

# PRODUCT STANDARD VERSION 4

DRAFT FOR PUBLIC COMMENT

## **BASIC LEVEL RESTRICTED SUBSTANCES LIST (RSL)**

AUGUST 2019

(NOTE: This reference document will be updated prior to release of the Version 4 standard and annually thereafter.)

## 1. Background

The following restrictions are proposed for all products seeking Cradle to Cradle certification or a Material Health Certificate at any certification level under Version 4 of the Cradle to Cradle Certified Product Standard (the Standard). Unless noted otherwise, the applicable thresholds may not be exceeded for the listed restricted substances in any homogeneous material subject to review in a certified product.

The restrictions are grouped into a core list that applies to all homogeneous materials subject to review in all products, and five supplementary lists, which include additional restrictions specific to certain material or product types (see section 2). Some substances are on multiple lists with differing thresholds or restriction conditions. In such cases, the most conservative applicable restriction must be met (e.g. PAHs are restricted with different thresholds on the Biological Materials and the Children's Products Lists. For a biological material in a children's product, PAH concentrations must be below the more conservative thresholds on the Children's Product List).

This draft RSL is based on leading international chemical regulations and Cradle to Cradle Certified life cycle concerns regarding organohalogens. The chemical regulations included are those currently in effect in the European Union (EU) under Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Restriction of Hazardous Substances (RoHS), the Stockholm Convention, and the Toy Directive, as well as one threshold based on the European Council of Vinyl Manufacturers (ECVM) Industry Charter. Where a substance or substance group on this RSL is also on the list of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity under California Proposition 65 ("The Safe Drinking Water and Toxic Enforcement Act of 1986"), this is referenced. Additionally, the RSL includes a general restriction on organohalogens, a chemical class of concern in the Cradle to

Cradle Certified Products Program rather than existing regulation. Organohalogens as a chemical class are not currently restricted in any international chemical regulations.

A number of the regulatory restrictions were generalized to apply to a broader set of materials or products than the original regulation addresses. Where restrictions from separate regulations overlapped, they were summarized to reflect the most general among the overlapping restrictions, both in terms of the restrictions' scope and the group of chemicals covered (e.g., all lead compounds versus just lead sulfates). Where multiple regulatory thresholds exist for the same substance and general application, the most conservative threshold was used.

To reflect additional restrictions that are added to the source regulations over time, the RSL will be updated prior to the completion of Version 4 and annually thereafter. With each revision of this reference document, current certification holders will be granted a transition period for their certified products to become certified under the newly released version.

Note: This document contains only the proposed chemical restrictions that are a Basic level requirement of certification (i.e. they are an entry-level screen applicable to all certification levels). At the Bronze level and above, toxicological assessment of the chemicals present in the applicant product following the Cradle to Cradle Certified Material Health Assessment Methodology is required. Only substances that are assessed as compatible with human and environmental health through this process are allowed in products at the Gold and Platinum level.

# 2. Definitions and Scope of Restricted Substances Lists

**Core List for All Materials in All Products-** The restrictions on the core list apply to all homogeneous materials subject to review in a product seeking certification.

**Biological Nutrient Materials-** The restrictions on this list apply to BN materials subject to review in any product. For the purpose of this list, BN materials are those that fall under one or more of the following categories: (1) Materials released directly to biosphere as part of their <u>intended</u> use or end-of-use (liquid formulated products, aerosols, materials designed for composting or other biodegradation pathways, etc.), (2) Materials for which partial or complete release to environment is <u>unavoidable</u> as a part of use or end-of-use of the product (paint; materials designed to abrade: brake pads, shoe soles, sliders; etc.), (3) Biological materials (wood, agricultural products, etc.) or biologically-derived materials that are commonly regarded as compostable/biodegradable (i.e. paper, cellulose, etc.).

**Children's Products-** The restrictions on this list apply to all homogeneous materials subject to review in a children's product. A children's product is defined as any product that is marketed towards or intended *specifically* for use by infants or children.

**Formulated Consumer Products-** The restrictions on this list apply to any homogeneous material subject to review in a formulated consumer product. Formulated consumer products are defined as any chemical mixture (paint, detergent, nail polish, etc.) intended for supply to the general public and/or intended for diffusive applications such as in surface cleaning and cleaning of fabrics.

