of California to cause cancer.
90-43-7	(OPP) o-Phenylphenol	Textile/Synthetic leather: 100 mg/kg Leather: 750 mg/kg	Solvent extraction / GC-MS, LC-MS for confirmation. Textile: EN 17134:2019 Leather: EN ISO 13365:2011	Prop 65: OPP is known to the State of California to cause cancer.

Other Biocides				BIOCIDAL AGENTS
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**
Carbendazim				
10605-21-7	Carbendazim	Usage ban	GC-MS	Not approved for PT9 according to the EU Biocide regulation
Dimethyl Fumarate (DMFU)				
CAS No.	**Substance**	Usage Ban	EN ISO 16186:2021 (footwear) EN 17130:2019 (textile) Reporting limit: 0.1 mg/kg	Legal limit: 0.1 mg/kg In REACH, Annex XVII, entry 61.
624-49-7	Dimethyl Fumarate (DMFu)			
Permethrin				
CAS No.	**Substance**	Not Detected Trace: 0.1 mg/kg	GC-MS, LC-MS. Reporting limit: 0.1 mg/kg	On the list of temporarily permitted existing biocides within PT9 (product type 9) that includes textiles, polymers and leather, according to the EU Biocides Regulation 528/2012 (EU BPR)
52645-53-1	Permethrin			
Sensitizing Isothiazolinones				
CAS No.	**Substance**	50 mg/kg	Solvent extraction / GC-MS, LC-MS for confirmation. Leather: EN ISO 13365:2011	OIT is on the list of temporarily permitted existing biocides within PT9 (product type 9) that includes textiles, polymers and leather, according to the EU Biocides Regulation 528/2012 (EU BPR) but not 5-Chloro-2-Methyl-4- Isothiazolin-3-One and MIT.
26172-55-4	5-Chloro-2-Methyl-4-Isothiazolin-3-One			
2682-20-4	2-Methyl-4-Isothiazolin-3-one (MIT)			

Other Biocides				
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**
26530-20-1	2-n-Octyl-4-isothiazolin-3-one (OIT)	250 mg/kg		
Silver and its compounds				
CAS No.	**Substance**	Usage Ban	ICP-MS, ICP-OES or AAS. Reporting limit: Total silver: 0.1 mg/kg.	Metallic silver as nano silver (AgNP) and its salts are banned as biocides within PT9 (product type 9) that includes textiles, polymers and leather, according to EU Biocides Regulation 528/2012 (EU BPR)
Not Defined	Silver and its compounds			
Triclosan				
CAS No.	**Substance**	Usage Ban	Textile: EN 17134:2019 Reporting limit: 1,0 mg/kg	On the list as not approved within PT9 (product type 9) that includes textiles, polymers and leather, according to the EU Biocides Regulation 528/2012 (EU BPR)
3380-34-5	Triclosan			
Other banned biocides				
52-51-7	Bronopol	Usage ban	Solvent extraction / GC-MS, LC-MS for confirmation	On the list as not approved within PT9 (product type 9) that includes textiles, polymers and leather, according to the EU Biocides Regulation 528/2012
137-26-8	Thiram			
137-42-8	Metam-sodium ((sodium N-methyldithiocarbamate)			

1.4.10 RESTRICTIONS ON PACKAGING

Restrictions on Packaging*					
Restricted Substance		Peak Performance Limit	Test method & Reporting limit	Regulation & Country	SVHC
CAS No.	**Substance**	Usage Ban for all 4 metals Trace of Cd & Pb: 100 mg/kg Trace of Cr^{+6}: 3 mg/kg Trace of Hg: 0.2 mg/kg Total Trace of all 4 metals: 100 mg/kg	CEN/CR 13695-1:2000	Total sum of Cd, Pb, Cr^{+6} and Hg shall not exceed 100 ppm by weight, Directive (EC) No 94/62/EC of 20 December 1994 on packaging and packaging waste.	
7440-43-9	(Cd) Cadmium				X
7439-92-1	(Pb) Lead				
18540-29-9	(Cr^{+6}) Chromium hexavalent				
7439-97-6	(Hg) Mercury				
7646-79-9	Cobalt dichloride	Should not be present in Silica bags**. Trace: 0.1%	Test equipment: AAS or ICP-OES		X
624-49-7	(DMFu) Dimethylfumarate	Usage Ban Trace: 0.1 mg/kg	Solvent extraction / GC-MS	In REACH Annex XVII, entry 61	
9002-86-2	PVC	Usage Ban Negative < detection limit	Beilstein test for screening. If positive, confirmation by FTIR.		

*Packaging means transportation packaging as well as product packaging, i.e., any material used for the function packaging purpose such as containment, protection, handling, delivery, and presentation of finished products. For metals, concentration is calculated at element level.
**Commonly used for detection of moisture, for example in drying agents such as silica gel. When cobalt dichloride is added as an indicator, the drying agent is blue when still active and pink when exhausted.

Boric acid, borate compounds*			PROPERTY LENDING CHEMICALS		
Restricted Substance		**Peak Performance Limit**	**Test method & Reporting limit**	**Regulation & Country**	**SVHC**
CAS No.	**Substance**	Usage ban	1) AAS 2) ICP-MS and ICP-OES Reporting limit: 1) 1000 µg/kg as Boron 2) 100 µg/kg as Boron	Legal limit: 1000 mg/kg or 0.1% by weight	
10043-35-3 11113-50-1	Boric acid				X
1303-96-4 1330-43-4 12179-04-3	Disodium tetraborate anhydrous				X
12267-73-1	Tetraboron disodium heptaoxide hydrate				X
234-390-0	Sodium perborate; perboric acid, sodium salt				X
7632-04-04	Sodium peroxometaborate				X
13840-56-7	Orthoboric acid, sodium salt				X
*Commonly found in Wood material in packaging.					

1.4.11 SUBSTANCES WHICH ARE NOT COMMONLY FOUND IN PEAK PERFORMANCE PRODUCTS

Asbestos			
Restricted Substance		**Peak Performance Limit**	**Regulation & Country**
CAS No.	**Substance**	Usage Ban Limit: Not Detected	Listed in REACH Annex XVII, entry 6. Warning label required if used under legal conditions. Switzerland: ORRChem annex 1.6 (art. 3) USA: 16 CFR 1500.17 entry 7 Unlikely in everyday wear except for firefighting Personal Protection equipment (PPE).
77536-66-4	Actinolite		
12172-73-5	Amosite		
77536-67-5	Anthophyllite		
12001-29-5	Chrysotile		
12001-28-4	Crocidolite		
77536-68-6	Tremolite		

Dioxins & Furans		
Restricted Substance		**Peak Performance Limit**
Group 1:		
CAS No.	**Substance**	Unavoidable traces: Sum of Group 1: 1 µg/kg
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	
40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran	
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	
Group 2:		
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	Unavoidable traces: Sum of Group 1 & 2: 5 µg/kg
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	
70648-26-9	1,2,3,4,7,8Hexachlorodibenzofuran	

Dioxins & Furans		
Restricted Substance		**Peak Performance Limit**
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	
Group 3:		
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	Unavoidable traces: Sum of Group 1, 2 & 3: 100 µg/kg
3268-87-9	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	
39001-02-0	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	
Group 4:		
50585-41-6	2,3,7,8-Tetrabromodibenzo-p-dioxin	Unavoidable traces: Sum of Group 4: 1 µg/kg
109333-34-8	1,2,3,7,8-Pentabromodibenzo-p-dioxin	
67933-57-7	2,3,7,8-Tetrabromodibenzofuran	
131166-92-2	2,3,4,7,8-Pentabromdibenzofuran	
Group 5:		
110999-44-5	1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	Unavoidable traces: Sum of Group 4 & 5: 5 µg/kg
110999-46-7	1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	
110999-45-6	1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	
107555-93-1	1,2,3,7,8-Pentabromodibenzofuran	

