

**sacha**

**MANFIELD**

**SISSY-BOY**

**RESTRICTED SUBSTANCES LIST** TERMEER GROUP

("RSL") 1.0

March 2024

TERMEER GROUP 2024

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**Introduction version 1.0****INTRODUCTION**

The production of apparel, footwear, home textiles and jewelry from raw materials to finished products is a complex and chemical-intensive process.

For this reason TERMEER GROUP is committed to developing and implementing responsible chemical management procedures throughout its supply chain and for all manufacturing processes and product components (including accessories / trims attached to products, prints and packaging materials).

TERMEER GROUP expects the same commitment from its suppliers and has developed a Restricted Substances List (TERMEER GROUP RSL 1.0) as a reference for suppliers regarding all chemicals that are banned or restricted in TERMEER GROUP's production processes and finished products. The purpose of the Restricted Substances List (RSL) is to market products that are safe for the consumer, reduce the risks of workers at the production locations and the substitution of hazardous substances in TERMEER GROUP's textile and apparel supply chain.

This RSL includes:

1. All legal and upcoming textile-related requirements in the European Union.
2. Industry standards and best practices.
3. Responsibility of the supplier regarding Substances of Very High Concern (SVHC) mentioned on the REACH Candidate list.

A valid OEKO-TEX® Standard 100 product certificate issued by the OEKO-TEX® Association ([www.oeko-tex.com](http://www.oeko-tex.com)) covers most of requirements of this RSL. The Sustainable Textile Production (STeP) is an OEKOTEX® certification that has a wider scope which includes an analysis of a production facility's management and performance with respect to certain environmental considerations. Certification based on the Oeko-Tex® Standard 100 or STeP can sometimes be more cost effective than single tests.

Please be prepared that your contact person may request a signature for each order as a declaration that the specific order complies with our RSL requirements. It is also possible that one or more of your styles could be selected for pre-shipment testing at a certified laboratory.

As a matter of general principle, TERMEER GROUP reserves the right to select styles to be (counter) tested upon arrival in our warehouse. If this test produces a "FAIL" result, all of the costs incurred in this testing process shall be borne by the supplier, including all additional costs associated with non-marketable styles.

As part of our ongoing sustainability improvement process, this RSL will be updated on a regular basis to incorporate additions to the list and/or changes to legislation. Together with our vendors, we seek opportunities to achieve continuous improvement in this area. To this end, the RSL can be used as a basis for the development of Quality Management Systems.

Should you have any questions, please do not hesitate to contact:

Zsuzsa Kozma, CSR Director:

[zsuzsa@termeergroep.com](mailto:zsuzsa@termeergroep.com)

**Materials version 1.0 - Examples of materials within the scope of the TERMEER GROUP RSL\***

Natural Fibres <i>Including semi-synthetics</i>	Blended Fibres	Synthetic Fibres	Synthetic Coated Fabrics	Natural Leather & Fur skin	Coatings & Prints	Natural Materials	Other Materials	Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber	Metal	Feathers & Down	Glue
<ul style="list-style-type: none"> <li>• Cotton</li> <li>• Wool</li> <li>• Silk</li> <li>• Hemp</li> <li>• Cashmere</li> <li>• Linen</li> <li>• Fur hair</li> <li>• Rayon (Semi-synthetic)</li> <li>• Lyocell (Semi-synthetic)</li> </ul>	<ul style="list-style-type: none"> <li>• Cotton-Polyester</li> <li>• Wool-Nylon</li> <li>• Ramie- Polyester</li> </ul>	<ul style="list-style-type: none"> <li>• Polyester</li> <li>• Acrylic</li> <li>• Nylon</li> <li>• Polyamide</li> </ul>	<p>Textiles with:</p> <ul style="list-style-type: none"> <li>• Polyurethane (PU) coating</li> <li>• Polyvinyl Chloride (PVC) coating</li> <li>• Other polymeric coatings</li> </ul>	<ul style="list-style-type: none"> <li>• Leather</li> <li>• Fur skin</li> <li>• Bonded / recycled leather</li> </ul>	<p>Printing techniques such as:</p> <ul style="list-style-type: none"> <li>• Heat transfers</li> <li>• Dye sublimation printing</li> <li>• Screen printing</li> <li>• Direct-to- garment printing</li> <li>• Discharge printing</li> <li>• Plastisol transfers</li> </ul> <p>Coatings such as:</p> <ul style="list-style-type: none"> <li>• Polyvinyl chloride (PVC)</li> <li>• Polyurethane (PU)</li> <li>• UV-cured</li> </ul>	<ul style="list-style-type: none"> <li>• Horn</li> <li>• Bone</li> <li>• Cork</li> <li>• Wood</li> <li>• Paper</li> <li>• Straw</li> <li>• Stone</li> <li>• Shell (e.g. coconut or mother of pearl)</li> <li>• Jacron (a semi-synthetic paper product)</li> </ul>	<ul style="list-style-type: none"> <li>• Glass</li> <li>• Synthetic stone</li> <li>• Porcelain</li> <li>• Ceramic</li> <li>• Crystal</li> </ul>	<ul style="list-style-type: none"> <li>• Ethylene vinyl acetate (EVA)</li> <li>• Polystyrene (PS)</li> <li>• Polyethylene (PE)</li> <li>• Acrylonitrile butadiene styrene (ABS)</li> <li>• Neoprene</li> <li>• Polypropylene (PP)</li> <li>• Polycarbonate (PC)</li> <li>• Polyamide (PA)</li> <li>• Polyurethane (PU)</li> <li>• Polyvinyl chloride (PVC)</li> <li>• Thermoplastic polyurethane (TPU)</li> <li>• Thermoplastic elastomer (TPE)</li> <li>• Styrene ethylene butylene styrene (SEBS)</li> </ul>	<ul style="list-style-type: none"> <li>• Stainless steel</li> <li>• Brass</li> <li>• Copper</li> <li>• Gold</li> <li>• Silver</li> <li>• Aluminum</li> </ul>	<ul style="list-style-type: none"> <li>• Feathers</li> <li>• Down</li> </ul>	<ul style="list-style-type: none"> <li>• Hot melt adhesive</li> <li>• Powdered adhesive</li> <li>• Flock adhesive</li> <li>• Contact adhesive</li> <li>• Latex glue</li> <li>• Polyurethane glue</li> <li>• Neoprene cement</li> <li>• Epoxies</li> <li>• Silicone adhesive</li> <li>• UV-cured adhesive</li> </ul>

\* NOTE: This list provides examples of materials within each category but is not all-inclusive.

**Risk matrix apparel, footwear, jewelry and home textiles version 1.0**

●●● indicates a higher risk that a chemical is used and/or could be detected in a particular material.  
 ●● indicates a lower risk that a chemical is used and/or could be detected in a particular material.  
 No dot indicates that the risk is not anticipated in a particular material.

CHEMICAL	NATURAL FIBERS	SYNTHETIC FIBERS	NATURAL & SYNTHETIC BLENDS	SYNTHETIC COATED FABRICS	NATURAL LEATHER & FUR SKIN	NATURAL MATERIALS	METALS	FEATHERS & DOWN	POLYMERS										
									EVA	PU Foams	All other PU & TPU	Rubber excludes latex and silicon rubbers	Polycarbonate	ABS	PVC	All Other foams, plastics & Polymers	COATING AND PRINTS	GLUE	
ACETOPHENONE & 2-PHENYL-2-PROPANOL									●●										
ACIDIC AND ALKALINE SUBSTANCES (pH)	●●●	●●●	●●●	●●●	●●●														
ALKYLPHENOL (AP) & ALKYLPHENOL ETHOXYLATES (APEOs), including all isomers	●●●	●●●	●●●	●●●	●●●	●●●		●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
AZO AMINES AND ARYLAMINE SALTS	●●●/A	●●●/A	●●●/A	●●●/A	●●●/A	●●●/A		●●●/A										●●●	
BISPHENOLS		●●●	●●●	●●●	●●●				●●	●●	●●	●●	●●●	●●	●●	●●			
CHLORINATED PARAFFINS				●●/H	●●●				●●	●●	●●●	●●●	●●	●●	●●●	●●			
CHLOROPHENOLS	●●	●●	●●		●●														
CHLORINATED BENZENES AND TOLUENES		●●	●●	●●															
DIMETHYLFUMURATE (DMFu)					●●														
CHLORINATED BENZENES AND TOLUENES		●●	●●	●●															
DISPERSE DYES - ALLERGENIC		●●●/A	●●●/A	●●●/A															●●
DYES - CARCINOGENIC		●●●/A	●●●/A	●●●/A															●●
DYES - NAVY BLUE		●●	●●																
FLAME RETARDANTS																			●●/B
FLUORINATED GREENHOUSE GASES																			
FORMALDEHYDE	●●●	●●●	●●●	●●	●●●	●●●/C							●●					●●●	●●●
<b>A</b> High risk for dyed/colored materials (non-white only)	<b>D</b> Medium risk for Wool materials						<b>G</b> Medium risk for plant-based fibers only; N/A for animal-based fibers						<b>K</b> High risk if PFAS use or contamination is suspected.						
<b>B</b> Medium risk only if Flame Retardant use or contamination is suspected.	<b>E</b> Medium risk if extractable Chrome above 1 mg/kg						<b>H</b> High risk for PVC materials only. Otherwise, medium risk						<b>L</b> High risk if Rubber or black Polymeric materials, otherwise medium risk						
<b>C</b> High risk for Wood, Paper, and Straw materials	<b>F</b> Copper is exempt from restriction limits in metal parts						<b>J</b> Medium risk for Styrene/Butadiene Rubbers (SBRs) only						<b>M</b> High risk for PU and PVC- based materials only						

**Risk matrix apparel, footwear, jewelry and home textiles version 1.0**

●●● indicates a higher risk that a chemical is used and/or could be detected in a particular material.

●● indicates a lower risk that a chemical is used and/or could be detected in a particular material.

No dot indicates that the risk is not anticipated in a particular material.

CHEMICAL	NATURAL FIBERS	SYNTHETIC FIBERS	NATURAL & SYNTHETIC BLENDS	SYNTHETIC COATED FABRICS	NATURAL LEATHER & FUR SKIN	NATURAL MATERIALS	METALS	FEATHERS & DOWN	POLYMERS										
									EVA	PU Foams	All other PU & TPU	Rubber excludes latex and silicon rubbers	Polycarbonate	ABS	PVC	All Other foams, plastics & Polymers	COATING AND PRINTS	GLUE	
HEAVY METALS CHROMIUM VI	●●/D	●●/E			●●●														
HEAVY METALS EXTRACTABLE	●●●	●●●	●●●	●●	●●●		●●/F		●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
HEAVY METALS, NICKEL RELEASE							●●●												
HEAVY METALS TOTAL CONTENT	●●/G		●●/G	●●●	●●		●●●		●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●
MONOMERS, STYRENE & VINYL CHLORIDE				●●●/H								●●/J		●●	●●●		●●●/H		
N-NITROSAMINES												●●							
ORGANOTIN COMPOUNDS		●●	●●	●●●	●●					●●●	●●●	●●●			●●●	●●●	●●●	●●●	●●●
ORTHO-PHENYLPHENOL (OPP)	●●	●●	●●	●●	●●													●●	
OZONE DEPLETING SUBSTANCES																			
PER - AND POLYFLUOROALKYL SUBSTANCES (PFAS)	●●●/K																		
PESTICIDES, AGRICULTURAL																			
PHthalATES				●●●					●●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●●	●●●
POLYCLIC AROMATIC HYDROCARBONS				●●					●●●/L	●●●/L	●●●/L	●●●			●●●/L	●●●/L	●●●/L	●●●/L	●●●/L
QUINOLINE		●●	●●																
SOLVENTS/RESIDUALS DMFa				●●●						●●●	●●●						●●●/M	●●●/M	
SOLVENTS/RESIDUALS DMAC AND NMP				●●●						●●	●●						●●	●●	●●
SOLVENTS/RESIDUALS FORMAMIDE									●●									●●	
UV ABSORBERS/STABILISERS									●●	●●	●●	●●	●●	●●	●●	●●	●●		
VOLATILE ORGANIC COMPOUNDS (VOCs)				●●					●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●●
<b>A</b> High risk for dyed/colored materials (non-white only)	<b>D</b> Medium risk for Wool materials						<b>G</b> Medium risk for plant-based fibers only; N/A for animal-based fibers						<b>K</b> High risk if PFAS use or contamination is suspected.						
<b>B</b> Medium risk only if Flame Retardant use or contamination is suspected.	<b>E</b> Medium risk if extractable Chrome above 1 mg/kg						<b>H</b> High risk for PVC materials only. Otherwise, medium risk						<b>L</b> High risk if Rubber or black Polymeric materials, otherwise medium risk						
<b>C</b> High risk for Wood, Paper, and Straw materials	<b>F</b> Copper is exempt from restriction limits in metal parts						<b>J</b> Medium risk for Styrene/Butadiene Rubbers (SBRs) only						<b>M</b> High risk for PU and PVC- based materials only						

**Packaging Matrix version 1.0**

●●● indicates a high risk that a chemical is used and/or could be detected in a particular material.