**Textile Materials-** The restrictions on this list apply to textile materials subject to review in any product. A textile is defined as a material that is composed of natural or synthetic fibers and is produced by weaving, knitting, tufting, or felting. This includes face fibers in carpet, upholstery, as well as apparel textiles.

**Footwear, Apparel & Jewelry Products-** The restrictions on this list apply to any homogeneous material subject to review in jewelry, apparel, footwear, clothing, or related accessories. They also apply to any textile material which, under normal or reasonably foreseeable conditions of use, comes into contact with human skin to an extent similar to clothing. Apparel and jewelry are defined as a product that clothes or adorns any part of the human body.

#### 3. Legend

	Symbol or	
Restriction Source	Indicator	Notes
REACH Annex XVII	REACH [number (8, 62b, etc.)]	Regulation (EC) No 1907/2006, Numbers correspond to entry in Annex XVII
REACH Annex XIV – Authorization list	REACH Auth	Regulation (EC) No 1907/2006
Restriction of Hazardous Substances	RoHS	Directives 2002/95/EC, 2011/65/EU, 2015/863/EU
Persistent Organic Pollutants Banned by Stockholm Convention and/or EU Commission	POPs	EU Commission Regulations No 850/2004, No 757/2010, No 519/2012, No 2015/2030, No 2016/293
ECVM Industry Charter for the production of VCM and PVC	ECVM	Industry guidelines. http://www.pvc.org/en/p/ecvm- chapter
EU Toy Safety Directive 2009/48/EC	9/48/EC	
California's Proposition 65 October 2017	Prop 65	Chemical or chemical group listed on the list of <i>Chemicals Known to the State</i> to Cause Cancer or Reproductive Toxicity

Max. allowable concentration (ppm)	Entry	Interpretation
Non-use (when written in the 'max. allowable concentration' column)	Non-use	Shall not be used as intentional input, treatment, or as part of process chemicals. Restricted to 1,000 ppm if present as a contaminant

## 4. Core Restricted Substances List for All Materials in All Products

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Crocidolite		12001-28-4	Non-use		REACH 6a, Prop 65
		Amosite		12172-73-5	Non-use		REACH 6b, Prop 65
		Anthophyllite		77536-67-5	Non-use		REACH 6c, Prop 65
	Asbestos	Actinolite		77536-66-4	Non-use		REACH 6d, Prop 65
		Tremolite		77536-68-6	Non-use		REACH 6e, Prop 65
		Chyrostile		12001-29-5, 132207-32-0	Non-use		REACH 6f, Prop 65
Inorganics		Arsenic and its compounds	As	several	1,000*	*1 ppm after extraction in footwear, clothing or related accessories, and textiles which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing	REACH 19, Auth, Prop 65
	Metals & Metalloids	Cadmium and its compounds	Cd	several	100*	*1 ppm after extraction in footwear, clothing or related accessories, and textiles which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing	REACH 23, RoHS, Prop 65
		Chromium VI and its compounds	Cr VI	several	1,000*	*1 ppm after extraction in footwear, clothing or related accessories, and textiles which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing; 2 ppm in cement (dry weight); 3 ppm in leather (dry weight); 100 ppm for BN materials; 1,000 ppm for all other materials	REACH 47, Auth, RoHS, Prop 65
		Mercury and its compounds	Hg	several	1,000		REACH 18, RoHS, Prop 65
		Lead and its compounds	Pb	several	1,000*	* Shall not be used in paint.  1 ppm after extraction in footwear, clothing or related accessories, and textiles which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing  Restriction threshold is 0.35% in steel, 0.4% in aluminum, and 4% in copper alloys, 1,000 ppm in all other non-BN materials.	REACH 16, 17, 63, Auth, RoHS, Prop 65
		Phenylmercury acetate	PMA	62-38-4	100		REACH 62a
		Phenylmercury propionate		103-27-5	100		REACH 62b
	Organometals	Phenylmercury 2- ethylhexanoate		13302-00-6	100		REACH 62c
		Phenylmercury octanoate		13864-38-5	100		REACH 62d
		Phenylmercury neodecanoate		26545-49-3	100		REACH 62e