Fluorinated Greenhouse Gases		
Restricted Substance		**Peak Performance Limit**
CAS No.	**Substance**	Usage Ban
2551-62-4	Sulphur hexafluoride – SF_6	
Hydrofluorocarbons (HFCs):		
75-46-7	HFC-23 – CHF_3	Usage Ban
75-10-5	HFC-32 – CH_2F_2	
593-53-3	HFC-41 – CH_3F	
138495-42-8	HFC-43-10mee – $C_5H_2F_{10}$	
354-33-6	HFC-125 – C_2HF_5	
359-35-3	HFC-134 – $C_2H_2F_4$	
811-97-2	HFC-134a – CH_2FCF_3	
75-37-6	HFC-152a – $C_2H_4F_2$	
420-46-2	HFC-143 – $C_2H_3F_3$	
470-46-6	HFC-143a – $C_2H_3F_3$	
431-89-0	HFC-227ea – C_3HF_7	
	HFC-236cb – $CH_2FCF_2CF_3$	
431-63-0	HFC-236ea – CHF_2CHFCF_3	
690-39-1	HFC-236fa – $C_3H_2F_6$	
679-86-7	HFC-245ca – $C_3H_3F_5$	
460-73-1	HFC-245fa – $CHF_2CH_2CF_3$	
406-58-6	HFC-365mfc – $CF_3CH_2CF_2CH_3$	
Perfluorocarbons (PFCs):		
75-73-0	Perfluoromethane – CF_4	Usage Ban
76-16-4	Perfluoroethane – C_2F_6	
76-19-7	Perfluoropropane – C_3F_8	
355-25-9	Perfluorobutane – C_4F_{10}	
67-8-26-2	Perfluoropentane – C_5F_{12}	
355-42-0	Perfluorohaxane – C_6F_{14}	
115-25-3	Perfluorocyclobutane – c-C_4F_8	

Ozone Depleting Substances – Class I and II		
Restricted Substance		**Peak Performance Limit**
Ozone Depleting Substances Class I		
75-69-4	Trichlorofluoromethane CFC-11	Usage Ban
75-71-8	Dichlorofluoromethane CFC-12	
354-58-5	1,1,1-trichlorotrifluoroethane CFC-113	
76-13-1	1,1,2-trifluoroethane CFC-113	
76-14-2	Dichlorotetrafluoroethane CFC-114	
76-15-3	Monochloropentafluoroethane CFC-15	
353-59-3	Bromochlorodifluoroethane Halon-1211	
75-63-8	Bromotrifluoromethane Halon-1301	
124-73-2	Dibromotetrafluoroethane Halon-2402	
75-72-9	Chlorotrifluoromethane CFC-13	
354-56-3	Pentachlorofluoroethane CFC-111	
76-12-0	Tetrachlorodifluoroethane CFC-112	
422-78-6	Heptachlorofluoropropane CFC-211	
3182-26-1	Hexachlorodifluoropropane CFC-212	
2354 06 5	Pentachlorotrifluoropropane CFC-213	
29255-31-0	Tetrachlorotetrafluoropropane CFC-214	
1599-41-3	Trichloropentafluoropropane CFC-215	
661-97-2	Dichlorohexafluoropropane CFC-216	
422-86-6	Monochloroheptafluoropropane CFC-217	
56-23-5	Carbon tetrachloride CC14	
71-55-6	1,1,1 trichloroethane (methyl Chloroform)	
	Halon-1211	
	Halon-1301	
	Halon-2402	
Ozone Depleting Substances Class II		
Trichlorotetrafluoropropane HCFC-4		Usage Ban

Ozone Depleting Substances – Class I and II	
Restricted Substance	**Peak Performance Limit**
Dichlorofluoromethane-HCFC-21	
Monochlorodifluoromethane HCFC-22	
Monochlorofluoromethane HCFC-31	Usage Ban
Tetrachlorofluoroethane HCFC-121	
Trichlorodifluoroethane-HCFC-122	
Dichlorotrifluoroethane HCFC-123	
Monochlorotetrafluoroethane HCFC-124	
Trichlorofluoroethane-HCFC-131	
Dichlorodifluoroethane HCFC-132B	
Monochlorotrifluoroethane HCFC-133A	
Dichlorofluoroethane HCFC -141B	
Monochlorodifluoroethane HCFC-142B	
Hexachlorofluoropropane HCFC-221	
Pentachlorodifluoropropane HCFC-222	
Tetrachlorotrifluoropropane HCFC-223	
Tirchlorotetrafluoropropane HCFC-224	
Dichloropentafluoropropane HCFC-225CA	
Dichloropentafluoropropane HCFC-225CB	
Monochlorohexafluoropropane HCFC-226	
Pentachlorofluoropropane HCFC-231	
Tetrachlorodifluoropropane HCFC-232	
Trichlorotrifluoropropane HCFC-233	
Dichlorotetrafluropropane HCFC-234	
Monchloropentafluoropropane HCFC-235	
Tetrachlorofluoropropane HCFC-241	
Trichlorodifluoropropane HCFC-242	
Dichlorotrifluoropropane HCFC-243	
Monochlorotetrafluoropropane HCFC-244	
Trichlorofluoropropane HCFC-251	

Ozone Depleting Substances – Class I and II	
Restricted Substance	**Peak Performance Limit**
Dichlorofluoropropane HCFC-252	
Monochlorodifluoropropane HCFC-253	Usage ban
Dichlorofluoropropane HCFC-261	
Monochlorodifluoropropane HCFC-262	
Monochlorofluoropropane HCFC-271	

Pesticides		
Restricted Substance		**Peak Performance Limit**
CAS No.	**Substance**	Usage Ban, Trace: 0.5 mg/kg
116-06-3	Aldicarb	
309-00-2	Aldrin	
57-74-9	Chlordane	
6164-98-3	Chlordimeform	
96-12-8	(DBCP) 1,2-Dibromo-3-Chloropropane	
72-54-8	(*p,p*-DDD) *p,p*-Dichlorodiphenyl-dichloroethane	
53-19-0	(*o,p*-DDD) *o,p*-Dichlorodiphenyl-dichloroethane	
72-55-9	(p,p-DDE) *p,p*-Dichlorodiphenyl-dichloroethylene	
3424-82-6	(o,p-DDE) *o,p*-Dichlorodiphenyl-dichloroethylene	
50-29-3	(p,p-DDT) *p,p*-Dichlorodiphenyl-trichloroethane	
789-02-6	(*o,p*-DDT) *o,p*-Dichloro-diphenyl-trichloro ethane	
94-75-7	2,4-Dichlorphenoxyacetic acid, its salts & compounds	
115-32-2	Dicofol	
60-57-1	Dieldrin	
115-29-7	Endosulfan	
72-20-8	Endrin	
106-93-4	(EDB) Ethylene Dibromide	
76-44-8	Heptachlor	
1024-57-3	Heptachlor epoxide	
608-73-1	(HCH) Hexachlorocyclohexane, all isomers	
465-73-6	Isodrin	
4234-79-1	Kelevan	
143-50-0	Kepone (Chlordecone)	
58-89-9	Lindane	
72-43-5	Methoxychlor	
298-00-0	Methyl Parathion	
2385-85-5	Mirex	
CAS No.	**Substance**	Usage Ban

Pesticides		
Restricted Substance		**Peak Performance Limit**
1910-42-5	Paraquat	Trace: 0.5 mg/kg
56-38-2	Parathion	
72-56-0	Perthane	
82-68-8	Quintozene	
8001-50-1	Strobane	
297-78-9	Telodrin	
57648-21-2	(DTTB) Timiperone	
8001-35-2	Toxaphene	
93-76-5	(2,4,5-T) 2,4,5-trichlorophenoxyacetic acid, its salts and compounds	
93-72-1	2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds	

Polyhalogenated Aromatic Hydrocarbons		
Restricted Substance		**Peak Performance Limit**
1336-36-3, 53469-21-9	(PCB) Halogenated Biphenyls, including Polychlorinated Biphenyls	Usage Ban, Should not be present in products.
Various	Halogenated Diarylalkanes	
Various	Halogenated Naphthalenes	
No CAS #	(PCT) Halogenated Terphenols, including Polychlorinated terphenyl	
99688-47-8 81161-70-8 76253-60-6	Halogenated diphenyl methanes, including: Halogenated diphenyl methanes Monmethyl-dibtomom-diphenyl methane Monomethyl-tetrachloro-diphenyls methane	Usage Ban, Should not be present in products.