●● indicates a medium risk that a chemical is used and/or could be detected in a particular material.

No dot indicates that there is a negligible risk of a chemical being used and/or detected in a particular material.

SUBSTANCE	NATURAL FIBERS	BLENDED FIBERS	SYNTHETIC FIBERS	COATINGS, DYES & PRINTS	NATURAL MATERIALS including paper and cardboard	POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER	METAL	GLUE	LEATHER Natural	LEATHER Artificial
ALKYPHENOL (AP) AND ALKYPHENOL ETHOXYLATES (APEO) including all isomers	●●●	●●●	●●●	●●●	●●●	●●●/A		●●●	●●●	●●●
AZO-AMINES AND ARYLAMINE SALTS	●●●/B	●●●/B	●●●/B		●●●/B				●●●/B	●●●/B
BISPHENOLS		●●●	●●●	●●●/C	●●●/D	●●/E			●●●	●●●
BUTYLHYDROXYTOLUENE (BHT)						●●/F				
DIMETHYLFUMARATE (DMFu)						●●/G			●●	
FORMALDEHYDE	●●	●●	●●	●●●	●●●	●●/H		●●●	●●	●●
HEAVY METALS, TOTAL CONTENT (Cd, CrVI, Pb, Hg)*				●●	●●/J	●●/K	●●		●●	
MOSH/MOAH				●●●/L	●●●/M	●●●/L				
ORGANOTIN COMPOUNDS				●●●		●●●		●●●	●●	●●●
PERFLUORINATED AND POLYFLUORINATED CHEMICALS (PFAS)	<b>Prohibited</b>									
PHTHALATES				●●●/N		●●●/O		●●●	●●/P	●●●
<b>A</b> High risk for foams only; Medium risk for all other materials.	<b>F</b> Medium risk for poly bags only; no testing requirement for other materials.					<b>L</b> High risk for printed packaging materials				
<b>B</b> High risk for dyed/colored materials (non-white) only	<b>G</b> Medium risk for silica gel packets and foam packaging only; no testing requirement for other material					<b>M</b> High risk for recycled paper				
<b>C</b> High risk for PVC only; Medium risk for all other materials.	<b>H</b> Medium risk for materials with high recycled content					<b>N</b> High risk for plastisol prints; Medium risk for all other materials.				
<b>D</b> High risk for thermal receipt and recycled paper only; Medium risk for all other materials.	<b>J</b> Medium risk for materials with high recycled content only; no testing requirement for other materials					<b>O</b> Medium risk for polycarbonate and ABS, High risk for all other polymers.				
<b>E</b> Medium risk for tapes, polycarbonate, and recycled plastic cases only; no testing requirement for other materials	<b>K</b> Medium risk for PVC only, no testing requirement for other materials					<b>P</b> Medium risk for patent or coated leather; no testing requirement for other materials				

\*Please note that Chromium VI, Cadmium, Lead, and Mercury are restricted to a sum total of 100 mg/kg in several jurisdictions. Cadmium, Lead, and Mercury are analyzed using the same method even if the risk of finding them varies across different materials.

## Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>ACETOPHENONE AND 2- PHENYL-2-PROPANOL</b>					
Acetophenone	98-86-2		Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60 degrees C	< 50 mg/kg each	Potential breakdown products in EVA foam when using certain cross-linking agents, including Dicumyl Peroxide.
2-Phenyl-2-Propanol	617-94-7				
<b>ACIDIC AND ALKALINE SUBSTANCES</b>					
pH value	Various		Textiles and synthetic coated fabrics:  EN ISO 3071:2020  Leather: EN ISO 4045:2018	Textiles: 4.0–7.5  Leather: Chrome tanned: 3.2–5.5  Other: leather: 3.5-7.5	<p>pH value is a characteristic number, ranging from pH 0 to pH 14, which indirectly shows the content of acidic or alkaline substances in a product.</p> <p>pH values less than 7 indicate sources of acidic substances, and values greater than 7 indicate sources of alkaline substances.</p> <p>To avoid irritation or chemical burns to the skin, the pH value of products must be in the range of human skin— approximately pH 5.5.</p> <p>Termeer Group recommends the limits cited to comply with all global regulations for all products.</p> <p>For chrome-tanned leather, the final fixing bath of the re-tanning process should always have a pH below 4.0 to guard against the formation of Chromium VI</p>



## Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO) INCLUDING ALL ISOMERS</b>					
Nonylphenols (NP), mixed isomers	Various	EU: REACH Regulation 1907/2006 Annex XVII entry No. 46	Textiles and Leather: EN ISO 21084:2019  Polymers and all other materials: 1 g sample/20 mL THF, sonication for 60 minutes at 70 degrees C, analysis according to EN ISO 21084:2019	Total APs: < 10 mg/kg  Total APs + APEOs: < 100 mg/kg	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings.  APs are used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers.  Biodegradation of APEOs into APs is the main source of APs in the environment.  APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes.  We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 mg/kg and that more time is necessary for the supply chain to phase them out completely.
Octylphenols (OP), mixed isomers	Various	EU: REACH Regulation 1907/2006 SVHC Candidate List			
Nonylphenol ethoxylates (NPEOs)	Various	EU: REACH Regulation 1907/2006 Annex XVII entry No. 46 + 46a  The entry is applicable for textile articles which can reasonably be expected to be washed in water during their normal lifecycle in concentrations equal to or greater than 0.01% (100 mg/kg) by weight of that textile article or of each part of the textile article.	All materials except Leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS  Leather: Sample prep and analysis using 18218-1:2023 with quantification according to EN ISO 18254-1:2016		
Octylphenol ethoxylates (OPEOs)	Various				Recycled products: Contact Termeer Group for information about potential exemptions from the limit on NPEOs in recycled textile products, in particular recycled wool garments.

## Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>AZO-AMINES AND ARYLAMINE SALTS</b>					
4-Aminobiphenyl	92-67-1	EU: REACH Regulation 1907/2006 Annex XVII entry No. 43 + appendix 8	All materials except leather: EN ISO 14362-1:2017  Leather: EN ISO 17234-1:2020  4-Aminoazobenzene (4AAB) All materials except leather: EN ISO 14362-3: 2017  Leather: EN ISO 17234-2:2011	< 20 mg/kg each	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds.  Thousands of azo dyes exist, but only those which degrade to form the listed cleaved amines are restricted.  Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.
Benzidine	92-87-5				
4-Chloro-o-toluidine	95-69-2				
2-Naphtylamine	91-59-8				
o-Aminoazotoluene	97-56-3				
2-Amino-4-nitrotoluene	99-55-8				
p-Chloraniline	106-47-8				
2,4-Diaminoanisole	615-05-4				
4,4'-Diaminodiphenylmethane (4,4'-MDA)	101-77-9				
3,3'-Dichlorobenzidine	91-94-1				
3,3'-Dimethoxybenzidine	119-90-4				
3,3'-Dimethylbenzidine	119-93-7				
3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0				
p-Cresidine	120-71-8				
4,4'-Methylen-bis(2-chloraniline)	101-14-4				
4,4'-Oxydianiline	101-80-4				
4,4'-Thiodianiline	139-65-1				
o-Toluidine	95-53-4				
2,4-Toluyldiamine (2,4-TDA)	95-80-7				
2,4,5-Trimethylaniline	137-17-7				
2-Methoxyaniline (= o-Anisidine)	90-04-0				
4-Aminoazobenzene (4-AAB)	60-09-3				
2,4-Xylidine	95-68-1	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12			
2,6-Xylidine	87-62-7				
4-Chloro-o-toluidinium chloride	3165-93-3				
2-Naphthylammoniumacetate	553-00-4				
4-Methoxy-m-phenylene diammonium sulphate	39156-41-7				
2,4,5-Trimethylaniline hydrochloride	21436-97-5				

## Restricted Substances List version 1.0

SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>BIOCIDES</b>					
2-Octylisothiazol-3(2H)-on	26530-20-1		EN ISO 13365-1:2020	< 250 mg/kg	These chemicals have biocidal properties and can also be used as pesticides.
4-Chlor-3-Methylphenol (CMK)	59-50-7			< 600 mg/kg leather	
2-(Thiocyanomethylthio)-Benzothiazole (TCMTB)	21564-17-0			< 500 mg/kg	TCMTB is a preservative for leather and can be used as a pesticide.
Triclosan	3380-34-5	Triclosan is not approved by EU 528/2012		< 50 mg/kg	Triclosan can be used as disinfectant and as antibacterial agent in textiles. Triclosan can damage the liver, kidneys, heart and lungs, suppresses the immune system.
Preservatives	Various	See POP Regulation (EU) 2019/1021 Switzerland Chemical Risk Reduction (SR 814.81) BPR (EU) Nr. 528/2012 for a complete list	Chromatographic Methods and/or Methods US EPA 8081A, US EPA 8081B and US EPA 8151A	Prohibited	These chemicals have biocidal properties and can also be used as pesticides.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>BISPHENOLS</b>					
Bisphenol-A (BPA)	80-05-7	EU: REACH Regulation 1907/2006 SVHC Candidate List	Leather: EN ISO 11936:2023  All other materials:  Extraction: 1g sample/20 ml THF, sonication for 60 minutes at 60° C, then add methanol or acetonitrile for precipitation prior to analysis with LC/MS	< 1 mg/kg	BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC.  BPS may be used as a substitute for BPA for some specific uses, including in thermal receipt paper.
Bisphenol S (BPS)	80-09-1			BPS and BPF can be found in polyamide dye fixing agents and in sulfone- and phenol- based leather synthetic tanning agents.	
Bisphenol B (BPB)	77-40-7			BPA and BPS can be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams.	
Bisphenol F (BPF)	620-92-8			BPA, BPS, and BPB are included on the REACH SVHC list. Additional restrictions on the entire class of bisphenols are expected, with a revised restriction proposal forthcoming in the European Union.  Termeer Group recommends testing relevant materials for bisphenols according to the Testing Matrix and to work with suppliers to minimize residual concentrations or replace them with better alternatives where possible.	
				In preparation for forthcoming restrictions, significantly lower levels of bisphenols should be achievable in, e.g., polyamide, over time or better alternatives should be substituted if possible.	