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Tributyl tin	ТВТ	several	1,000		REACH 20, Prop 65
Inorganics		Triphenyl tin	TPT	several	1,000		REACH 20, Prop 65
rgai	Organometals	Dibutyl tin	DBT	several	1,000		REACH 20
Ino		Dioctyl tin compounds	DOT	several	1,000		REACH 20
		Dibutyltin hydrogen borate		75113-37-0	1,000		REACH 21
Organohalogens		Total organohalogens (including PVC and other halogenated polymers)			Homogeneous materials in the finished product must not contain organohalogen substances in exceedance of 1 % by weight as measured by the cumulative mass of all carbon bonded chlorine, bromine, fluorine, or iodine.	Exemptions a) Homogeneous materials that are present at less than 1 % of the finished product by weight; OR b) Homogeneous materials that are contained in a part that is less than 1 % of the finished product by weight; OR c) The use of a halogenated organic substance in the material is required to meet regulatory requirements (e.g., fire standards). To claim this exemption, there cannot be any alternative ways of meeting the regulatory requirement while using this type of homogeneous material (i.e., no comparable materials that meet the regulatory requirements exist on the market and no alternative product design solutions exist that would make use of the material or halogenated substance unnecessary) and the applicant must demonstrate ongoing research into alternative ways of complying with the regulation without the use of the halogenated organic substance.  Exemptions a) and b) may only be claimed for homogeneous materials totaling no more than 5 % by weight of the finished product.	Cradle to Cradle Certified Policy
Orga		Polybrominated diphenyl ethers	PBDEs	several	10		REACH 45, 67, RoHS, POPs, Prop 65 (only DE- 71)
		Polybrominated biphenyls	PBBs	several	10*	*Shall not be used in textile articles, such as garments, undergarments and linen, intended to come into contact with the skin. Restriction threshold is 0.1% (1,000 ppm) for electronic products or recycled content materials.	REACH 8, POPs, ROHS, Prop 65
	Halogenated Flame Retardants	Hexabromocyclododecane	HBCDD	3194-55-6, 25637- 99-4, 134237-50-6, 134237-51-7, 134237-52-8	100		REACH Auth, POPs
		Pentachlorobenzene	PeCB	608-93-5	Non-use		POPs
		Tris(2,3-dibromopropyl) phosphate	TDPP, Tris	126-72-7	1,000*	*Shall not be used in textile articles, such as garments, undergarments and linen, intended to come into contact with the skin.	REACH 4, Prop 65
		Tris(2-chloroethylphosphate)	TCEP	115-96-8	1,000*	*5 ppm for Children's products.	REACH Auth, 9/48/EC, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Monomethyl- tetrachlorodiphenyl methane	Ugilec 141	111483-93-3	10		REACH 24, POPs
	Halogenated Diphenyl	Monomethyl-dichloro-diphenyl methane	Ugilec 121, 21	76253-60-6	10		REACH 26, POPs
	Methanes	Monomethyl-dibromo diphenyl methane bromobenzylbromotoluene, mixture of isomers	DBBT	99688-47-8	10		REACH 25, POPs
	Brominated Compounds	1-Bromopropane		106-94-5	1,000		REACH Auth, Prop 65
		Polychlorinated terphenyls	PCTs	61788-33-8 and others	50		REACH 1
		Polychlorinated biphenyls	PCBs	several	50		POPs, Prop 65
SI		Polychlorinated naphthalenes		several	Non-use	Polychlorinated naphthalenes means chemical compounds based on the naphthalene ring system, where one or more hydrogen atoms have been replaced by chlorine atoms	POPs
oger		Hexachlorobutadiene	HCBD	87-68-3	Non-use		POPs, Prop 65
Organohalogens		Hexachlorooethane (perchloroethane)	PCE	67-72-1	1,000		REACH 41, Prop 65
Orga	Chlorinated Compounds	Pentachlor <b>o</b> phenol and its salts and esters	PCP	87-86-5 and others	1,000		REACH 22, Prop 65
		Trichlorobenzene	тсв	120-82-1	1,000		REACH 49
		2,2'-Dichloro-4,4'- methylenedianiline	MOCA	101-14-4	1,000		REACH Auth, Prop 65
		1,2-Dichloroethane	EDC	107-06-2	1,000		REACH Auth, Prop 65
		Chloroethylene (Vinyl chloride monomer)	VCM	75-01-4	5*	*5 ppm for general, 1 ppm for food and medical applications; may not be used as propellant	REACH 2, ECVM, Prop 65
		Short-chain chlorinated parrafins	SCCPs	several	1,500		POPs, Prop 65
		Perfluorooctane sulfonic acid and its derivatives	PFOS, C-8	1763-23-1	10*	*1 ug/m² for textiles and other coated materials	POPs
	Fluorinated Compounds	Perfluorooctane sulfonates	PFOS, C-8 salts	several	10*	*1 ug/m² for textiles and other coated materials	POPs
		Perfluorooctanoic acid and its salts*	PFOA	Several	25*	This includes related substances as defined in Entry 68 of REACH Annex XVII. 25 ppm threshold applies to PFOA and its salts. The sum of PFOA related substances may not exceed 1,000 ppm.	REACH 68, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Benzo[a]pyrene	ВаР	50-32-8	1*		REACH 50a, Prop 65
ıtic AH)		Benzo[e]pyrene	BeP	192-97-2	1*	Applies to rubber or plastic materials that come into direct, prolonged, or short-term repetitive contact with the human skin	REACH 50b
oma s (P,		Benzo[a]anthracene	BaA	56-55-3	1*	or the oral cavity, under normal or reasonably foreseeable conditions of use (i.e sport equipment, household utensils,	REACH 50c, Prop 65
Polycyclic Aromatic Hydrocarbons (PAH)		Chrysene	CHR	218-01-9	1*	trolleys, walking frames, tools for domestic use, apparel, jewelry,	REACH 50d, Prop 65
		Benzo[b]fluoranthene	BbFA	205-99-2	1*	etc.).	REACH 50e, Prop 65
		Benzo[j]fluoranthene	BjFA	205-82-3	1*	*Concentration threshold is 0.5 ppm for Children's products (see Children's products list). For all relevant materials, the sum of all	REACH 50f, Prop 65
ъ т		Benzo[k]fluoranthene	BkFA	207-08-9	1*	PAHs may not exceed 10 ppm.	REACH 50g, Prop 65
		Dibenzo[a,h]anthracene	DBAhA	53-70-3	1*		REACH 50h, Prop 65
		Bis (2-ethylhexyl) phthalate	DEHP	117-81-7	1,000		REACH 51a, Auth, RoHS, Prop 65
		Dibutyl phthalate	DBP	84-74-2	1,000		REACH 51a, Auth, RoHS, Prop 65
		Benzyl butyl phthalate	ВВР	85-68-7	1,000		REACH 51a, Auth, RoHS, Prop 65
		Di-isononyl phthalate	DINP	28553-12-0, 68515- 48-0	1,000		REACH 52a, Prop 65
		Di-isodecyl phthalate	DIDP	26761-40-0, 68515- 49-1	1,000		REACH 52b, Prop 65
S		Di-n-octyl phthalate	DNOP	117-84-0	1,000		REACH 52c
Aromatics	Phthalates	Di-n-pentyl phthalate	DPP	131-18-0	1,000		REACH Auth
Aror		Diisopentylphthalate	DIPP	605-50-5	1,000		REACH Auth
		Diisobutyl phthalate	DIBP	84-69-5	1,000		REACH Auth, RoHS
		1,2-Benzenedicarboxylic acid, di- C6-8-branched alkyl esters, C7 rich		71888-89-6	1,000		REACH Auth
		1,2-Benzenedicarboxylic acid, di- C7-11-branched and linear alkyl esters		68515-42-4	1,000		REACH Auth
		1,2-Benzenedicarboxylic acid, dipentylester, branched and linear		84777-06-0	1,000		REACH Auth
		Bis(2-methoxyethyl) phthalate		117-82-8	1,000		REACH Auth
		N-pentyl-isopentylphthalate		776297-69-9	1,000		REACH Auth