1.4.12 CANDIDATE LIST WITH SUBSTANCES OF VERY HIGH CONCERN

Link to the SVHC List

The list of ECHA Candidates, SVHC's, is continuously updated. This list is available on the ECHA homepage:
https://echa.europa.eu/candidate-list-table

SVHC List, 223 Substances, last updated 17-01-2022

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
1	4,4' Methylendianiline	202-974-4	101-77-9	28.10.2008	Raw material to produce methylene diphenyl diisocyanate for PUR (main application). Hardener in epoxy resins, adhesives.
2	Bis(tributyltin) oxide, (TBTO)	200-268-0	56-35-9	28.10.2008	Biocide in anti-fouling paint and other biocide uses, also for industrial use.
3	Benzylbutylphthalate (BBP)	201-622-7	85-68-7	28.10.2008	Plasticizer (mainly for PVC), adhesives, inks, lacquers, small use in package, cosmetics.
4	Anthracene	204-371-1	120-12-7	28.10.2008	From coal tar distillation. Raw material for other synthesis.
5	Triethyl arsenate	427-700-2	15606-95-	28.10.2008	Wood preservation (phased out), pesticide, glass goods, E&E products, PVC.
6	Hexabromocyclododecane, (HBCDD)	247-148-4	25637-99-4	28.10.2008	Flame retardant (mainly in PS). In constructions, buildings also in flame-retard textiles and E&E products.
7	5-tert-butyl-2,4,6-trinitro-m-xylene	201-329-4	81-15-2	28.10.2008	Cosmetics.
8	Alkanes, C10-13, Chloro (Short chain chlorinated paraffins)	287-476-5	85535-84-8	28.10.2008	Metal working lubricants, fat liquoring of leather, flame retardant in textiles, rubber, paint, sealants and adhesives.
9	Cobalt(2+) dichloride	231-589-4	7646-79-9	28.10.2008	Absorber for gases, humidity indicator (e.g., silica gels), to produce vitamin B12, dye mordant for glass industry, solid lubricant, catalyst, invisible inks, drying agent, production of non-ferrous metals, electroplating, additive in

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
10	Sodium dichromate, dihydrate	234-190-3	7789-12-0	28.10.2008	Production of other Cr-product as chromate pigments, use for paints and plastic coloration, corrosive protection for metals, in vitamin K production, preparation of colored glass and ceramic glazes, in wood preparation, in production of essential oils and perfumes.
11	Di(2-ethylhexyl)phthalate (DEHP)	204-211-0	117-81-7	28.10.2008	Plasticizer in resins and polymers (mainly PVC).
12	Lead hydrogen arsenate	232-064-2	7784-40-9	28.10.2008	Wood preservation (phased out), pesticide, glass goods, E&E products, PVC.
13	Diarsenicpentoxide	215-116-9	1303-28-2	28.10.2008	Dying industry, metallurgy (harden copper, lead, gold), special glasses, wood preservation.
14	Diarsenic trioxide	215-481-4	1327-53-3	28.10.2008	Decolorizing agent for glass and enamels, application in glass and lead glass industry, wood preservation, to produce other As chemicals.
15	Dibutylphthalate	201-557-4	84-74-2	28.10.2008	Plasticizer in resins and polymers (mainly PVC) Also used in printing inks, adhesives (e.g. paper, package), sealant/grouting agents, nitrocellulose paints, film coatings, glass fibers and consumer products.
16	2,4-Dinitrotoluene	204-450-0	121-14-2	13.01.2010	Used as intermediate in the production of TDI, this is used to produce Polyurethane. Gelatinizing plasticizing agent. Automotive airbags. Intermediate
17	Anthracene oil	292-602-7	90640-80-	13.01.2010	These Anthracene oils consist of PAH. It is mainly used as an intermediate to produce pure Anthracene which is used to produce dyes. Also used in carbon black, pharmaceuticals, and wood preservative, waterproof membranes for roofing, asphalt and industrial viscosity modifiers.
18	Anthracene oil fraction (a complex combination of the distillation of Anthracene)	295-278-5	91995-17-4	13.01.2010	
19	Anthraceneoil, Athracene paste, Anthracene fraction	295-275-9	91995-15-2	13.01.2010	
20	Anthracene oil, Anthracene-low	292-604-8	90640-82-	13.01.2010	
21	Anthracene oil, Anthracene paste	292-603-2	90640-81-	13.01.2010	
22	Diisobutyl phthalate (DIBP)	201-553-2	84-69-5	13.01.2010	Plasticizer in several consumer products (e.g. crayons, bar ends of run bikes, erasers, toys, perfumes).

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
23	Lead chromate	231-846-0	7758-97-6	13.01.2010	Basis for lead chromate pigments (e.g. C.I. Pigment Red 104 and C.I. Pigment Yellow 34). Lead chromate based paints are used in paints for their corrosive protections properties and bright colours.
24	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	13.01.2010	C.I. Pigment Red 104 is a colorant based on lead chromate and used i.e. as pigment in plastic colouring, as well as industrial paint. Also reported are textile printing, leather finishing and some printing inks.
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	13.01.2010	C.I. Pigment Yellow 34 is a colorant based on lead chromate and used i.e. as pigment in plastic colouring, as well as industrial paint.
26	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	13.01.2010	Used as flame retardant. (Historical use in Polyurethane foam in EU)
27	Coal tar pitch, high temperature	266-028-2	65996-93-2	13.01.2010	Coal tar pitch is a residue from distillation of coal tar containing various aromatic compounds. Used as coal substitute in steel industry, coke making process, production of carbon black.
28	Acrylamide	201-173-7	79-06-1	30.03.2010	Intermediate in polyacrylamide production.
29	Trichloroethylene	201-167-4	79-01-6	18.06.2010	Cleaning and degreasing of metal parts, used in adhesives, chemical intermediates, in leather and textile processing industries and in paints, lacquers and varnishes industry.
30	Boric acid	233-139-2; 234-343-4	10043-35-3; 11113-50-1	18.06.2010	In biocides and preservatives, personal care products, disinfectants, preservatives in wood, textile, paper, leather, rubber, polymers, additives in several products like dental products, food, glass, ceramics, rubber, fertilizers, flame retardants, paints, industrial fluids, brake fluids, soldering products, film
31	Disodium tetraborate, anhydrous	215-540-4	1330-43-4; 12179-04-3;	18.06.2010	In glass and glass fibres, ceramics, detergents and cleaners, metallurgy, flame retardants.
32	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	18.06.2010	In glass and glass fibres, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides,
33	Potassium chromate	232-140-5	7789-00-6	18.06.2010	Treatment and coating of metals, manufacture of reagents and chemicals, manufacture of textiles, colouring agent in ceramics, tanning and dressing of leather, manufacture of pigments/inks, laboratory (analytical reagent),