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>CHLORINATED PARAFFINS</b>					
Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	85535-84-8	EU: Regulation 2019/1021 on Persistent Organic Pollutants EU: REACH Regulation 1907/2006 SVHC Candidate List	Leather: ISO 18219-1:2021 (SCCP) ISO 18219-2:2021 (MCCP)	< 1000 mg/kg	May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production.
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	85535-85-9	EU: Regulation 1907/2006 Candidate List.	Textiles and all other materials: ISO 22818:2021 (SCCP + MCCP)	< 1000 mg/kg	

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>CHLOROPHENOLS</b>					
Pentachlorophenol (PCP)	87-86-5	EU: Regulation 2019/1021 on Persistent Organic Pollutants	All materials: EN 17134-2:2023	< 0.5 mg/kg each	<p>Chlorophenols are polychlorinated compounds used as preservatives or pesticides.</p> <p>Pentachlorophenol (PCP), Tetrachlorophenol (TeCP), and Trichlorophenols (TriCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing/transporting fabrics.</p> <p>PCP, TeCP, and TriCP can also be used as in-can preservatives in print pastes and other chemical mixtures.</p>
2,3,5,6- Tetrachlorophenol (TeCP)	935-95-5	SWITZERLAND: ORRChem annex 1.2 (Art.3)			
2,3,4,6- Tetrachlorophenol (TeCP)	58-90-2				
2,3,4,5- Tetrachlorophenol (TeCP)	4901-51-3				
2,3,4-Trichlorophenol (TriCP)	15950-66-0				
2,3,5-Trichlorophenol (TriCP)	933-78-8				
2,3,6-Trichlorophenol (TriCP)	933-75-5				
2,4,5-Trichlorophenol (TriCP)	95-95-4				
2,4,6-Trichlorophenol (TriCP)	88-06-2				
3,4,5-Trichlorophenol (TriCP)	609-19-8				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>CHLORINATED BENZENES AND TOLUENES</b>					
Hexachlorobenzene (HCB)	118-74-1	EU: Regulation 2019/1021 on Persistent Organic Pollutants	All materials: EN 17137:2018	< 1 mg / kg (total)	Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/ polyester fibers.  They can also be used as solvents.  Cross-contamination from anti-moth agents and poly shipping bags may cause failures.
Pentachlorobenzenes (PCB)	608-93-5				
$\alpha,\alpha,\alpha,4$ -tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12			
$\alpha,\alpha,\alpha$ -trichlorotoluene; benzotrichloride	98-07-7				
$\alpha$ -chlorotoluene; benzyl chloride	100-44-7				
1,2,3-Trichlorobenzene	87-61-6				
1,2,4-Trichlorobenzene	120-82-1				
1,3,5-Trichlorobenzene	108-70-3				
1,2,3,4-Tetrachlorobenzene	634-66-2				
1,2,3,5-Tetrachlorobenzene	634-90-2				
1,2,4,5-Tetrachlorobenzene	95-94-3				
1,3-Dichlorobenzene	541-73-1				
1-4-Dichlorobenzene	106-46-7				
2-Chlorotoluene	95-49-8				
3-Chlorotoluene	108-41-8				
4-Chlorotoluene	106-43-4				
2,3-Dichlorotoluene	32768-54-0				
2,4-Dichlorotoluene	95-73-8				
2,5-Dichlorotoluene	19398-61-9				
2,6-Dichlorotoluene	118-69-4				
3,4-Dichlorotoluene	95-75-0				
2,3,6-Trichlorotoluene	2077-46-5				
2,4,5-Trichlorotoluene	6639-30-1				
2,3,4,5-Tetrachlorotoluene	76057-12-0				
2,3,4,6-Tetrachlorotoluene	875-40-1				
2,3,5,6-Tetrachlorotoluene	1006-31-1				
Pentachlorotoluenes	877-11-2				
1,2-Dichlorobenzene	95-50-1		< 10 mg/kg		

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>DIMETHYLFUARATE (DMFu)</b>					
Dimethylfumarate (DMFu)	624-49-7	EU: REACH Regulation 1907/2006 Annex XVII entry No.61	All materials: ISO 16186:2021	< 0.1 mg/kg	DMFu is an anti-mold agent that may be used in sachets in packaging to prevent the buildup of mold, especially during shipping.



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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>DISPERSE DYES WHICH ARE CLASSIFIED TO BE ALLERGENIC</b>					
C.I. Disperse Blue 1	2475-45-8	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12	All materials: DIN 54231:2022	< 30 mg/kg each	<p>Disperse dyes are a class of water- insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds.</p> <p>Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide).</p> <p>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.</p>
C.I. Disperse Blue 35A	56524-77-7	GERMANY: The authoritative German Federal Institute for Risk Assessment (BfR) strongly advises not to to use the sensitising disperse dyes listed. Please note that in Germany findings for these substances are judged according to the Lebensmittel- , Bedarfsgegenstände-, und Futtermittelgesetzbuch (LFGB), which is somehow legally binding and considered to be best practice			
C.I. Disperse Blue 35B	56524-76-6				
C.I. Disperse Blue 106	12223-01-7				
C.I. Disperse Blue 124	61951-51-7				
C.I. Disperse Orange 3	730-40-5				
C.I. Disperse Orange 37/59/76	12223-33-5				
	13301-61-6				
	51811-42-8				
C.I. Disperse Red 1	2872-52-8				
C.I. Disperse Yellow 3	2832-40-8				
C.I. Disperse Blue 3	2475-46-9				
C.I. Disperse Blue 7	3179-90-6				
C.I. Disperse Blue 26	3860-63-7				
C.I. Disperse Blue 102	12222-97-8				
C.I. Disperse Brown 1	23355-64-8				
C.I. Disperse Orange 1	2581-69-3				
C.I. Disperse Orange 11	82-28-0				
C.I. Disperse Orange 149	85136-74-9				
C.I. Disperse Red 11	2872-48-2				
C.I. Disperse Red 17	3179-89-3				
C.I. Disperse Red 151	61968-47-6				
C.I. Disperse Yellow 1	119-15-3				
C.I. Disperse Yellow 7	6300-37-4				
C.I. Disperse Yellow 9	6373-73-5				
C.I. Disperse Yellow 23	6250-23-3				
C.I. Disperse Yellow 39	12236-29-2				
C.I. Disperse Yellow 49	54824-37-2				
	6858-49-7				
C.I. Disperse Yellow 56	54077-16-6				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>DYES WHICH ARE CLASSIFIED TO BE CARCINOGENIC</b>					
C.I. Basic Red 9	569-61-9	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12	All materials: DIN 54231:2022	< 30 mg/kg each	Basic dyes are water- soluble cationic dyes mainly used on acrylic fibers.  Acid dyes are water-soluble anionic dyes mainly used on fibers such as wool, silk, and nylon.  Direct dyes are used on natural fibers such as cotton, linen, cellulose and in special treatments such as dip dyes.  Solvent dyes are dyes which are soluble in organic solvents, and can be used on natural and synthetic fibers.
C.I. Basic Violet 3 (with ≥ 0.1 % Michler's ketone or base)*	548-62-9				
C.I. Basic Blue 26 (with ≥ 0.1 % Michler's ketone or base)*	2580-56-5	EU: Regulation 1907/2006 Candidate List			
C.I. Basic Violet 14	632-99-5	The dyes marked* are included in EU: REACH Regulation 1907/2006 SVHC Candidate List			
C.I. Basic Green 4 (oxalate, chloride or free)	2437-29-8 569-64-2 10309-95-2				
C.I. Acid Red 26	3761-53-3				
C.I. Direct Black 38*	1937-37-7				
C.I. Direct Red 28*	573-58-0				
C.I. Direct Blue 6	2602-46-2				
C.I. Direct Brown 95	16071-86-6				
4-Dimethylaminoazobenzene (Solvent Yellow 2)	60-11-7				
Solvent Yellow 14	842-07-9				
C.I. Acid Violet 49	1694-09-3				
Basic Violet 1	8004-87-3				
C.I. Solvent Blue 4*	6786-83-0				
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol (Solvent Violet 8)*	561-41-1 52080-58-7				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>DYES, NAVY BLUE</b>					
Component 1: C <sub>39</sub> H <sub>23</sub> ClCrN <sub>7</sub> O <sub>12</sub> S <sub>2</sub> Na	118685-33-9				
Component 2: C <sub>46</sub> H <sub>30</sub> CrN <sub>10</sub> O <sub>20</sub> S <sub>2</sub> .3Na	Not allocated	EU: REACH Regulation 1907/2006 Annex XVII entry no.43 + appendix 9	All materials: DIN 54231:2022	< 30 mg/kg	Navy blue colorants are regulated and prohibited from use for dyeing of textiles.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>FLAME RETARDANTS</b>					
Tri(2,3-dibromopropyl)phosphate (TRIS)	126-72-7	EU: REACH Regulation 1907/2006 Annex XVII entry No. 4	EN ISO 17881-1 (2016) for brominated flame retardants  EN ISO 17881-2 (2016) for phosphorus flame retardants	< 10 mg/kg each	<p>With very limited exceptions, flame- retardant substances, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production.</p> <p>Listed here are examples of flame-retardant substances used historically across the apparel and footwear industry.</p> <p>It is not intended to be a complete list.</p> <p>Other flame retardants not applicable to this industry are regulated worldwide by the Stockholm Convention and the Aarhus Protocol, which have been implemented in the European Union under the POPs Regulation.</p> <p>The 10 mg/kg limit is established to account for incidental impurities, byproducts, and contaminants.</p> <p>Flame retardants should not be used for any other purpose, e.g., as softeners or plasticizers.</p>
Tris(aziridiny)phosphin oxide (TEPA)	545-55-1	EU: REACH Regulation 1907/2006 Annex XVII entry No.7			
Polybromobiphenyls (PBBs)	59536-65-1	EU: REACH Regulation 1907/2006 Annex XVII entry No.8			
Octabromodiphenylethers (OctaBDEs)	32536-52-0	EU: REACH Regulation 1907/2006 Annex XVII entry No.45			
Polybrominated diphenyl ethers (PBDEs)	Various	EU: Regulation 2019/1021 on Persistent Organic Pollutants			
Decabromodiphenylether (DecaBDE)	1163-19-5				
Pentabromodiphenylethers (PentaBDEs)	32534-81-9				
Hexabromocyclododecane and all main diastereomeres identified (alpha-, beta-, gamma-) (HBCDD)	3194-55-6 134237-50-6 134237-51-7 134237-52-8 25637-99-4				
Decabromodiphenyl ethane (DBDPE)	84852-53-9				
Trixylylphosphate (TXP)	25155-23-1				
Tetrabromobisphenol A (TBBPA)	79-94-7				
Bis(2,3-dibromopropyl)phosphate (BIS)	5412-25-9				
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0				
Tris(1,3-dichloro-iso-propyl)phosphate (TDCPP)	13674-87-8				
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>FLUORINATED GREENHOUSE GASES</b>					
See Regulation (EU) No 517/2014 for a complete list.	Various	Regulation (EU) No 517/2014	Sample preparation: Purge and trap — thermal desorption or SPME Measurement: GC/MS	< 0.1 mg/kg each	Prohibited from use. May be used as foam blowing agents, solvents, fire retardants, and aerosol propellants.
<b>FORMALDEHYDE</b>					
Formaldehyde	50-00-0	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12	All materials except Leather: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011  Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences.  Alternatively, EN ISO 17226-1:2021 can be used on its own.	< 75 mg/kg	Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>HEAVY METALS EXTRACTABLE (NON-JEWELRY)</b>					
Chromium VI (Cr VI)	18540-29-9	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12	EN 16711-2:2016  EN ISO 17075-1:2017 if Cr is detected	< 1 mg/kg	Though typically associated with leather tanning, Chromium VI also may be used in the “after-chroming” process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).
Arsenic (As)	7440-38-2		< 0.2 mg/kg	Arsenic and its compounds can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics.	
Cadmium (Cd)	7440-43-9		< 0.1 mg/kg	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints.	
Lead (Pb)	7439-92-1		All materials except Leather:  DIN EN 16711-2:2016	< 1 mg/kg*	Lead may be associated with plastics, paints, inks, pigments and surface coatings.
Antimony (Sb)	7440-36-0		Leather: DIN EN ISO 17072-1:2019	< 30 mg/kg	Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments, and alloys.
Barium (Ba)	7440-39-3		* Crystal or “lead glass” is exempt from total Lead restrictions.	< 1000 mg/kg	Barium and its compounds can be used in pigments for inks, plastics, and surface coatings, as well as in dyeing, mordants, filler in plastics, textile finishes, and leather tanning.
Cobalt (Co)	7440-48-4			< 4 mg/kg	Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons.
Copper (Cu)	7440-50-8			< 50 mg/kg	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>HEAVY METALS EXTRACTABLE (NON-JEWELRY) CONTINUED</b>					
Nickel (Ni)	7440-02-0			< 1 mg/kg	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.
Chromium (Cr)	7440-47-3		All materials except Leather:  DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019	< 2 mg/kg Leather: < 200 mg/kg	Chromium compounds can be used as dyeing additives; dye-fixing agents; color-fastness after-treatments; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning.
Mercury (Hg)	7439-97-6			< 0.02 mg/kg	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints and as catalysts in the manufacture of PU and vinyl chloride for use in PVC.
Selenium (Se)	7782-49-2			< 500 mg/kg	Selenium may be found in synthetic fibres, paints, inks, plastics and metal trims.
<b>APPLICABLE FOR LEATHER</b>					
Chromium VI (Cr VI)	18540-29-9	EU: REACH Regulation 1907/2006 ANNEX XVII entry No.47	EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference. Alternatively, EN ISO 17075-2:2017 may be used on its own.  Aging of the sample is required according to ISO 10195 (2018) Method A1 (24h, 80°C, max. 10%rH, usage of a non- ventilated oven)	Not detected Detection Limit: 3 mg/kg	Though typically associated with leather tanning, Chromium VI also may be used in the "after-chroming" process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>HEAVY METALS JEWELRY</b>					
Cadmium (Cd)	7440-43-9	EU: REACH Regulation 1907/2006 Annex XVII entry No.23	ASTM F963-17 as referenced in ASTM F2923:2020 *  * Sample preparation for jewelry and wearables: Wax areas not intended for skin-contact: EN 1811:2023	Substrates, Paints & Coatings: < 75 mg/kg	Cadmium and its compounds are used as pigments (especially in red, orange, yellow, and green). It can also be used in alloys to improve hardness or be found as a contaminant.
Lead (Pb)	7439-92-1	EU: REACH Regulation 1907/2006 Annex XVII entry No 63 for individual part of jewelry articles		Substrates, Paints & Coatings: < 90 mg/kg	Lead and its compounds may be associated with plastics, paints, inks, pigments, and surface coatings. It can also be found in metals as a contaminant.
Nickel (Ni)	7440-02	EU: REACH Regulation 1907/2006 Annex XVII entry No.27	Nickel release: EN 1811: 2023 for non coated items  Abrasion of coated items: EN 12472:2005:2020	Release (metal parts): Prolonged skin contact: 0.5 µg/cm <sup>2</sup> /week  Pierced part: 0.2 µg/cm <sup>2</sup> /week	Nickel and its compounds can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.
Antimony (Sb)	7440-36-0			Paints & Coatings: Extractable: < 60 mg/kg	Antimony and its compounds can be used as a Flame Retardant in paints, as well as a colorant in pigments.
Arsenic (As)	7440-38-2			Paints & Coatings: Extractable: < 25 mg/kg	Arsenic and its compounds can be used in paints and inks.
Barium (Ba)	7440-39-3		ASTM F963-17 as referenced in ASTM F2923:2020 *  * Sample preparation for jewelry and wearables: Wax areas not intended for skin-contact: EN 1811:2011+A1:2015	Paints & Coatings: Extractable: < 1000 mg/kg	Barium and its compounds can be used in pigments for inks.
Chromium (Cr)	7440-47-3			Paints & Coatings: Extractable: < 60 mg/kg	Chromium and its compounds can be used as pigments in paints. It can also be used as part of alloys such as stainless steel.
Mercury (Hg)	7439-97-6			Paints & Coatings: Extractable: < 60 mg/kg	Mercury and its compounds may be used in paints and can be found as a contaminant in alloys.
Selenium (Se)	7782-49-2			Paints & Coatings: Extractable: < 500 mg/kg	Selenium and its compounds may be found in paints and inks.