			Acronym		Max. allowable		
	Sub-Grouping	Chemical(s) Name	or Trade Name	CAS Number(s)	concentration (ppm)	Restriction Notes	Restriction Source
	Benzene	Benzene	Name	71-43-2	1,000*	*5 ppm for children's products, footwear, clothing or related accessories, and textiles which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing; 1,000 ppm for all other product types	REACH 5, 72 Prop 65
		2-Naphthylamine and its salts		91-59-8 and others	1,000		REACH 12, Prop 65
	Aromatic Amine	1,1'-biphenyl-4,4'-diamine and its salts	Benzidine	several	1,000		REACH 13, Prop 65
	(Anilines)	4-Aminobiphenyl xenylamine and its salts		92-67-1 and others	1,000		REACH 15, Prop 65
		4,4'-Diaminodiphenylmethane	MDA	101-77-9	1,000		REACH Auth, Prop 65
S		Nonylphenols	NP	several	1,000		REACH 46a
Aromatics	Phenol Derivatives	Nonylphenol ethoxylates	NPE	several	1,000		REACH 46b
∀		4-(1,1,3,3-Tetramethyl)phenol, ethoxylated		several*	1,000	*Covers well-defined substances, those of unknown or variable composition, complex reaction products, biological (UVCB) substances, polymers and homologues	REACH Auth
		4-Nonylphenol, branched and linear, ethoxylated		several*	1,000	*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	REACH Auth
		5-tert-butyl-2,4,6-trinitro-m-xylene	Musk xylene	81-15-2	1,000		REACH Auth
	Nitroaromatics	4-nitrobiphenyl		92-93-3	1,000		REACH 14, Prop 65
		2,4-Dinitrotoluene	DNT	121-14-2	1,000		REACH Auth, Prop 65
Tar		Anthracene oil		90640-80-5	1,000		REACH Auth
Te		Pitch, coal tar, high temp.		65996-93-2	1,000		REACH Auth
U V	)	Formaldehyde, oligomeric reaction products with aniline		25214-70-4	1,000		REACH Auth
Organic		Bis(2-methoxyethyl) ether	Diglyme	111-96-6	1,000		REACH Auth
		Dimethylfumarate	DMF	624-49-7	0.1		REACH 61