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
34	Sodium chromate	231-889-5	7775-11-3	18.06.2010	Steel and alloy industry, leather and textile industry, laboratory (analytical agent), manufacture of other chromium compounds.
35	Ammonium dichromate	232-143-1	7789-09-5	18.06.2010	Oxidizing agent, laboratory (analytical agent), tanning of leather, manufacture of textiles, and manufacture of photosensitive screens (cathode ray tubes), metal treatment.
36	Potassium dichromate	231-906-6	7778-50-9	18.06.2010	Chrome metal manufacturing, treatment and coating of metals, manufacture of reagents and chemicals, laboratory (analytical agent), cleaning of laboratory glassware, tanning of leather, manufacture of textiles, photolithography, wood treatment and corrosion inhibitor in cooling systems.
37	Cobalt(II) sulphate	233-334-2	10124-43-3	15.12.2010	Mainly used in the production of other chemicals. Further applications may include manufacture of catalysts and driers, surface treatments (such as electroplating), corrosion prevention, production of pigments, decolorizing (in glass, pottery), batteries, animal food supplements, soil fertilizers, and others.
38	Cobalt(II) dinitrate	233-402-1	10141-05-6	15.12.2010	Mainly used in the production of other chemicals and the manufacture of catalysts. Further applications may include surface treatment and batteries.
39	Cobalt(II) carbonate	208-169-4	513-79-1	15.12.2010	Mainly used in the manufacture of catalysts. Minor uses may include feed additive, production of other chemicals, production of pigments, and adhesion (in ground coat frit).
40	Cobalt(II) diacetate	200-755-8	71-48-7	15.12.2010	Mainly used in the manufacture of catalysts. Minor uses may include production of other chemicals, surface treatment, alloys, and production of pigments, dyes, rubber adhesion, and feed additive.
41	2-Methoxyethanol	203-713-7	109-86-4	15.12.2010	Mainly used as solvent, intermediate and as an additive for fuel. Might be used as well in textile finishing.
42	2-Ethoxyethanol	203-804-1	110-80-5	15.12.2010	Mainly used as solvent and chemical intermediate. Might be used as well in textile finishing.
43	Chromium trioxide	215-607-8	1333-82-0	15.12.2010	Used for metal finishing and as fixing agent in waterborne wood