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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>HEAVY METALS TOTAL CONTENT</b>					
Cadmium (Cd)	7440-43-9	EU: REACH Regulation 1907/2006 ANNEX XVII entry No.23	All materials except Leather: DIN EN 16711-1:2016  Leather: DIN EN ISO 17072-2:2019	< 40 mg/kg	Heavy metals, including arsenic, cadmium, lead, and mercury may be found in pigments and dyes, metal alloys and coating, and in the PVC stabilization process.  Cadmium may be found in low quality dyes. Arsenic, cadmium, lead, and mercury may be found in pigments, but have largely been phased out. Metal alloys and coatings may contain arsenic, cadmium, and lead.  PVC stabilization may be accomplished with the use of cadmium or lead.
Lead (Pb)	7439-92-1	EU: REACH Regulation 1907/2006 ANNEX XVII entry No.63	Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coatings: CPSC-CH-E1003-09.1	< 90 mg/kg	
Mercury (Hg)	7439-97-6	EU:REACH Regulation 1907/2006 ANNEX XVII entry No.62	All materials except Leather: DIN EN 16711-1:2016	< 0.5 mg/kg	
Arsenic (As)	7440-38-2		Leather: DIN EN ISO 17072-2:2019	< 100 mg/kg	

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>HEAVY METALS RELEASABLE NICKEL</b>					
Nickel	7440-02-0	EU:REACH Regulation 1907/2006 ANNEX XVII entry No.27	EN 12472:2020 and EN 1811:2023	Release (metal parts):  Prolonged skin contact: < 0.5 µg/cm <sup>2</sup> /week  Pierced parts: < 0.2 µg/cm <sup>2</sup> /week  Eyewear frames: < 0.5 µg/cm <sup>2</sup> /week	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys.  They can also occur as impurities in pigments and alloys.
			Release (eyewear frames):  EN 16128:2015		

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>MONOMERS</b>					
Styrene, Free	100-42-5		Extraction in Methanol GC/MS, sonication at 60 degrees C for 60 minutes	< 30 mg/kg	Styrene is a precursor for polymerization and may be present in various Styrene copolymers like plastic buttons.  Free styrene is restricted, not total styrene.
Vinyl Chloride	75-01-4		EN ISO 6401:2022	< 1 mg/kg	Vinyl Chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops, and synthetic leather.
<b>N-NITROSAMINES</b>					
N-Nitrosodibutylamine (NDBA)	924-16-3				
N-Nitrosodiethylamine (NDEA)	55-18-5				
N-Nitrosodimethylamine (NDMA)	62-75-9				
N-Nitrosodipropylamine (NDPA)	621-64-7				
N-Nitrosomorpholine (NMOR)	59-89-2				
N-Nitroso-N-ethyl-N-phenylamine (NEPhA)	612-64-6				
N-Nitroso-N-methyl-N-phenylamine (NMPHA)	614-00-6				
N-Nitroso-piperidine (NPIP)	100-75-4				
N-Nitroso-pyrrolidine (NPYR)	930-55-2		EN ISO 19577:2019 with LC/MS/MS verification if positive.	< 0.5 mg/kg each	Can be formed as by-product in the production of rubber.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>ORGANOTIN COMPOUNDS</b>					
Tributyltin (TBT) compounds	Various	EU: Regulation 1907/2006 REACH ANNEX XVII entry No.20		< 0.5 mg/kg	Class of chemicals combining tin and organics such as butyl and phenyl groups that should no longer be used in the production of apparel, footwear, and related products.
Triphenyltin (TPhT) compounds	Various				
Dibutyltin (DBT) compounds	Various				
Diocetyl tin (DOT) compounds	Various				
Monobutyltin (MBT)	Various		All materials: CEN ISO/TS 16179:2012 or EN ISO 22744-1:2020  Footwear, Leather, Plastic: CEN ISO TS16179:2012	< 1 mg/kg each	Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber.  In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material.
Tricyclohexyltin (TCyHT)	Various				
Triocetyl tin (TOT)	Various				
Tripropyltin (TPT)	Various				
Trimethyltin (TMT)	Various				
Monooctyltin (MOT)	Various				
Dimethyltin (DMT)	Various				
Diphenyltin (DPhT)	Various				
Dipropyltin (DPT)	Various				
Monomethyltin (MMT)	Various				
Monophenyltin (MPhT)	Various				
Tetrabutyltin (TeBT)	Various				
Tetraethyltin (TeET)	Various				
Tetraoctyltin (TeOT)	Various				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>ORTHO-PHENYLPHENOL</b>					
o-Phenylphenol (OPP)	90-43-7		All materials: EN 17134-2:2023	< 1000 mg/kg leather < 100 mg/kg other	OPP is used for its preservative properties in leather or as a carrier in polyester dyeing processes.
<b>OZONE DEPLETING SUBSTANCES</b>					
See Regulation (EC) No 1005/2009 for a complete list	Various	Regulation (EC) No 1005/2009	All materials: GC/MS headspace 120 degrees C for 45 minutes	< 5 mg/kg	Prohibited from use. Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry cleaning agent.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION	
<b>PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)* (SEE APPENDIX A FOR INDIVIDUAL SUBSTANCES)</b>						
All PFAS as measured by total organic fluorine	Various	USA	EN 14582:2016 or ASTM D7359:2023	< 100 mg/kg by 2025 < 50 mg/kg by 2027	Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.  PFAS may be used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.  Refer to Appendix A for the full list of substances and CAS Numbers included in this restriction.	
Perfluorooctane Sulfonates (PFOS) and related substances **	Various	EU: Regulation 2019/1021 on Persistent Organic Pollutants	All materials: EN ISO 23702-1:2023 or EN 17681-1:2022 & 17681-2:2022	< 1 µg / m <sup>2</sup> total		
Perfluorooctanoic Acid (PFOA) and its salts	Various			< 0.025 mg/kg total		
PFOA-related substances	Various			< 1 mg/kg total		
Perfluorohexane-1-sulphonic acid (PFHxS) and its salts	Various			< 0.025 mg/kg total		
PFHxS-related substances	Various			< 1 mg/kg total		
C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts	Various	EU: REACH Regulation 1907/2006 Annex XVII entry No.68				< 0.025 mg/kg total
C9-C14 PFCA-related substances	Various					< 0.26 mg/kg total
PFHxA, its salts, and related substances	Various	SWITZERLAND:ORRChem annex 1.16 (Art.3)  EU REACH regulation 2025- 2026 expected to be going into force 2027-2029			Anticipated regulated limits in the EU:  PFHxA and its salts: < 0.25 mg/kg  PFHxA-related substances: < 1 mg/kg	

\*The 1 µg/m<sup>2</sup> total area-based limit for PFOS and related substances is in the process of revision under the EU POPs Regulation and will transition to a 0.025 mg/kg total sum limit on PFOS and its salts and a 1 mg/kg total sum limit on PFOS-related substances. This will bring EU PFOS restrictions into alignment with other existing PFAS restrictions included here.