## 5. Additional Restrictions for **Biological Nutrient Materials**

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)		Restriction Notes	Restriction Source
		Aluminum and its compounds	AI	several	70,000*		*1,460 ppm in liquids; 5,625 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Antimony and its compounds	Sb	several	560*		*11.3 ppm in liquids; 45 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Arsenic and its compounds	As	several	47*		*0.9 ppm in liquids; 3.8 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Barium and its compounds	Ва	several	18,750*		*375 ppm in liquids; 1,500 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Boron and its compounds	В	several	15,000*		*300 ppm in liquids; 1,200 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Cadmium and its compounds	Cd	several	17*	Values have are	*0.3 ppm in liquids; 1.3 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Chromium, trivalent and its compounds	Cr III	several	460*	Values here are metal migration limits rather than	*9.4 ppm in liquids; 37.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
	Metals, Metalloids, & Selenium	Chromium, hexavalent, and its compounds	Cr VI	several	0.2*	bulk concentration limits. If a limit is	*0.005 ppm in liquids; 0.02 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Cobalt and its compounds	Со	several	130*	exceeded by a homogeneous	*2.6 ppm in liquids; 10.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
anics		Copper and its compounds	Cu	several	7,700*	material in bulk, compliance may alternatively be	*156 ppm in liquids; 622.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
Inorganics		Lead and its compounds	Pb	several	160*	demonstrated by showing that the amount of leachable metal per bulk material (mg/kg) is below	*3.4 ppm in liquids; 13.5 ppm in brittle, powder-like or pliable products/materials (including paint); Shall not be used in paint.	17, 9/48/EC, Prop 65
		Manganese and its compounds	Mn	several	15,000*		*300 ppm in liquids; 1,200 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Mercury and its compounds	Hg	several	94*	the relevant specified limit as per DIN EN 71-3:	*1.9 ppm in liquids; 7.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Nickel and its compounds	Ni	several	930*	2013.	*18.8 ppm in liquids; 75 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Selenium and its compounds	Se	several	460*		*9.4 ppm in liquids; 37.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Strontium and its compounds	Sr	several	56,000*		*1,125 ppm in liquids; 4,500 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Tin and its compounds	Sn	several	180,000*		*3,750 ppm in liquids; 15,000 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Organostannic compounds	Organic Sn	several	12*		*shall not be used as biocide; 0.2 ppm in liquids; 0.9 ppm in brittle, powder-like or pliable products/materials	REACH 20, 9/48/EC
		Zinc and its compounds	Zn	several	46,000*		*938 ppm in liquids; 3,750 ppm in brittle, powder-like or pliable products/materials	9/48/EC