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
44	Acids generated from chromium trioxide and their oligomers: Chromic acid Dichromic acid Oligomers of chromic acid and dichromic acid	231-801-5 236-881-5	7738-94-5 13530-68-2	15.12.2010	These acids and their oligomers are generated when chromium trioxide is dissolved in water. Chromium trioxide is mainly used in the form of aqueous solutions. Consequently, the uses of these substances are the same as indicated for chromium trioxide.
45	2-ethoxyethyl acetate	203-839-2	111-15-9	31.05.2011	In paints, adhesives, glues, cosmetics, leather, wood stains, semiconductors, photographic and photolithographic.
46	Strontium chromate	232-142-6	7789-06-2	31.05.2011	In paints, varnishes and oil colours, metal conditioners or in aluminium flake coatings.
47	1,2-Benzenedicarboxylic acid, di-7-11-branched and linear alkyl esters (DHNUP)	271-084-6	68515-42-4	31.05.2011	Plasticizer in PVC, electrical cables and adhesives.
48	Hydrazine	206-114-9	7803-57-8; 302-01-2	31.05.2011	In metal coatings, on glass and plastics, in plastics, rubber, PU and dyes.
49	1-methyl-2-pyrrolidone	212-828-1	872-50-4	31.05.2011	Solvent in coatings, surface treatment of textiles & resins and metal coated
50	1,2,3-trichloropropane	202-486-1	96-18-4	31.05.2011	Solvent in degreasers, cleaning solutions, paint thinners, pesticides, resins and glues
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	276-158-1	71888-89-6	31.05.2011	Plasticizer in PVC, sealants and printing inks.
52	Dichromium tris(chromate)	246-356-2	24613-89-6	19.12.2011	Main use in mixtures for metal surface treatment in aeronautic/aerospace, steel and aluminium coating sectors.
53	Potassium hydroxyoctaoxo dizincatedichromate	234-329-8	11103-86-9	19.12.2011	Main use in coatings in aeronautic/ aerospace, steel and aluminium coil coating and vehicle coating sectors.
54	Pentazinc chromate octahydroxide	256-418-0	49663-84-5	19.12.2011	Main use in coatings in vehicle coating and aeronautic / aerospace sectors.
55	Bis(2-methoxyethyl) phthalate (DMEP)	204-212-6	117-82-8	19.12.2011	Main uses in the past were as plasticizer in polymeric materials and paints, lacquers and varnishes, including printing inks.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
56	Aluminosilicate Refractory Ceramic Fibres (RCF), covered by Annex VI, part 3, table 3.1 of EC 1272/2008, and fulfil the three following conditions: 280) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration rang b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	650-017-00-8*		19.12.2011	Aluminosilicate Refractory Ceramic Fibres are a special category of synthetic vitreous fibres, commonly known as man-made vitreous fibres. May be used in electrical and domestic appliances, like glass ceramic hobs, electric ovens and grills, microwaves, gas-fired apparatus. Also in fire protection windows and doors, motor construction. * Index number in Annex VI of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
57	Zirconia Aluminosilicate Refractory Ceramic Fibres Zr-RCF), covered by Annex VI, part 3, table 3.1 of EC 1272/2008, and fulfil the three following conditions: 280) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres(µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO +BaO) content less or equal to 18% by weight	650-017-00-8*		19.12.2011	Zirconia Aluminosilicate Refractory Ceramic Fibres are a special category of synthetic vitreous fibres, commonly known as man-made vitreous fibres. May be used in electrical and domestic appliances, like glass ceramic hobs, electric ovens and grills, microwaves, gas-fired apparatus. Also in fire protection windows and doors, motor construction. * Index number in Annex VI of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
58	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	500-036-1	25214-70-4	19.12.2011	Raw material for production of other substances. Minor uses as hardener for epoxy resins, e.g., in rolls, pipes and moulds, and adhesives.
59	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	19.12.2011	Main use in production of dyes for tattooing and coloration of paper, polymers and aluminium foil.
60	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	19.12.2011	Main use in production of polymer preparations and ethoxylates. Further use as a component in adhesives, coatings, inks and rubber articles.
61	1,2-Dichloroethane	203-458-1	107-06-2	19.12.2011	Main use in production of other substances. Minor use as solvent in the chemical and pharmaceutical industry.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
62	Bis(2-methoxyethyl) ether	203-924-4	111-96-6	19.12.2011	Used as solvent or process chemical in various applications. Used also as solvent for battery electrolytes, and in other products (sealants, adhesives, fuels and automotive care products).
63	Arsenic acid	231-901-9	7778-39-4	19.12.2011	Use to remove gas bubbles from ceramic glass melt and in the production of laminated printed circuit boards.
64	Calcium arsenate	231-904-5	7778-44-1	19.12.2011	Present in complex raw materials imported for manufacture of copper, lead and other precious metals. Main use as precipitating agent in copper smelting and to manufacture diarsenic trioxide.
65	Trilead diarsenate	222-979-5	3687-31-8	19.12.2011	In complex raw materials imported for production of copper, lead and other precious metals. During metallurgical refinement process it is transformed to calcium arsenate and diarsenic trioxide.
66	N,N-dimethylacetamide (DMAC)	204-826-4	127-19-5	19.12.2011	Used as solvent in production of other substances and fibres for clothing and other applications. Also used as reagent, and in products (industrial coatings, polyimide films, paint strippers and ink removers).
67	2,2‘-dichloro-4,4‘- methylenedianiline (MOCA)	202-918-9	101-14-4	19.12.2011	Used as curing agent in resins and in the production of polymer articles and production of other substances. Further use in construction and arts.
68	Phenolphthalein	201-004-7	77-09-8	19.12.2011	Main use as pH indicator (laboratory), for the production of pH-indicator paper and in medicinal products.
69	Lead azide, Lead diazide	236-542-1	13424-46-9	19.12.2011	Use as initiator or booster in detonators (civilian & military) and as initiator in pyrotechnics.
70	Lead styphnate	239-290-0	15245-44-0	19.12.2011	Use as a primer for small calibre and rifle ammunition. Other common uses are in munitions pyrotechnics, powder actuated devices and detonators for civilian use.
71	Lead dipicrate	229-335-2	6477-64-1	19.12.2011	Explosive compound like lead diazide and lead styphnate and may be used in detonator mixtures together with the two other mentioned lead compounds.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
72	1,2-bis(2methoxy-ethoxy) ethane(TEGDME; triglyme)	203-977-3	112-49-2	18.06.2012	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor use in brake fluids and repair of motor vehicles
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	18.06.2012	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries
74	4,4'-bis(dimethylamino)-4''(methyl-amino)trityl alcohol (C.I. Solvent Violet 8)	209-218-2	561-41-1	18.06.2012	Used in the production of writing inks and potentially in the production of other inks, as well as for dyeing of a variety of materials.
75	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	202-027-5	90-94-8	18.06.2012	Intermediate in the manufacture of triphenylmethane dyes and other substances. Further potential uses include as additive (photosensitizer) in dyes and pigments, in dry film products, as a process chemical in the production of electronic circuit boards, in research and development applications.
76	[4-[4,4'-bis(dimethyl-amino) benzhydrylidene]cyclohexa-2,5-dien- 1-ylidene]dimethyl ammonium chloride (C.I. Basic Violet 3)	208-953-6	548-62-9	18.06.2012	Used mainly for paper colouring and inks supplied in printer cartridges and ball pens. Further uses include staining of dried plants, marker for increasing the visibility of liquids, staining in microbial and clinical laboratories.
77	[4-[[4-anilino-1-naphthyl] [4(dimethylamino)phenyl] methylene]cyclohexa-2,5- dien-1ylidene] dimethyl ammonium chloride (C.I. Basic Blue 26)	219-943-6	2580-56-5	18.06.2012	Used in the production of inks, cleaners, and coatings, as well as for dyeing of paper, packaging, textiles, plastic products, and other types of articles. It is also used in diagnostic and analytical applications.
78	N,N,N',N'-tetramethyl- 4,4'methylenedianiline (Michler's base)	202-959-2	101-61-1	18.06.2012	Intermediate in the manufacture of dyes and other substances. Used also as chemical reagent in research and development.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
79	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	229-851-8	6786-83-0	18.06.2012	Mainly used in the production of printing and writing inks, for dyeing of paper and in mixtures such as windscreen washing agents.
80	Diboron trioxide	215-125-8	1303-86-2	18.06.2012	Used in a multitude of applications, e.g., in glass and glass fibres, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, adhesives, inks/paints, film developer solutions, detergents and cleaners, biocides and insecticides.
81	Formamide	200-842-0	75-12-7	18.06.2012	Mainly used as an intermediate. Minor uses as solvent, as reagent chemical (in the pharmaceutical industry) and as laboratory chemical. The substance seems further to be used in the agrochemical industry and as a plasticizer.
82	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	18.06.2012	Mainly used in plating (both electrolytic and electrolysis) processes for electronic components (such as printed circuit boards).
83	TGIC (1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-(1H,3H,5H)trione	219-514-3	2451-62-9	18.06.2012	Mainly used as a hardener in resins and coatings; also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilizers for plastics.
84	ß-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine- 2,4,6-(1H,3H,5H)trione)	423-400-0	59653-74-6	18.06.2012	Mainly used as a hardener in resins and coatings; also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilizers for plastics.
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5	19.12.2012	Used as flame retardant in plastics, binders, paints, varnishes, floor covering materials, manufacture of printed circuit boards, home electronics coatings (e.g. television cabinets), office electronics, including mobile telephone equipment, within textile applications, upholstery, cables and insulation materials.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
86	Pentacosafluorotridecanoic acid	276-745-2	72629-94-8	19.12.2012	Used as non-stick water and stain repellent in food wrappers, kitchen pans, clothing and food packaging. Also used as fire extinguisher foam.
87	Tricosafluorododecanoic acid	206-203-2	307-55-1	19.12.2012	
88	Henicosafluoroundecanoic acid	218-165-4	2058-94-8	19.12.2012	
89	Heptacosafluorotetrade- canoic acid	206-803-4	376-06-7	19.12.2012	
90	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide, ADCA)	204-650-8	123-77-3	19.12.2012	Used in the production of plastics, foams and coatings as blowing agent, aging and bleaching ingredient, foaming agent or catalyst. Main areas are insulating material, construction material and cement filler. Also used in adhesive, coatings or inks.
91	Cyclohexane-1,2-dicarbo-xylic anhydride, cis-cyclohexane-1,2-di-carboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	201-604-9, 236-086-3, 238-009-9	85-42-7, 13149-00-3, 14166-21-3	19.12.2012	Intermediate of alkyd resins, plasticizers, insect repellents and rust inhibitors. Also used as hardener in epoxy resins.
92	Hexahydromethylphthalic anhydride, Hexahydro-4-methyl-phthalic anhydride, Hexahydro-1-methyl-phthalic anhydride, Hexahydro-3-methyl-phthalic anhydride	247-094-1, 243-072-0, 256-356-4, 260-566-1	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	19.12.2012	Widely used in the manufacture of polyester and alkyd resins and as plasticizers for thermoplastic polymers. Also used as hardeners for epoxy resins and chain cross-linkers for thermoplastic polymers.
93	4-Nonylphenol, branched and linear	-	-	19.12.2012	In textile production, paper production as a component of phenolic resins used in coatings, e.g. for carbonless copy paper, and other NP-resins used for printing inks. It is also used as raw material in the production of Ethoxylated Nonylphenols.
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	-	19.12.2012	Part of polymer dispersions in the production of paints, paper, inks, adhesives and carpet backings. Emulsifier in finishing agents for covering leather and textiles with a thin polymer film.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
95	Methoxyacetic acid	210-894-6	625-45-6	19.12.2012	As an intermediate for the manufacture of chemical products, and as cleaning/washing agent in the buildings sector.
96	N,N-dimethylformamide; dimethyl formamide	200-679-5	68-12-2	19.12.2012	Solvent for the production of polymers used e.g. in plastics, artificial leathers, coatings, resin. Formulation of mixtures e.g. paints, adhesives, coatings, pesticides and medicines. Furthermore, used in acetylene bottles.
97	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	19.12.2012	As stabilizer in plastics. Catalyst in the production of polyurethanes and silicones used for insulation and coatings.
98	Lead oxide (lead monoxide)	215-267-0	1317-36-8	19.12.2012	Additive in PVC- and rubber products. It is also used in lead battery production, in crystal glass production and in the production of ceramic ware. Historically also used as pigments.
99	Lead tetroxide (orange lead)	215-235-6	1314-41-6	19.12.2012	Additive in PVC- and rubber products. It is also used in lead battery production, in crystal glass production, in the production of ceramic ware, in manufacture of rubber protection, in lead oxide and stabilizer production. Historically also used as pigments.
100	Lead bis(tetrafluoroborate)	237-486-0	13814-96-	19.12.2012	Used in electroplating & laboratory use.
101	Trilead bis(carbonate) dihydroxide (basic lead carbonate)	215-290-6	1319-46-6	19.12.2012	Raw material of PTC ceramics and semiconductors. Historically also used in pigments.
102	Lead titanium trioxide	235-038-9	12060-00-	19.12.2012	Used in the manufacture of semiconductors for computers, electronic and optical products.
103	Lead titanium zirconium oxide	235-727-4	12626-81-2	19.12.2012	
104	Silicic acid, lead salt	234-363-3	11120-22-2	19.12.2012	Found in lead crystal ware.
105	Silicic acid (H2Si2O5), barium salt (1:1), lead-doped	272-271-5	68784-75-8	19.12.2012	Especially used in coatings of light bulbs.
106	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	19.12.2012	Mostly used as solvent for fats, waxes or resins, in some spray adhesives and as cleaner in the metal and electronics industries.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
107	Methyloxirane (Propylene oxide)	200-879-2	75-56-9	19.12.2012	Used as intermediate in the polymer and chemicals production, could also be used as fumigation agent.
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	19.12.2012	Could be used as plasticizer in plastics or coatings.
109	Diisopentylphthalate (DIPP)	210-088-4	605-50-5	19.12.2012	As plasticizer for nitrocellulose propellants, possibly also in plastic materials.
110	N-pentyl-isopentyl- phthalate (iPnPP)	-	776297-69-9	19.12.2012	Could be used as plasticizer in plastics or coatings.
111	1,2-Diethoxyethane	211-076-1	629-14-1	19.12.2012	As inert solvent in the production of ester gum, shellac and some resins and oils. Also used as solvent for detergents and dyes in non-grain raising stains.
112	Acetic acid, lead salt, basic	257-175-3	51404-69-4	19.12.2012	Used in few hair cosmetics and as intermediate in the production of lead compounds.
113	Lead oxide sulphate	234-853-7	12036-76-9	19.12.2012	Could be used as stabilizer in PVC products.
114	[Phthalato(2-)]dioxotrilead (Dibasic lead phthalate)	273-688-5	69011-06-9	19.12.2012	
115	Dioxobis(93ligomer)trilead	235-702-8	12578-12-0	19.12.2012	Could be used as stabilizer in PVC products, medical applications and lubricants
116	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	19.12.2012	Could be used as stabilizer in PVC products and as intermediate in the lead battery production.
117	Lead cyanamidate	244-073-9	20837-86-	19.12.2012	No data on possible uses available.
118	Lead dinitrate	233-245-9	10099-74-8	19.12.2012	Compound in Pigment production and in the production of explosives and matches. Also used as textile etchant.
119	Pentalead tetraoxide sulphate	235-067-7	12065-90-6	19.12.2012	Could be used as stabilizer in PVC products and as intermediate in the lead battery production.
120	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	19.12.2012	As pigment in lead glazes for ceramic articles. Also used in historical pigments.
121	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	19.12.2012	Could be used as stabilizer in PVC products and as intermediate in the lead battery production.
122	Tetraethyllead	201-075-4	78-00-2	19.12.2012	Historical use as fuel additive.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
123	Tetralead trioxide sulphate	235-380-9	12202-17-	19.12.2012	Could be used as stabilizer in PVC products and as intermediate in the lead battery production.
124	Trilead dioxide phos- phonate	235-252-2	12141-20-	19.12.2012	
125	Furan	203-727-3	110-00-9	19.12.2012	Intermediate in the production of THF and for special resins for mould castings.
126	Diethyl sulphate	200-589-6	64-67-5	19.12.2012	Intermediate in the synthesis of polymers and fine chemicals.
127	Dimethyl sulphate	201-058-1	77-78-1	19.12.2012	Used as raw material for various chemicals, cosmetics, paints and medical products.
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	19.12.2012	In paint for polyurethane, in polyurethane finishing and sealants as moisture scavenger or reactant diluent.
129	Dinoseb (6-sec-butyl-2,4-dinit- rophenol)	201-861-7	88-85-7	19.12.2012	Possibly additive in styrene production, has also been used as pesticide.
130	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	19.12.2012	As intermediate for laboratory use, monomer in high performance polyimide products. It´s also a component in the production of certain Azo dyes.
131	4,4'-oxydianiline and its salts	202-977-0	101-80-4	19.12.2012	As monomer in high performance polyimide products. It´s also a component in the production of certain Azo dyes.
132	4-aminoazobenzene	200-453-6	60-09-3	19.12.2012	Used as intermediate for the production of certain Azo dyes.
133	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	202-453-1	95-80-7	19.12.2012	In the production of sulphur dyes and as intermediate in the production of PU Plastics. It´s also a component in the production of certain Azo dyes.
134	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	19.12.2012	Intermediate in the production of PU Plastics and certain Azo dyes.
135	Biphenyl-4-ylamine	202-177-1	92-67-1	19.12.2012	Intermediate to produce certain Azo dyes.
136	o-aminoazotoluene [(4-o-tolylazo-o-toluidine])	202-591-2	97-56-3	19.12.2012	
137	o-toluidine	202-429-0	95-53-4	19.12.2012	
138	N-methylacetamide	201-182-6	79-16-3	19.12.2012	Used as laboratory chemical.
139	Pentadecafluoroocanoic acid (PFOA)	206-397-9	335-67-1	20.06.2013	Mostly used in the production of Fluoropolymers.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
140	Ammoniumpantadecafluorootanoate (APFO)	223-320-4	3825-26-1	20.06.2013	Mostly used in the production of Fluoropolymers.
141	Cadmium	231-152-8	7440-43-9	20.06.2013	Used for example in metal alloys, in anticorrosion formulations, as stabilizer in PVC materials, in some rechargeable batteries and for the production of cadmium compounds.
142	Cadmium oxide	215-146-2	1306-19-0	20.06.2013	Industrially used in electroplating baths, to produce coloured glass and ceramics as well as photodiodes.
143	Dipentyl phthalate (DPP)	205-017-9	131-18-0	20.06.2013	Could be used as plasticizer in plastics or coatings.
144	4-Nonylphenol, branched and linear, ethoxylated (NPEO) [Substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	-	20.06.2013	Wide range of uses such as detergent ingredient, emulsifier in textile and leather production as well as metal finishing.
145	Cadmium Sulphide	215-147-	1306-23-6	16.12.2013	Used as a high-performance pigment and semiconducting substance in photo electronics components like solar panels.
146	Dihexyl phthalate (DnHP)	201-559-5	84-75-3	16.12.2013	Could be used as plasticizer in plastics or coatings.
147	Disodium 3,3‘-[[1,1‘-biphenyl]-4,4‘-diylbis(azo)]bis(4-amino- naphthalene-1-sulphonate) (C.I. Direct Red 28)	209-358-4	573-58-0	16.12.2013	Could be used as pigment in textile- and other dyes.