**Important note:**

New draft updated method prEN 17681-1:2023 for targeted PFAS analysis is likely to be finalized and adopted in a future version of the Termeer Group RSL. Termeer Group anticipates higher findings of various PFAS analytes, especially FTOHs, with this new method, and industry should prepare accordingly

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>PESTICIDES AGRICULTURAL (SEE APPENDIX B FOR INDIVIDUAL SUBSTANCES)</b>					
See Appendix B for the complete list	Various	EU: Regulation 2019/1021 on Persistent Organic Pollutants	All materials: EN ISO 15913:2003 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09	< 0.5 mg/kg each	May be found in natural fibers, primarily cotton.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>PHthalATES</b>					
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	EU: REACH Regulation 1907/2006 Annex XVII entry No. 51	Sample preparation for all materials: CPSC-CH-C1001-09.4  Measurement:  Textiles: GC/MS, EN ISO 14389:2014 (7.1 Calculation based on weight of print only; 7.2 Calculation based on weight of print and textile if print cannot be removed).	< 500 mg/kg each  Total: < 1000 mg/kg	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility.  They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.  Phthalates can be found in: <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC) <ul style="list-style-type: none"> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> </li> </ul> Listed here are all legally restricted phthalates as well as those included on the REACH substances of very high concern (SVHC) candidate list at the time of publication. Suppliers should assume that the RSL includes all phthalates on the SVHC list—whether itemized here or not— since the list is updated frequently.
Dibutyl phthalate (DBP)	84-74-2				
Butylbenzyl phthalate (BBP)	85-68-7				
Di-isobutyl phthalate (DIBP)	84-69-5				
Di-“isononyl” phthalate (DINP)	28553-12-0 68515-48-0	EU: REACH Regulation 1907/2006 Annex XVII entry No.52 a,b,c			
Di-“isodecyl” phthalate (DIDP)	26761-40-0 68515-49-1				
Di-n-octyl phthalate (DNOP)	117-84-0				
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	All materials except textiles: GC/MS		
Di-isopentylphthalate (DIPP)	605-50-5				
Di-n-pentyl phthalate (DPP)	131-18-0				
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8				
Di-n-hexyl phthalate (DnHP)	84-75-3				



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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>PHthalates CONTINUED</b>					
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	EU: Regulation 1907/2006 Candidate List.	Sample preparation for all materials: CPSC-CH-C1001-09.4  Measurement:  Textiles: GC/MS, EN ISO 14389:2014 (7.1 Calculation based on weight of print only; 7.2 Calculation based on weight of print and textile if print cannot be removed).  All materials except textiles: GC/MS	< 500 mg/kg each  Total: < 1000 mg/kg	Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility.  They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.  Phthalates can be found in: <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC) <ul style="list-style-type: none"> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> </li> </ul> Listed here are all legally restricted phthalates as well as those included on the REACH substances of very high concern (SVHC) candidate list at the time of publication. Suppliers should assume that the RSL includes all phthalates on the SVHC list—whether itemized here or not— since the list is updated frequently.
Bis(2-ethylhexyl) tetrabromophthalate	26040-51-7				
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4				
N-pentyl-isopentyl phthalate (NPIPP)	776297- 69-9				
Di-cyclohexylphthalate (DCHP)	84-61-7				
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DHxP)	68515-50-4				
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1				
Di-iso-hexylphthalate (DIHxP)	71850-09-4				
Di-n-propylphthalate (DPrP)	131-16-8				
Diethyl phthalate (DEP)	84-66-2				
Dimethyl phthalate (DMP)	131-11-3				
Di-iso-octyl phthalate (DIOP)	27554-26-3				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)</b>					
Benzo(a)pyrene [BaP]	50-32-8	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12  EU: REACH Regulation 1907/2006 Annex XVII entry No. 50	All materials: AFPS GS 2019 or EN 17132: 2019 or ISO 16190: 2021	1 mg/kg each  Total 18 PAHs: < 10 mg/kg	PAHs are natural components of crude oil and are common residues from oil refining.  PAHs have a characteristic smell similar to that of car tires or asphalt.  Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings.
Benzo(a)anthracene	56-55-3				
Chrysene	218-01-9				
Benzo(b)fluoranthene	205-99-2				
Benzo(k)fluoranthene	207-08-9				
Dibenzo(a,h)anthracene	53-70-3				
Benzo(e)pyrene	192-97-2				
Benzo(j)fluoranthene	205-82-3				
Antracene	120-12-7	EU: Regulation 1907/2006 Candidate List		No individual restriction  Total 18 Pahas: < 10 mg/kg	PAHs are often found in the outsoles of footwear and in printing pastes for screen prints.  PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing.  *Naphthalene: Dispersing agents for textile dyes may contain high residual naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor- quality Naphthalene Sulphonate Formaldehyde condensation products).
Benzo(g,h,i)perylene	191-24-2				
Fluoranthene	206-44-0				
Naphthalene*	91-20-3 *				
Phenanthrene	85-01-8				
Pyrene	129-00-0				
Acenaphthene	83-32-9				
Acenaphthylene	208-96-8				
Fluorene	86-73-7				
Indeno(1,2,3-cd)pyrene	193-39-5				

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>QUINOLINE</b>					
Quinoline	91-22-5	EU: REACH Regulation 1907/2006 Annex XVII entry No.72 + appendix 12	All materials: DIN 54231:2022 with methanol extraction at 70 degrees C	< 50 mg/kg	Found as an impurity in polyester and some dyestuffs.  Quinoline can be included with disperse dye testing, as the same method is used for both. It is not expected in non-dyed materials.
<b>RESTRICTION ON PACKAGING</b>					
Cadmium (Cd)	Various	EU Directive 94/62/EC	CEN/TR 13695-1	The sum of concentration levels of lead, cadmium, mercury and hexavalent chromium present in packaging or packaging components shall not exceed 100 mg/kg	Packaging means transportation packaging as well as product packaging, i.e., any material used for the containment, protection, handling, delivery, and presentation of finished goods (article).
Lead (Pb)					
Chromium (Cr6+) - hexavalent					
Mercury (Hg)					
MOAH consisting of 1 to 7 aromatic rings					
MOSH consisting of 16 to 35 carbon atoms	FRANCE: AGEC law, Article 112 of April 13, 2022 (reduction of certain critical compounds in printing inks for pack	GC-FID/MS		< 1.0% 1 January 2025 onwards < 0.1% and <1 mg/kg MOAH compounds containing 3 to 7 aromatic rings)	These mineral oils can be used in printing inks of packaging materials and recycled paper.  The implementation applies to mineral oils containing substances that disrupt the recycling of packaging waste paper or restrict the use of recycled materials because of the risk of these substances to human health.
				< 0.1%	
Butylated Hydroxytoluene (BHT)	128-37-0		All materials: ASTM D4275	< 25 mg/kg	Used as an additive in plastics as an antioxidant to prevent aging. Can cause phenolic yellowing of textiles.

Suppliers should inform their contracted packaging and/or printing companies about the MOSH/MOAH restrictions in order that they determine, in consultation with printing ink manufacturers, the permissible printing inks (free of MOSH/MOAH) within the meaning of the Arrêté du 13 Avril 2022. A declaration of conformity, whilst not yet required, will be required in the future as part of the planned EU Packaging Regulation. As part of the duty of care as a manufacturer, random checks should be carried out on the printing inks used or the printed materials.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>SOLVENTS AND RESIDUALS</b>					
DMFa (N,N Dimethylformamide)	68-12-2			< 500 mg/kg	DMFa is a solvent used in plastics, rubber, and polyurethane (PU) coating.  Water-based PU does not contain DMFa and is therefore preferable.
1-Methyl-2-pyrrolidone (NMP)	872-50-4	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	Textiles: EN 17131:2019  All other materials: ISO 16189:2021	< 1000 mg/kg each	Industrial solvent used in production of water-based Polyurethanes and other polymeric materials.  May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper.
DMAC (N,N-dimethylacetamide)	127-19-5				Solvent used in the production of elastane fibers and sometimes as substitute for DMFa.
Formamide	75-12-7	EU: Regulation 1907/2006 Candidate List		< 200 mg/kg	Byproduct in the production of EVA foams.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION
<b>UV ABSORBERS/STABILIZERS</b>					
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	EU: Regulation 1907/2006 Candidate List	ISO 24040: 2022 with extraction in THF, analysis by GC/MS	< 1000 mg/kg each	PU foam materials such as open cell foams for padding.  Used as UV-absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber, polyurethane.
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1				
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1				
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3				
Drometrizole	2440-22-4			For informational purposes only. Termeer Group recommends testing to assess content levels.	Used as UV Absorbers for Plastics (PVC, PET, PC, PA, ABS, and other Polymers), Rubber, and Polyurethane.

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SUBSTANCE	CAS NUMBER	REGULATION	TEST METHOD	TERMEER GROUP RESTRICTED LIMIT	POTENTIAL USES & ADDITIONAL INFORMATION	
<b>VOLATILE ORGANIC COMPOUNDS (VOCs)</b>						
Benzene	71-43-2	EU: REACH Regulation 1907/2006 Annex XVII entry 72 + appendix 12	For general VOC screening: GC/MS headspace 45 minutes at 120 degrees C	< 1 mg/kg	These VOCs should not be used in textile auxiliary chemical preparations.  They are associated with solvent- based processes such as solvent- based polyurethane coatings and glues/adhesives.  They should not be used for any kind of facility cleaning or spot cleaning.	
Carbon Disulfide	75-15-0	The VOCs marked* are included in EU: REACH Regulation 1907/2006 SVHC Candidate List				< 1000 mg/kg
Carbon Tetrachloride	56-23-5					
Chloroform	67-66-3					
Cyclohexanone	108-94-1					
Ethylbenzene	100-41-4					
2-Butanone (MEK)	78-93-3					< 50 mg/kg
Tetrachloroethylene (PERC)	127-18-4					
Trichloroethylene*	79-01-6					< 10 mg/kg
1,2-Dichloroethane*	107-06-2					
Toluene	108-88-3					< 100 mg/kg
Phenol	108-95-2					
Xylene	1330-20-7					< 30 mg/kg
1,1-Dichloroethylene	75-35-4					< 1000 mg/kg
Pentachloroethane	76-01-7					
1,1,1,2- Tetrachloroethane	630-20-6					
1,1,2,2- Tetrachloroethane	79-34-5					
1,1,1- Trichloroethane	71-55-6					
1,1,2- Trichloroethane	79-00-5					
Orthoxylene	95-47-6					
Metaxylene	108-38-3					
Paraxylene	106-42-3					

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SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER
<b>APPENDIX A. PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)*</b>					
<b>PFOS and Related Substances</b>		<b>PFOA and Its Salts</b>		<b>PFHxS and Its Salts</b>	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	Perfluorooctanoic acid (PFOA)	335-67-1	Perfluorohexane Sulfonic acid (PFHxS)	355-46-4
Perfluorooctanesulfonic acid, potassium salt (PFOS-K)	2795-39-3	Sodium perfluorooctanoate (PFOA-Na)	335-95-5	Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)	3871-99-6
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5	Potassium perfluorooctanoate (PFOA-K)	2395-00-8	Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	55120-77-9
Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )	29081-56-9	Silver perfluorooctanoate (PFOA-Ag)	335-93-3	Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH <sub>4</sub> )	68259-08-5
Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )	70225-14-8	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	82382-12-5
Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> )	56773-42-3	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	<b>PFHxS-related Substances</b>	
Didecyldimethyl ammonium perfluorooctane sulfonate (PFOS-N(C <sub>10</sub> H <sub>21</sub> ) <sub>2</sub> (CH <sub>3</sub> ) <sub>2</sub> )	251099-16-8	<b>PFOA-related Substances</b>		N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	68259-15-4
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	Perfluorohexane sulfonamide (PFHxSA)	41997-13-1
N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)	31506-32-8	Methyl perfluorooctanoate (Me-PFOA)	376-27-2	<b>*NOTE: This list is a subset of PFAS and is not exhaustive</b>	
2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2	Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5		
2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)	24448-09-7	2-Perfluorooctylethanol (8:2 FTOH)	678-39-7		
Perfluoro-1-octanesulfonyl fluoride (POSF)	307-35-7	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9		
Perfluorooctane sulfonamide (PFOSA)	754-91-6	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9		
		2H,2H-Perfluorodecanoic acid (H <sub>2</sub> PFDA)	27854-31-5		