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Creosote; wash oil		8001-58-9	1,000*		REACH 31a
		Creosote oil; wash oil		61789-28-4	1,000*		REACH 31b
		Distillates (coal tar), naphthalene oils; naphthalene oil		84650-04-4	1,000*		REACH 31c
Tar Products		Creosote oil, acenaphthene fraction; wash oil		90640-84-9	1,000*	*shall not be used as intentional input or treatment for wood	REACH 31d
		Distillates (coal tar), upper; heavy anthracene oil		65996-91-0	1,000*	materials (in any amount), 1,000 ppm threshold applies to wood materials where prior application is unknown (i.e. recycled wood etc.)	REACH 31e
		Tar acids, coal, crude; crude phenols		65996-85-2	1,000*		REACH 31g
		Creosote, wood		8021-39-4	1,000*		REACH 31h
		Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline		122384-78-5	1,000*		REACH 31i
		Endosulfan Isomers	Many	several	*		POPs
		Aldrin	HHDN	309-00-2	*		POPs, Prop 65
		Alpha-hexachlorocyclohexane	alpha-HCH	319-84-6	*		POPs, Prop 65
		Beta-hexachlorocyclohexane	beta-HCH	319-85-7	*		POPs, Prop 65
		Chlordane	Many	57-74-9	*		POPs, Prop 65
es		Chlordecone	Kepone	143-50-0	*	*These substances are banned as intentional inputs for all BN	POPs, Prop 65
Pesticides		Dieldrin	HEOD	60-57-1	*	materials in certified products, but must only be tested for in materials derived from agricultural products (i.e. plant or animal	POPs, Prop 65
Pest		Endosulfan	Many	115-29-7, 959-98-8, 33213-65- 9	*	tissues/fibers) and be shown to be present below 1,000 ppm in such cases	POPs
		Endosulfan sulfate		1031-07-8	*		POPs
		Endrin	Many	72-20-8	*		POPs, Prop 65
		Heptachlor	Many	76-44-8	*		POPs, Prop 65
		Hexachlorobenzene	НСВ	118-74-1	*		POPs, Prop 65
		Lindane	γ-НССН	58-89-9	*		POPs
		Mirex		2385-85-5	*		POPs, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
Pesticides		P,P'- dichlorodiphenyltrichloroethane	DDT	50-29-3	*	*These substances are banned as intentional inputs for all BN materials in certified products, but must only be tested for in materials derived from agricultural products (i.e. plant or animal	POPs, Prop 65
Pest		Toxaphene	Many	92-93-3	*	tissues/fibers) and be shown to be present below 1,000 ppm in such cases	POPs, Prop 65
	Organic Substances	Acrylamide		79-06-1	1,000		REACH 60, Prop 65
		Bisphenol A	ВРА	80-05-7	200		REACH 66, Prop 65
Other		Bisphenol S	BPS	80-09-1	200	BPS added to restriction here based on the EU Committee for Risk Assessment (RAC) conclusion that it could be a likely substitute with comparable risk profile: http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:32016R2235	REACH 66
	Inorganic Salts	Inorganic ammonium salts		several	3*	*Shall not be used in cellulose insulation mixtures or cellulose insulation articles unless the emission of ammonia from those mixtures or articles results in a concentration of less than 3 ppm by volume (see ECHA for test details)	REACH 65