Substances name		EC Number	CAS Number	Dateof inclusion	Remarks & additional information (These are examples and are not conclusive)
148	Disodium 4-amino-3-[[4'- [(2,4-diaminophenyl)azo] [1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo) naphthalene-2,7-disulphonate (C.I. Direct Black 38)	217-710-3	1937-37-7	16.12.2013	Could be used as pigment in textile- and other dyes.
149	2-imidazoline-2-thiol	202-506-9	96-45-7	16.12.2013	Widely used as vulcanisation agent in and neoprene and polyacrylate rubber articles
150	Lead diacetate	206-104-4	301-04-2	16.12.2013	Used as intermediate for other lead compounds and as laboratory chemical.
151	Trixylyl phosphate	246-677-8	25155-23-1	16.12.2013	Diversely used industry chemical (flame retardant, metal working fluid, lubricant, hydraulic fluid, plasticiser).
152	Cadmium chloride	233-296-7	10108-64-2	16.06.2014	Cadmium chloride is used for preparation of other chemicals, in laboratory, and also for photocopying, dyeing and electroplating.
153	1,2-Benzenedicarboxylic acid, dihexyl ester, bran- ched and linear	271-093-5	68515-50-4	16.06.2014	Could be used as plasticizers in plastics and coatings.
154	Sodium peroxometaborate	231-556-4	7632-04-4	16.06.2014	Might be used as bleaching agent in laundry detergents and machine dishwashing products as well as in household cleaners. Used in some special laboratory chemicals
155	Sodium perborate; perboric acid, sodium salt	239-172-9; 234-390-0	-	16.06.2014	Might be used as intermediate in chemical reactions and as bleaching agent mainly
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	17/12/2014	UV-stabilizer for plastics, polyurethanes and rubber, and constituent in formulations used in coating of surfaces, e.g. cars or special wood coatings.
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	17/12/2014	UV-stabilizer for plastics, polyurethanes and rubber, and constituent in formulations used in coating of surfaces, e.g. cars or special wood coatings.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
158	2-ethylhexyl 10-ethyl-4,4-dioctyl- 7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	17/12/2014	Stabilizer in PVC Processing.
159	Cadmium fluoride	232-222-0	7790-79-6	17/12/2014	Used in production of metallic alloys.
160	Cadmium sulphate	233-331-6	10124-36-4, 31119-53-6	17/12/2014	Used as pigment (e.g. Glass and plastic). Its semiconducting property together with chemical/physical properties makes cadmium sulphide useful for photoelectronic applications (e.g. solar cells).
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	-	17/12/2014	Stabilizer in PVC Processing.
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters EC no.: 272-013-1 | CAS no.: 68648-93-1 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters EC no.: 271-094-0 | CAS no.: 68515-51-5	-	-	15/06/2015	Used in plasticizers and lubricants, for example in adhesives, lubricants, coatings, building materials, cable compounding, polymer foil, PVC compounds and artist supply.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] covering any of the individual stereoisomers of [1] and [2] or any combination thereof 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane EC no.: - | CAS no.: - 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane EC no.: - | CAS no.: -	-	-	15/06/2015	Fragrance ingredient.
164	1,3-propanesultone	214-317-9	1120-71-4	17/12/2015	Electrolyte fluid of lithium ion batteries.
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1	17/12/2015	UV protection agent in coatings, plastic, rubber and cosmetics.
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	17/12/2015	UV protection agent in coatings, plastic, rubber and cosmetics.
167	Nitrobenzene	202-716-0	98-95-3	17/12/2015	Manufacture of other substances.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts Ammonium salts of perfluorononan-1-oic-acid EC no.: - | CAS no.: -, 4149-60-4 Perfluorononan-1-oic-acid EC no.: 206-801-3 | CAS no.: 375-95-1 Sodium salts of perfluorononan-1-oic-acid EC no.: - | CAS no.: -, 21049-39-8	-	-	17/12/2015	Processing aid for fluoropolymer manufacture/lubricating oil additive/surfactant for fire extinguishers/cleaning agent/textile antifouling finishing agent/polishing surfactant/waterproofing agents and in liquid crystal display panels.
169	Benzo[def]chrysene (Benzo[a]pyrene)	200-028-5	50-32-8	20/06/2016	Normally not manufactured intentionally but may occur as a constituent or impurity in other substances.
170	4,4'-isopropylidenediphenol Bisphenol A; BPA	201-245-8	80-05-7	12/01/2017 15/01/2018	Manufacture of polycarbonate, as a hardener for epoxy resins, as an anti-oxidant for processing PVC and in thermal paper production.
171	4-heptylphenol, branched and linear substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	-	-	12/01/2017	Manufacture of polymers; formulation into lubricants.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts Nonadecafluorodecanoic acid EC no.: 206-400-3 | CAS no.: 335-76-2 Decanoic acid, nonadecafluoro-, sodium salt EC no.: - | CAS no.: 3830-45-3 Ammonium nonadecafluorodecanoate EC no.: 221-470-5 | CAS no.: 3108-42-7	-	-	12/01/2017	Lubricant, wetting agent, plasticiser and corrosion inhibitor.
173	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	12/01/2017	Manufacture of chemicals and plastic products
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	-	07/07/2017	Degradation product from additives in cleaning agents, ant pesticide bait, fire extinguishing agent, metal plating and impregnation agent in leather and textiles.
175	Chrysene	205-923-4	218-01-9	15/01/2018	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
176	Benz[a]anthracene	200-280-6	56-55-3	15/01/2018	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
177	Cadmium nitrate	233-710-6	10325-94-7	15/01/2018	Used for the manufacture of glass, porcelain and ceramic products and in laboratory chemicals.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
178	Cadmium hydroxide	244-168-5	21041-95-2	15/01/2018	Used for the manufacture of electrical, electronic and optical equipment and in laboratory chemicals.
179	Cadmium carbonate	208-168-9	513-78-0	15/01/2018	Used as a pH regulator and in water treatment products, laboratory chemicals, cosmetics and personal care products.
180	1,6,7,8,9,14,15,16,17,17,18,18 Dodecachloropentacyclo[12.2.1 .16,9.02,13.05,10] octadeca-7,15-diene (Dechlorane PlusTM), [covering any of its individual anti- and syn-isomers or any combination thereof]	-	-	15/01/2018	Non-plasticizing flame retardant for plastics, electronic wiring and cables, automobiles, hard plastic connectors and plastic roofing material. Use in adhesives and sealants. Use in binding agents.
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear	-	-	15/01/2018	Used as a lubricant additive in lubricants and greases.
182	Terphenyl, hydrogenated	262-967-7	61788-32-7	27/06/2018	Used as a plastic additive, solvent, in coatings/inks, in adhesives and sealants, and heat transfer fluids.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
183	Octamethylcyclotetrasiloxane D4	209-136-7	556-67-2	27/06/2018	Used in washing and cleaning products, polishes and waxes and cosmetics and personal care products.
184	Lead	231-100-4	7439-92-1	27/06/2018	Used in metals, welding and soldering products, metal surface treatment products, and polymers.
185	Ethylenediamine EDA	203-468-6	107-15-3	27/06/2018	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, pH regulators and water treatment products.
186	Dodecamethylcyclohexasiloxane D6	208-762-8	540-97-6	27/06/2018	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
187	Disodium octaborate	234-541-0	12008-41-2	27/06/2018	Used in anti-freeze products, heat transfer fluids, lubricants and greases, and washing and cleaning products
188	Dicyclohexyl phthalate DCHP	201-545-9	84-61-7	27/06/2018	Used in plastisol, PVC, rubber and plastic articles. A further use is also as a 103ligomerizat and dispersing agent for formulations of organic peroxides.
189	Decamethylcyclopentasiloxane D5	208-764-9	541-02-6	27/06/2018	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products, textile treatment products and dyes.
190	Benzo[ghi]perylene	205-883-8	191-24-2	27/06/2018	Not registered under REACH. Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
191	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride trimellitic anhydride; TMA	209-008-0	552-30-7	27/06/2018	Used in the manufacture of esters and polymers.
192	Pyrene	204-927-3	129-00-0	15/0172019	Used as a transported intermediate for the manufacture of fine chemicals., PAH impurity
193	Phenanthrene	201-581-5	85-01-8	15/01/2019	PAH , impurity
194	Fluoranthene	205-912-4	206-44-0	15/01/2019	PAH, impurity