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SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER
<b>APPENDIX A. PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)* CONTINUED</b>					
<b>C9 – C14 PFCAs and Their Salts</b>		<b>C9 – C14 PFCA-related Substances</b>		<b>PFHxA, Its Salts, and Related Substances</b>	
Perfluorononanoic Acid (PFNA, C9-PFCA)	375-95-1	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	17741-60-5	Perfluorohexanoic Acid (PFHxA, C6-PFCA)	307-24-4
Perfluorodecanoic Acid (PFDA, C10-PFCA)	335-76-2	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9	1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	27619-97-2
Perfluoroundecanoic Acid (PFUnA, C11-PFCA)	2058-94-8	1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)	865-86-1	1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)	647-42-7
Perfluorododecanoic Acid (PFDoA, C12-PFCA)	307-55-1	2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)	34598-33-9	<b>*NOTE: This list is a subset of PFAS and is not exhaustive</b>	
Perfluorotridecanoic Acid (PFTrDA, C13-PFCA)	72629-94-8	Perfluorocylethanol 8:2 (8:2 FTOH)	678-39-7		
Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)	376-06-7	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5		
Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA)	172155-07-6	1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)	120226-60-0		
		1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)	2043-54-1		
		1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2		



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SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER	SUBSTANCE	CAS NUMBER
<b>APPENDIX B. PESTICIDES, AGRICULTURAL</b>					
2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds; 2,4,5-TP	93-72-1	Dichlorprop	120-36-5	Kepone	143-50-0
2,4,5-T	93-76-5	Dicofol	115-32-2	Lindane	58-89-9
2,4-D	94-75-7	Dicrotophos	141-66-2	Malathione	121-75-5
Aldrine	309-00-2	Dieldrine	60-57-1	MCPA	94-74-6
Azinophosmethyl	86-50-0	Dimethoate	60-51-5	MCPB	94-81-5
Azinophosethyl	2642-71-9	Dinoseb, Salts and Acetate	88-85-7	Mecoprop	93-65-2
Bromophos-ethyl	4824-78-6	DTTB (4, 6-Dichloro-7 (2,4,5-trichloro- phenoxy) -2-Trifluoro methyl benzimidazole)	63405-99-2	Metamidophos	10265-92-6
Captafol	2425-06-1	Endosulfan	115-29-7	Methoxychlor	72-43-5
Carbaryl	63-25-2	Endosulfan, $\alpha$ -	959-98-8	Mirex	2385-85-5
Chlorbenzilat	510-15-6	Endosulfan, $\beta$ -	33213-65-9	Monocrotophos	6923-22-4
Chlordane	57-74-9	Endrine	72-20-8	Parathion-methyl	298-00-0
Chlordimeform	6164-98-3	Esfenvalerate	66230-04-4	Pentachloroanisole	1825-21-4
Chlorfenvinphos	470-90-6	Ethylendibromid	106-93-4	Phosdrin/Mevinphos	7786-34-7
Chlorthalonil	1897-45-6	Ethylparathione; Parathion	56-38-2	Perthane	72-56-0
Coumaphos	56-72-4	Fenvalerate	51630-58-1	Propethamphos	31218-83-4
Cyfluthrin	68359-37-5	Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs)	Various	Profenophos	41198-08-7
Cyhalothrin	91465-08-6	Heptachlor	76-44-8	Quinalphos	13593-03-8
Cypermethrin	52315-07-8	Heptachlorepoxyde	1024-57-3	Quintozene	82-68-8
S,S,S-Tributyl phosphorotrithioate (Tribufos)	78-48-8	Hexabromobiphenyl	36355-01-8	Strobane	8001-50-1
Deltamethrin	52918-63-5	a-Hexachlorcyclohexane with & without Lindane	319-84-6	TelodrinE	297-78-9
DDD	53-19-0 72-54-8	b-Hexachlorcyclohexane with & without Lindane	319-85-7	Toxaphene	8001-35-2
DDE	3424-82-6 72-55-9	g-Hexachlorcyclohexane with & without Lindane	319-86-8	Tolyfluanide	731-27-1
DDT	50-29-3 789-02-6	Hexachlorobenzene	118-74-1	Trifluralin	1582-09-8
Diazinon	333-41-5	Isodrine	465-73-6	Polychlorinated naphthalenes	70776-03-3
Dichlofluanide	1085-98-9	Kelevane	4234-79-1		

**REACH ANNEX: ECHA'S CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN LAST UPDATE 23-01-2024****NUMBER OF SUBSTANCES ON THE CANDIDATE LIST: 240**

The European Chemicals Agency (ECHA) "CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN FOR AUTHORISATION" can be accessed via the following link:

<https://echa.europa.eu/candidate-list-table>

The identification of a substance as a Substance of Very High Concern (SVHC) and its inclusion in the Candidate List is the first step of the authorisation procedure.

Companies may have immediate legal obligations following such inclusion which are linked to the listed substance on its own, in preparations and articles.

Specific obligations exist for importers, producers, and suppliers (regardless of geographical location) of any article that contains one or more of these substances above 0.1 percent by weight per component (>1000 mg/kg)<sup>1</sup> These obligations include:

- Notify ECHA if the substance(s) are present in article components above 0.1 percent in quantities totalling over one ton per producer or importer per year<sup>2</sup> and register the products in the SCIP database.
- Notify Termeer Group immediately and provide sufficient information to allow safe use of the article to Termeer Group and other clients.
- Provide sufficient information, upon request, to allow safe use of the article to a consumer within 45 days of receipt of the request.

The candidate list is updated twice per year by ECHA. The candidate list provided within this RSL reflects the situation at the time of creation of the RSL. Suppliers, importers and producers should always follow the latest version which can be found via the link above.

<sup>1</sup> *European Court of Justice judgement of 10-09-2015 case C-106/14 referring to every constituent part of the article*

<sup>2</sup> *Notification is not required if the substance has already been registered for that use or when the producer or importer of an article can exclude exposure of humans and the environment during the use and disposal of the article. In such cases, the producer or importer must supply appropriate instructions to the recipient of the article.*

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
1	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	-	2024/01/23	vPvB (Article 57e)
2	Bumetrizole (UV-326)	3896-11-5	2024/01/23	vPvB (Article 57e)
3	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	119344-86-4	2024/01/23	Toxic for reproduction (Article 57c)
4	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	3147-75-9	2024/01/23	vPvB (Article 57e)
5	2,4,6-tri-tert-butylphenol	732-26-3	2024/01/23	Toxic for reproduction (Article 57c) PBT (Article 57d)
6	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	2023/06/14	Toxic for reproduction (Article 57c)
7	Bis(4-chlorophenyl) sulphone	80-07-9	2023/06/14	vPvB (Article 57e)
8	Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	-	2023/01/17	vPvB (Article 57e)

## REACH Candidate List version 1.0

Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
9	Perfluoroheptanoic acid and its salts - Ammonium perfluoroheptanoate Potassium perfluoroheptanoate Perfluoroheptanoic acid Sodium perfluoroheptanoate	6130-43-4 21049-36-5 375-85-9 20109-59-5	2023/01/17	Toxic for reproduction (Article 57c) PBT (Article 57d) vPvB (Article 57e) Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
10	Melamine	108-78-1	2023/01/17	Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
11	Isobutyl 4-hydroxybenzoate	4247-02-3	2023/01/17	Endocrine disrupting properties (Article 57(f) - human health)
12	bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	-	2023/01/17	vPvB (Article 57e)
13	Barium diboron tetraoxide	13701-59-2	2023/01/17	Toxic for reproduction (Article 57c)
14	4,4'-sulphonyldiphenol	80-09-1	2023/01/17	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
15	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	79-94-7	2023/01/17	Carcinogenic (Article 57a)
16	1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]	37853-59-1	2023/01/17	vPvB (Article 57e)
17	N-(hydroxymethyl)acrylamide	924-42-5	2022/06/10	Carcinogenic (Article 57a) Mutagenic (Article 57b)
18	Tris(2-methoxyethoxy)vinylsilane	1067-53-4	2022/01/17	Toxic for reproduction (Article 57c)
19	S-(tricyclo(5.2.1.0' <sup>2</sup> ,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	2022/01/17	PBT (Article 57d)
20	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	2022/01/17	Toxic for reproduction (Article 57c)
21	(±)-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)	-	2022/01/17	Endocrine disrupting properties (Article 57(f) - human health)
22	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	210555-94-5 27459-10-5 27147-75-7 121158-58-5 74499-35-7 57427-55-1	2021/07/08	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
23	Orthoboric acid, sodium salt	25747-83-5 22454-04-2 14312-40-4 1333-73-9 13840-56-7 14890-53-0	2021/07/08	Toxic for reproduction (Article 57c)
24	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)	1372804-76-6 85535-85-9 - 198840-65-2	2021/07/08	PBT (Article 57d) vPvB (Article 57e)
25	Glutaral	111-30-8	2021/07/08	Respiratory sensitising properties (Article 57(f) - human health)
26	4,4'-(1-methylpropylidene)bisphenol	77-40-7	2021/07/08	Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
27	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	75166-31-3 80-54-6 75166-30-2	2021/07/08	Toxic for reproduction (Article 57c)
28	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)	3296-90-0, 36483-57-5 1522-92-5 96-13-9	2021/07/08	Carcinogenic (Article 57a)
29	1,4-dioxane	123-91-1	2021/07/08	Carcinogenic (Article 57a) Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
30	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety dioctyl tin dilaurate; stannane, dioctyl-, bis(coco acyloxy) derivs. Diocetyl tin dilaurate Stannane, dioctyl-, bis(coco acyloxy) derivs.	3648-18-8 91648-39-4	2021/01/19	Toxic for reproduction (Article 57c)
31	Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8	2021/01/19	Toxic for reproduction (Article 57c)
32	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	2020/06/25	Toxic for reproduction (Article 57c)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
33	butyl 4-hydroxybenzoate	94-26-8	2020/06/25	Endocrine disrupting properties (Article 57(f) - human health)
34	2-methylimidazole	693-98-1	2020/06/25	Toxic for reproduction (Article 57c)
35	1-vinylimidazole	1072-63-5	2020/06/25	Toxic for reproduction (Article 57c)
36	Perfluorobutane sulfonic acid (PFBS) and its salts	-	2020/01/16	Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
37	Diisohexyl phthalate	71850-09-4	2020/01/16	Toxic for reproduction (Article 57c)
38	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	2020/01/16	Toxic for reproduction (Article 57c)
39	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	2020/01/16	Toxic for reproduction (Article 57c)
40	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	-	2019/07/16	Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
41	2-methoxyethyl acetate	110-49-6	2019/07/16	Toxic for reproduction (Article 57c)
42	4-tert-butylphenol	98-54-4	2019/07/16	Endocrine disrupting properties (Article 57(f) - environment)
43	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	2019/07/16	Endocrine disrupting properties (Article 57(f) - environment)
44	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	2019/01/15	Endocrine disrupting properties (Article 57(f) - environment)
45	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	2019/01/15	Toxic for reproduction (Article 57c)
46	Benzo[k]fluoranthene	207-08-9	2019/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
47	Fluoranthene	206-44-0 93951-69-0	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
48	Phenanthrene	85-01-8	2019/01/15	vPvB (Article 57e)
49	Pyrene	129-00-0 1718-52-1	2019/01/15	PBT (Article 57d) vPvB (Article 57e)
50	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride	552-30-7	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
51	Benzo[ghi]perylene	191-24-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
52	Decamethylcyclopentasiloxane	541-02-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
53	Dicyclohexyl phthalate (DCHP)	84-61-7	2018/06/27	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - human health)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
54	Disodium octaborate	12008-41-2	2018/06/27	Toxic for reproduction (Article 57c)
55	Dodecamethylcyclohexasiloxane	540-97-6	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
56	Ethylenediamine	107-15-3	2018/06/27	Respiratory sensitising properties (Article 57(f) - human health)
57	Lead	7439-92-1	2018/06/27	Toxic for reproduction (Article 57c)
58	Octamethylcyclotetrasiloxane	556-67-2	2018/06/27	PBT (Article 57d) vPvB (Article 57e)
59	Terphenyl, hydrogenated	61788-32-7	2018/06/27	vPvB (Article 57e)
60	Benz[a]anthracene	56-55-3 1718-53-2	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
61	Cadmium carbonate	513-78-0	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
62	Cadmium hydroxide	21041-95-2	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
63	Cadmium nitrate	10022-68-1 10325-94-7	2018/01/15	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
64	Chrysene	218-01-9 1719-03-5	2018/01/15	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)
65	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination there of]	-	2018/01/15	vPvB (Article 57e)
66	fluoranthene	-	2018/01/15	Endocrine disrupting properties (Article 57(f) - environment)
67	Perfluorohexane-1-sulphonic acid and its salts	-	2017/07/07	vPvB (Article 57e)
68	4,4'-isopropylidenediphenol Bisphenol A; BPA	80-05-7	2017/01/12	Toxic for reproduction (Article 57 c)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
69	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	-	2017/01/12	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
70	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3830-45-3 3108-42-7 335-76-2	2017/01/12	Toxic for reproduction (Article 57 c) PBT (Article 57 d)
71	p-(1,1-dimethylpropyl)phenol	80-46-6	2017/01/12	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
72	Benzo(def)chrysene	50-32-8	2016/20/06	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); PBT (Article 57 d); vPvB (Article 57 e)
73	1,3-propanesultone	1120-71-4	2015/12/17	Carcinogenic (Article 57a);
74	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	2015/12/17	vPvB (Article 57e)
75	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	2015/12/17	vPvB (Article 57e)
76	Nitrobenzene	98-95-3	2015/12/17	Toxic for reproduction (Article 57 c)
77	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	2015/12/17	Toxic for reproduction (Article 57 c) PBT (Article 57 d)
78	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1	2015/06/15	Toxic for reproduction (Article 57 c)
79	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]	-	2015/06/15	vPvB (Article 57e)
80	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	2014/12/17; 2008/10/28	Equivalent level of concern having probable serious effects to the environment (Article 57 f); Toxic for reproduction (article 57c)
81	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	2014/12/17	Toxic for reproduction (Article 57 c)
82	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	2014/12/17	PBT (Article 57 d); vPvB (Article 57 e)
83	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)	-	2014/12/17	Toxic for reproduction (Article 57 c)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
84	Cadmium fluoride	7790-79-6	2014/12/17	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
85	Cadmium sulphate	10124-36-4 31119-53-6	2014/12/17	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
86	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	2014/12/17	PBT (Article 57 d); vPvB (Article 57 e)
87	Cadmium chloride	10108-64-2	2014/06/16	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); Equivalent level of concern having probable serious effects to human health (Article 57 f)
88	Sodium peroxometaborate	04-04-7632	2014/06/16	Toxic for reproduction (Article 57 c)
89	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	2014/06/16	Toxic for reproduction (Article 57 c)
90	Sodium perborate; perboric acid, sodium salt	-	2014/06/16	Toxic for reproduction (Article 57 c)
91	Trixylyl phosphate	25155-23-1	2013/12/16	Toxic for reproduction (Article 57 c);
92	Lead di(acetate)	301-04-2	2013/12/16	Toxic for reproduction (Article 57 c);
93	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	2013/12/16	Toxic for reproduction (Article 57 c);
94	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	2013/12/16	Carcinogenic (Article 57a);
95	Cadmium sulphide	1306-23-6	2013/12/16	Carcinogenic (Article 57a);
96	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)	1937-37-7	2013/12/16	Carcinogenic (Article 57a);
97	Dihexyl phthalate	84-75-3	2013/12/16	Toxic for reproduction (Article 57 c);
98	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	2013/06/20	Toxic for reproduction (Article 57 c);
99	4-Nonylphenol, branched and linear, ethoxylated [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]	-	2013/06/20	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
100	Pentadecafluorooctanoic acid (PFOA)	335-67-1	2013/06/20	Toxic for reproduction (Article 57 c);
101	Dipentyl phthalate (DPP)	131-18-0	2013/06/20	Toxic for reproduction (Article 57 c);
102	Cadmium	7440-43-9	2013/06/20	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)
103	Cadmium oxide	1306-19-0	2013/06/20	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)



REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
104	4,4'-methylenedi-o-toluidine	838-88-0	2012/12/19	Carcinogenic (Article 57a)
105	N-pentyl-isopentylphthalate	776297-69-9	2012/12/19	Toxic for reproduction (Article 57 c)
106	4-Aminoazobenzene	60-09-3	2012/12/19	Carcinogenic (Article 57a)
107	Orange lead (lead tetroxide)	1314-41-6	2012/12/19	Toxic for reproduction (Article 57 c)
108	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	2012/12/19	Toxic for reproduction (Article 57 c)
109	Dimethyl sulphate	77-78-1	2012/12/19	Carcinogenic (Article 57a)
110	Heptacosafuorotetradecanoic acid	376-06-7	2012/12/19	vPvB (Article 57 e)
111	Lead titanium zirconium oxide	12626-81-2	2012/12/19	Toxic for reproduction (Article 57 c)
112	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	2012/12/19	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
113	6-methoxy-m-toluidine (p-cresidine)	120-71-8	2012/12/19	Carcinogenic (Article 57a)
114	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	2012/12/19	Toxic for reproduction (Article 57 c)
115	1,2-Diethoxyethane	629-14-1	2012/12/19	Toxic for reproduction (Article 57 c)
116	Sulfurous acid, lead salt, dibasic	62229-08-7	2012/12/19	Toxic for reproduction (Article 57 c)
117	1-bromopropane (n-propyl bromide)	106-94-5	2012/12/19	Toxic for reproduction (Article 57 c)
118	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	2012/12/19	PBT (Article 57 d); vPvB (Article 57 e)
119	Biphenyl-4-ylamine	92-67-1	2012/12/19	Carcinogenic (Article 57a)
120	Pentalead tetraoxide sulphate	12065-90-6	2012/12/19	Toxic for reproduction (Article 57 c)
121	Silicic acid, lead salt	11120-22-2	2012/12/19	Toxic for reproduction (Article 57 c)
122	o-Toluidine	95-53-4	2012/12/19	Carcinogenic (Article 57a)
123	Acetic acid, lead salt, basic	51404-69-4	2012/12/19	Toxic for reproduction (Article 57 c)
124	Dioxobis(stearato)trilead	12578-12-0	2012/12/19	Toxic for reproduction (Article 57 c)
125	Lead bis(tetrafluoroborate)	13814-96-5	2012/12/19	Toxic for reproduction (Article 57 c)
126	Lead dinitrate	10099-74-8	2012/12/19	Toxic for reproduction (Article 57 c)
127	Silicic acid (H <sub>2</sub> SiO <sub>5</sub> ), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD)]; the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	2012/12/19	Toxic for reproduction (Article 57 c)
128	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7 13149-00-3 14166-21-3	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
129	N-methylacetamide	79-16-3	2012/12/19	Toxic for reproduction (Article 57 c)
130	Pyrochlore, antimony lead yellow	8012-00-8	2012/12/19	Toxic for reproduction (Article 57 c)
131	Lead monoxide (lead oxide)	1317-36-8	2012/12/19	Toxic for reproduction (Article 57 c)

REACH Candidate List version 1.0				
Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
132	Tetralead trioxide sulphate	12202-17-4	2012/12/19	Toxic for reproduction (Article 57 c)
133	Trilead bis(carbonate)dihydroxide	1319-46-6	2012/12/19	Toxic for reproduction (Article 57 c)
134	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
135	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	2012/12/19	Toxic for reproduction (Article 57 c)
136	N,N-dimethylformamide	68-12-2	2012/12/19	Toxic for reproduction (Article 57 c)
137	Tetraethyllead	78-00-2	2012/12/19	Toxic for reproduction (Article 57 c)
138	Methyloxirane (Propylene oxide)	75-56-9	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
139	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	2012/12/19	Equivalent level of concern having probable serious effects to the environment (Article 57 f)
140	Fatty acids, C16-18, lead salts	91031-62-8	2012/12/19	Toxic for reproduction (Article 57 c)
141	Trilead dioxide phosphonate	12141-20-7	2012/12/19	Toxic for reproduction (Article 57 c)
142	o-aminoazotoluene	97-56-3	2012/12/19	Carcinogenic (Article 57a)
143	[Phthalato(2-)]dioxotrilead	69011-06-9	2012/12/19	Toxic for reproduction (Article 57 c)
144	Tricosafuorododecanoic acid	307-55-1	2012/12/19	vPvB (Article 57 e)
145	Lead oxide sulfate	12036-76-9	2012/12/19	Toxic for reproduction (Article 57 c)
146	Methoxyacetic acid	625-45-6	2012/12/19	Toxic for reproduction (Article 57 c)
147	Diisopentylphthalate	605-50-5	2012/12/19	Toxic for reproduction (Article 57 c)
148	Lead cyanamidate	20837-86-9	2012/12/19	Toxic for reproduction (Article 57 c)
149	4,4'-oxydianiline and its salts	101-80-4	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
150	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	2012/12/19	Carcinogenic (Article 57a)
151	Henicosafuoroundecanoic acid	2058-94-8	2012/12/19	vPvB (Article 57 e)
152	Furan	110-00-9	2012/12/19	Carcinogenic (Article 57a)
153	Pentacosafuorotridecanoic acid	72629-94-8	2012/12/19	vPvB (Article 57 e)
154	Diethyl sulphate	64-67-5	2012/12/19	Carcinogenic (Article 57a); Mutagenic (Article 57b)
155	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0 19438-60-9 48122-14-1 57110-29-9	2012/12/19	Equivalent level of concern having probable serious effects to human health (Article 57 f)
156	Dibutyltin dichloride (DBTC)	683-18-1	2012/12/19	Toxic for reproduction (Article 57 c)
157	Lead titanium trioxide	12060-00-3	2012/12/19	Toxic for reproduction (Article 57 c)
158	Formamide	75-12-7	2012/06/18	Toxic for reproduction (Article 57 c)

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Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
159	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	2012/06/18	Carcinogenic (Article 57a)
160	Diboron trioxide	1303-86-2	2012/06/18	Toxic for reproduction (Article 57 c)
161	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	2012/06/18	Carcinogenic (Article 57a)
162	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	2012/06/18	Toxic for reproduction (Article 57 c)
163	Lead(II) bis(methanesulfonate)	17570-76-2	2012/06/18	Toxic for reproduction (Article 57 c)
164	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	2012/06/18	Carcinogenic (Article 57a)
165	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	2012/06/18	Mutagenic (Article 57b)
166	4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	2012/06/18	Carcinogenic (Article 57a)
167	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	2012/06/18	Carcinogenic (Article 57a)
168	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	2012/06/18	Carcinogenic (Article 57a)
169	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	2012/06/18	Mutagenic (Article 57b)
170	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2012/06/18	Toxic for reproduction (Article 57 c)
171	Lead styphnate	15245-44-0	2011/12/19	Toxic for reproduction (article 57 c)
172	Calcium arsenate	7778-44-1	2011/12/19	Carcinogenic (article 57 a)
173	Bis(2-methoxyethyl) ether	111-96-6	2011/12/19	Toxic for reproduction (article 57 c)
174	Phenolphthalein	77-09-8	2011/12/19	Carcinogenic (article 57 a)
175	Arsenic acid	7778-39-4	2011/12/19	Carcinogenic (article 57 a)
176	2-Methoxyaniline; o-Anisidine	90-04-0	2011/12/19	Carcinogenic (article 57 a)
177	Potassium hydroxyoctaoxidizincatedichromate	11103-86-9	2011/12/19	Carcinogenic (article 57 a)
178	Bis(2-methoxyethyl) phthalate	117-82-8	2011/12/19	Toxic for reproduction (article 57 c)
179	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	2011/12/19	Equivalent level of concern having probable serious effects to the environment (article 57 f)
180	Dichromium tris(chromate)	24613-89-6	2011/12/19	Carcinogenic (article 57 a)
181	Pentazinc chromate octahydroxide	49663-84-5	2011/12/19	Carcinogenic (article 57 a)