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
195	Benzo[k]fluoranthene	205-916-6	207-08-9	15/01/2019	PAH, impurity
196	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	401-720-1	6807-17-6	15/01/2019	A bisphenol with similar uses as bisphenol A e.g thermo stabilizer.
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one Also called: 3-benzylidene camphor and 3-BC	239-139-9	15087-24-8	15/01/2019	UV stabilizer.
198	4-tert-butylphenol	202-679-0	110-49-6	16/07/2019	Used in coating products, polymers, adhesives, sealants and for the synthesis of other substances.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) Tris(nonylphenyl) phosphite tris(4-nonylphenyl, branched) phosphite Phenol, 4-nonyl-, phosphite (3:1)	247-759-6 701-028-2	26523-78-4 3050-88-2	16/07/2019	Primarily used as an antioxidant to stabilise polymers.
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides covering any of their individual isomers and combinations thereof: 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid Ammonium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionyl fluoride Potassium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionate	236-236-8 700-242-3 218-173-8 266-578-3	13252-13-6 62037-80-3 2062-98-8 67118-55-2	16/07/2019	Processing aid in the production of fluorinated polymers.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
201	2-methoxyethyl acetate	203-772-9	110-49-6		Solvent for gums, resins, waxes, and oils; manufacture of semiconductors; textile printing, photographic films
202	Perfluorobutane sulfonic acid (PFBS) and its salts	--	--	16/01/2020	Used as a catalyst/ additive/reactant in polymer manufacture and in chemical synthesis. It is also used as a flame retardant in polycarbonate (for electronic equipment).
203	Diisohexyl phthalate	276-090-2	71850-09-4	16/01/2020	Plastiziser in PVC, PU and rubber.
204	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	400-600-6	71868-10-5	16/01/2020	The substance is used in polymer production. Photoinitiator for coatings and binders.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
205	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	404-360-3	119313-12-1	16/01/2020	The substance is used in polymer production. Photoinitiator for coatings and binders.
206	1-vinylimidazole	214-012-0	1072-63-5	25/06/2020	In formulations and as a monomer in the production of polymers.
207	2-methylimidazole	211-765-7	693-98-1	25/06/2020	As a catalyst in the production of coating products.
208	Dibutylbis(pentane-2,4-dionato-O,O')tin	245-152-0	22673-19-4	25/06/2020	As a catalyst and as an additive in the production of plastics

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
209	Butyl 4-hydroxybenzoate (Butylparaben)	202-318-7	94-26-8	25/06/2020	Cosmetics, personal care products and pharmaceuticals
210	HH: dioctyltin dilaurate; stannane, dioctyl-, bis(coco acyloxy) derivs. Stannane, dioctyl-, bis(coco acyloxy) derivs. Dioctyltin dilaurate	 293-901-5 222-883-3	 91648-39-4 3648-18-8	19/01/2021	Stabilizers in polymers
211	Bis(2-(2-methoxyethoxy)ethyl)ether	205-594-7	143-24-8	19/01/2021	Processing aid for the production of e.g leather and textiles
212	2-(4-tert-butylbenzyl) propionaldehyde and its individual stereoisomers	-	-	08/07/2021	Cleaning agents, cosmetics, in scented articles, polishes and wax blends.
213	Orthoboric acid, sodium salt	237-560-2	13840-56-7	08/07/2021	Orthoboric Acid is a key ingredient not only in pest control products but also can be used as an antiseptic to address medical problems, a preservative for skins, a lubricant and even for pyrotechnics.

	Substances name	EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
214	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	221-967-7 253-057-0 202-480-9	3296-90-0 36483-57-5 1522-92-5 96-13-9	08/07/2021	BMP: manufacture of polymer resins and in one component foam (OCPF) application. TBNPA: polymer production manufacture of plastics products, such as foam seating and bedding products, including compounding and conversion and as an intermediate. DBPA: registered as an intermediate in the preparation of flame retardants, insecticides, and pharmaceuticals. Main use is in the production of tris (1,2,3-dibromopropyl) phosphate, commonly abbreviated TRIS.
215	Glutaral	203-856-5	111-30-8	08/07/2021	Also called glutaraldehyde and occur in vegetable tanning of leather (chrome free tanning). Also used in cosmetics.
216	Medium-chain chlorinated paraffins (MCCP) UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17	-	-	08/07/2021	Same uses as short chain chloro paraffins (SCCP).
217	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from 110ligomerization, covering any individual isomers and/ or combinations thereof (PDDP)	-	-	08/07/2021	PDDP are a part of the alkylphenols (AP) and may occur together with mixtures of APEO and other AP. Preparation of lubricant additive materials and of fuel system cleaners.
218	1,4-dioxane	204-661-8	123-91-1	08/07/2021	1,4-dioxane is a clear liquid with ether-like odour. It is highly flammable and forms explosive peroxides in storage (rate of formation increased by heating, evaporation, or exposure to light). Industrial applications of 1,4-dioxane are extensive, for instance, as solvent for cellulose acetate, ethyl cellulose, benzyl cellulose, resins, oils, waxes, and some dyes, as a solvent for paper, cotton, and textile processing and for various organic and inorganic compounds and products. It is also used in automotive coolant liquid and in shampoos and other cosmetics as a degreasing agent and as a component of paint and varnish.

Substances name		EC Number	CAS Number	Date of inclusion	Remarks & additional information (These are examples and are not conclusive)
219	4,4'-(1-methylpropylidene)bisphenol	201-025-1	77-40-7	08/07/2021	Also called Bisphenol B and has similar uses as Bisphenol A.
220	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	204-327-1	1067-53-4	17/01/2022	Uses in hydraulic fluids, lubricants and greases, metal working fluids, adhesives and sealants, fuels and polymers. This substance is used for the manufacture of rubber products and plastic products
221	tris(2-methoxyethoxy)vinylsilane	213-934-0	1067-53-4	17/01/2022	An adhesion promoter for various mineral-filled polymers, improving mechanical and electrical properties especially after exposure to moisture.
222	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) Individual isomers (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) (3E)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one EC No.: - | CAS No.: 1782069-81-1 (1R,3E,4S)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one EC No.: - | CAS No.: 95342-41-9 (1S,3Z,4R)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one	-	-	17/01/2022	These hormone distrurbing SVHC are so called Camphor compounds that are ultraviolet light blockers used in cosmetics and sunscreen preparations, specifically UV B radiation.
223	S-(tricyclo(5.2.1.02,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	401-850-9	255881-94-8	17/01/2022	Used in lubricants and greases

Appendix 01

PEAK PERFORMANCE RSL CORRECTIVE ACTION PLAN (CAP)		
Product info	Style number:	Brand:
	Style name:	Season:
	Col code:	Purchase order number:
	Product:	Supplier name:
	Merchandiser's name and email:	Supplier contact's name and email:
Lab info	Testing lab:	Lab contact's name and email:
	Test report number:	
	Description of the failed components and found substance:	
CAP	Identification and mapping of the source in the process where the failure occur:	
	Provide an action plan for correcting the specific case:	
	Provide an action plan for supplier to prevent the same to repeat in future production:	
	Action taken to prevent the same to repeat:	Verification of action taken and implemented:
	List of relevant documentation to be attached:	
	Signature	Date:

Appendix 02

Modern Testing Services Contact List for Peak Performance

PROGRAM MANAGEMENT		
DEPARTMENT	**CONTACT PERSON**	**CONTACT INFORMATION**
Hong Kong 香港		
General Enquiry	RSL – Harold Chan	Email: haroldchan@mts-global.com Tel: (852) 3604 1346
	Performance – Ms. Yen Wong	Email: ywong@mts-global.com Tel: (852) 3604 1366
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