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Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
182	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 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, and fulfil the three following conditions: a) oxides of aluminium and silicon 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 ( $\mu\text{m}$ ) c) alkaline oxide and alkali earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content less or equal to 18% by weight	-	2011/12/19	Carcinogenic (article 57 a)
183	Lead dipicrate	6477-64-1	2011/12/19	Toxic for reproduction (article 57 c)
184	N,N-dimethylacetamide	127-19-5	2011/12/19	Toxic for reproduction (article 57 c)
185	1,2-dichloroethane	107-06-2	2011/12/19	Carcinogenic (article 57 a)
186	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	2011/12/19	Carcinogenic (article 57 a)
187	Trilead diarsenate	3687-31-8	2011/12/19	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
188	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	2011/12/19	Carcinogenic (article 57 a)
189	Lead diazide, Lead azide	13424-46-9	2011/12/19	Toxic for reproduction (article 57 c),
190	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 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, and fulfil the three following conditions: a) 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 ( $\mu\text{m}$ ). c) alkaline oxide and alkali earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content less or equal to 18% by weight		2011/12/19	Carcinogenic (article 57 a)
191	Cobalt dichloride	7646-79-9	2011/06/20 - 2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
192	1-Methyl-2-pyrrolidone	872-50-4	2011/06/20	Toxic for reproduction (article 57c)
193	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	2011/06/20	Toxic for reproduction (article 57c)
194	Hydrazine	302-01-2 7803-57-8	2011/06/20	Carcinogenic (article 57a)
195	1,2,3-Trichloropropane	96-18-4	2011/06/20	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
196	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	2011/06/20	Toxic for reproduction (article 57c)
197	Strontium chromate	7789-06-2	2011/06/20	Carcinogenic (article 57a)

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Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
198	2-Ethoxyethyl acetate	111-15-9	2011/06/20	Toxic for reproduction (article 57c)
199	2-Ethoxyethanol	110-80-5	2010/12/15	Toxic for reproduction (article 57c)
200	Cobalt(II) diacetate	71-48-7	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
201	Cobalt(II) carbonate	513-79-1	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
202	Cobalt(II) sulphate	10124-43-3	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
203	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	7738-94-5 13530-68-2	2010/12/15	Carcinogenic (article 57a)
204	Cobalt(II) dinitrate	10141-05-6	2010/12/15	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
205	Chromium trioxide	1333-82-0	2010/12/15	Carcinogenic and mutagenic (articles 57 a and 57 b)
206	2-Methoxyethanol	109-86-4	2010/12/15	Toxic for reproduction (article 57c)
207	Trichloroethylene	79-01-6	2010/06/18	Carcinogenic (article 57 a)
208	Sodium chromate	7775-11-3	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
209	Boric acid	10043-35-3 11113-50-1	2010/06/18	Toxic for reproduction (article 57 c)
210	Potassium chromate	7789-00-6	2010/06/18	Carcinogenic and mutagenic (articles 57 a and 57 b).
211	Tetraboron disodium heptaoxide, hydrate	12267-73-1	2010/06/18	Toxic for reproduction (article 57 c)
212	Potassium dichromate	7778-50-9	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
213	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	2010/06/18	Toxic for reproduction (article 57 c)
214	Ammonium dichromate	7789-09-5	2010/06/18	Carcinogenic, mutagenic and toxic for reproduction (articles 57 a, 57 b and 57 c)
215	Acrylamide	79-06-1	2010/03/30	Carcinogenic and mutagenic (articles 57 a and 57 b)
216	2,4-Dinitrotoluene	121-14-2	2010/01/13	Carcinogenic (article 57a)
217	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
218	Anthracene oil, anthracene-low	90640-82-7	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
219	Pitch, coal tar, high temp.	65996-93-2	2010/01/13	Carcinogenic, PBT and vPvB (articles 57a, 57d and 57e)
220	Anthracene oil, anthracene paste	90640-81-6	2010/01/13	Carcinogenic <sup>2</sup> , mutagenic <sup>3</sup> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
221	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c))
222	Lead chromate	7758-97-6	2010/01/13	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
223	Anthracene oil	90640-80-5	2010/01/13	Carcinogenic <sup>1</sup> , PBT and vPvB (articles 57a, 57d and 57e)
224	Diisobutyl phthalate	84-69-5	2010/01/13	Toxic for reproduction (article 57c)
225	Tris(2-chloroethyl)phosphate	115-96-8	2010/01/13	Toxic for reproduction (article 57c)

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Nr.	Substance Name	Cas Number	Date of inclusion	Reason for inclusion
226	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	2010/01/13	Carcinogenic <sub>2</sub> , mutagenic <sub>3</sub> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
227	Anthracene oil, anthracene paste, distn. lights	91995-17-4	2010/01/13	Carcinogenic <sub>2</sub> , mutagenic <sub>3</sub> , PBT and vPvB (articles 57a, 57b, 57d and 57e)
228	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	2008/10/28	Carcinogenic (article 57a)
229	Triethyl arsenate	15606-95-8	2008/10/28	Carcinogenic (article 57a)
230	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	2008/10/28	vPvB (article 57e)
231	Benzyl butyl phthalate (BBP)	85-68-7	2008/10/28	Toxic for reproduction (article 57c)
232	Sodium dichromate	7789-12-0 10588-01-9	2008/10/28	Carcinogenic, mutagenic and toxic for reproduction (articles 57a, 57b and 57c)
233	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	2008/10/28	PBT and vPvB (articles 57 d and 57 e)
234	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	2008/10/28	PBT (article 57d)
235	Anthracene	120-12-7	2008/10/28	PBT (article 57d)
236	Dibutyl phthalate (DBP)	84-74-2	2008/10/28	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
237	Lead hydrogen arsenate	7784-40-9	2008/10/28	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)
238	Diarsenic trioxide	1327-53-3	2008/10/28	Carcinogenic (article 57a)
239	Diarsenic pentaoxide	1303-28-2	2008/10/28	Carcinogenic (article 57a)
240	Bis(tributyltin)oxide (TBTO)	56-35-9	2008/10/28	PBT (article 57d)

**REACH ANNEX XIV****LIST OF SUBSTANCES SUBJECT TO AUTHORISATION LAST UPDATE 01-11-2023****NUMBER OF SUBSTANCES ON THE AUTHORISATION LIST : 59**

The identification of a substance as Substance of Very High Concern and its inclusion in the Candidate List is the first step of the authorisation procedure.

Companies may have immediate legal obligations following such inclusion which are linked to the listed substance on its own, in preparations and articles.

Further documentation or more detailed information on the identification process of substances of very high concern can be found on the web pages of ECHA's Member State Committee.

**Without authorisation, usage is not allowed in the EU/EEA**

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No.	Substance Name	Cas Number	Latest application date	Sunset date
1	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	21/02/2013	21/08/2014
2	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	21/02/2013	21/08/2014
3	Hexabromocyclododecane (HBCDD), alpha-hexabromocyclododecane, beta-hexabromocyclododecane, gamma-hexabromocyclododecane	3194-55-6 25637-99-4 134237-50-6 134237-51-7 134237-52-8	21/02/2014	21/08/2015
4	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	21/08/2013	21/02/2015
5	Benzyl butyl phthalate (BBP)	85-68-7	21/08/2013	21/02/2015
6	Dibutyl phthalate (DBP)	84-74-2	21/08/2013	21/02/2015
7	Diisobutyl phthalate (DIBP)	84-69-5	21/08/2013	21/02/2015
8	Diarsenic trioxide	1327-53-3	21/11/2013	21/05/2015
9	Diarsenic pentaoxide	1303-28-2	21/11/2013	21/05/2015
10	Lead chromate	7758-97-6	21/11/2013	21/05/2015
11	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	21/11/2013	21/05/2015
12	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	21/11/2013	21/05/2015
13	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	21/02/2014	21/08/2015
14	2,4 – Dinitrotoluene (2,4-DNT)	121-14-2	21/02/2014	21/08/2015
15	Trichloroethylene	79-01-6	21/10/2014	21/04/2016
16	Chromium trioxide	1333-82-0	21/03/2016	21/09/2017
17	Acids generated from chromium trioxide and their oligomers Group containing: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2	21/03/2016	21/09/2017

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No.	Substance Name	Cas Number	Latest application date	Sunset date
18	Sodium dichromate	7789-12-0 10588-01-9	21/03/2016	21/09/2017
19	Potassium dichromate	7778-50-9	21/03/2016	21/09/2017
20	Ammonium dichromate	7789-09-5	21/03/2016	21/09/2017
21	Potassium chromate	7789-00-6	21/03/2016	21/09/2017
22	Sodium chromate	7775-11-3	21/03/2016	21/09/2017
23	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	22/02/2016	22/08/2017
24	Arsenic acid	7778-39-4	22/02/2016	22/08/2017
25	Bis(2-methoxyethyl) ether	111-96-6	22/02/2016	22/08/2017
26	1,2-dichloroethane (EDC)	107-06-2	22/05/2016	22/11/2017
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	22/05/2016	22/11/2017
28	Dichromium tris(chromate)	24613-89-6	22/07/2017	22/01/2019
29	Strontium chromate	7789-06-2	22/07/2017	22/01/2019
30	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	22/07/2017	22/01/2019
31	Penntazinc chromate octahydroxide	49663-84-5	22/07/2017	22/01/2019
32	1-bromopropane (n-propyl bromide)	106-94-5	04/01/2019	04/07/2020
33	Diisopentyl phthalate	605-50-5	04/01/2019	04/07/2020
34	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	04/01/2019	04/07/2020
35	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	04/01/2019	04/07/2020
36	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0	04/01/2019	04/07/2020
37	Bis(2-methoxyethyl) phthalate	117-82-8	04/01/2019	04/07/2020
38	Dipentyl phthalate	131-18-0	04/01/2019	04/07/2020
39	N-pentyl-isopentylphthalate	776297-69-9	04/01/2019	04/07/2020
40	Anthracene oil	90640-80-5	04/04/2019	04/10/2020
41	Pitch, coal tar, high-temp.	65996-93-2	04/04/2019	04/10/2020
42	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	- 2497-59-8 9036-19-5 2315-67-5 2315-61-9 9002-93-1	04/07/2019	04/01/2021



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No.	Substance Name	Cas Number	Latest application date	Sunset date
43	4-Nonylphenol, branched and linear, ethoxylated	- Various 26027-38-3 9016-45-9 27942-27-4 20427-84-3 7311-27-5 68412-54-4 14409-72-4 34166-38-6 37205-87-1 26264-02-8 26571-11-9 27177-05-5 20636-48-0 156609-10-8 127087-87-0 104-35-8 1119449-38-5 1119449-37-4 68412-54-4 127087-87-0 9016-45-9	04/07/2019	04/01/2021
44	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	27/08/2021	27/02/2023
45	Dihexyl phthalate	84-75-3	27/08/2021	27/02/2023
46	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	- 68648-93-1 68515-51-5	27/08/2021	27/02/2023
47	Trixylyl phosphate	25155-23-1	27/11/2021	27/05/2023
48	Sodium perborate, perboric acid, sodium salt	- 13517-20-9 90568-23-3 15120-21-5 11138-47-9 125022-34-6	27/11/2021	27/05/2023

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No.	Substance Name	Cas Number	Latest application date	Sunset date
49	Sodium peroxometaborate	7632-04-4	27/11/2021	27/05/2023
50	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]	- 117933-89-8 343934-04-3 676367-09-2 343934-05-4 676367-04-7 676367-08-1 676367-03-6 676367-07-0 676367-02-5 676367-06-9 676367-05-8 186309-28-4	27/02/2022	27/08/2023
51	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	25973-55-1	27/05/2022	27/11/2023
52	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol	3864-99-1	27/05/2022	27/11/2023
53	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol	36437-37-3	27/05/2022	27/11/2023
54	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	3846-71-7	27/05/2022	27/11/2023
55	Tetraethyllead	78-00-2	01-11-2023	01-05-2025
56	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	01-11-2023	01-05-2025
57	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	-	01-11-2023	01-05-2025
58	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	15571-58-1	01-11-2023	01-05-2025
59	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)	-	01-11-2023	01-05-2025