## 6. Additional Restrictions for **Children's Products**

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
CMRs	Category 1 & 2	Substances classified as carcinogenic, mutagenic or toxic for reproduction of category 1A, 1B or 2 under Regulation (EC) No 1272/2008 (CLP)	CMRs	Several	1,000*	* Limit is 200 ppm for gaseous preparations, where specific limits are noted in CLP Annex VI, those take precedence. Exceptions & exemptions specified in 2009/48/EC apply (i.e. for substances and mixtures that are inaccessible to children in any form, including inhalation or are listed as permitted in Appendix A of 2009/48/EC, such as nickel).  An xlsx version of CLP Annex VI can be downloaded from ECHA here: https://echa.europa.eu/information-on-chemicals/annex-vito-clp.  A single, fully searchable list is available through Pharos (https://www.pharosproject.net/hazard/list/show/324).	9/48/EC, Prop 65
		Benzo[a]pyrene	ВаР	50-32-8	0.5*		REACH 50a, Prop 65
70		Benzo[e]pyrene	BeP	192-97-2	0.5*		REACH 50b
natic		Benzo[a]anthracene	BaA	56-55-3	0.5*		REACH 50c, Prop 65
ron ns (F		Chrysene	CHR	218-01-9	0.5*	Applies to rubber or plastic materials that come into direct as well as prolonged or short-term repetitive contact with the human skin	REACH 50d, Prop 65
:lic A		Benzo[b]fluoranthene	BbFA	205-99-2	0.5*	or the oral cavity.  * the sum of all PAHs may not exceed 10 ppm.	REACH 50e, Prop 65
Polycyclic Aromatic Hydrocarbons (PAHs)		Benzo[j]fluoranthene	BjFA	205-82-3	0.5*		REACH 50f, Prop 65
P P		Benzo[k]fluoranthene	BkFA	207-08-9	0.5*		REACH 50g, Prop 65
		Dibenzo[a,h]anthracene	DBAhA	53-70-3	0.5*		REACH 50h, Prop 65
		Toluene		108-88-3	1,000		REACH 48, Prop 65
		2-(2-methoxyethoxy)ethanol	DEGME	111-77-3	1,000		REACH 54
		Cyclohexane		110-82-7	1,000		REACH 57
Other	Organic	Acrylamide		79-06-1	1,000		REACH 60, Prop 65
ō	Substances	Bisphenol A	BPA	80-05-7	200		REACH 66, Prop 65
		Bisphenol S	BPS	80-09-1	200	BPS added to restriction here based on the EU Committee for Risk Assessment (RAC) conclusion that it could be a likely substitute with comparable risk profile: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R2235	REACH 66

CORE RSL	I BN	MATERIALS

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)		Restriction Notes	Restriction Source
		Aluminum and its compounds	Al	several	70,000*		*1,460 ppm in liquids; 5,625 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Antimony and its compounds	Sb	several	560*		*11.3 ppm in liquids; 45 ppm in brittle, powder- like or pliable products/materials	9/48/EC, Prop 65
		Arsenic and its compounds	As	several	47*		*0.9 ppm in liquids; 3.8 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Barium and its compounds	Ва	several	18,750*		*375 ppm in liquids; 1,500 ppm in brittle, powder- like or pliable products/materials	9/48/EC
		Boron and its compounds	В	several	15,000*		*300 ppm in liquids; 1,200 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Cadmium and its compounds	Cd	several	17*	Values here are	*0.3 ppm in liquids; 1.3 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Chromium, trivalent and its compounds	Cr III	several	460*	metal migration limits rather than	*9.4 ppm in liquids; 37.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
	Metals, Metalloids, & Selenium	Chromium, hexavalent, and its compounds	Cr VI	several	0.2*	bulk concentration limits. If a limit is	*0.005 ppm in liquids; 0.02 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Cobalt and its compounds	Со	several	130*	exceeded by a homogeneous	*2.6 ppm in liquids; 10.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
Inorganics		Copper and its compounds	Cu	several	7,700*	material in bulk, compliance may alternatively be	*156 ppm in liquids; 622.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
Inorg		Lead and its compounds	Pb	several	160*	demonstrated by showing that the amount of	*3.4 ppm in liquids; 13.5 ppm in brittle, powder- like or pliable products/materials (including paint); Shall not be used in paint.	17, 9/48/EC, Prop 65
		Manganese and its compounds	Mn	several	15,000*	leachable metal per bulk material (mg/kg) is below the relevant specified limit as	*300 ppm in liquids; 1,200 ppm in brittle, powder- like or pliable products/materials	9/48/EC
		Mercury and its compounds	Hg	several	94*		*1.9 ppm in liquids; 7.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC, Prop 65
		Nickel and its compounds	Ni	several	930*	per DIN EN 71-3: 2013.	*18.8 ppm in liquids; 75 ppm in brittle, powder- like or pliable products/materials	9/48/EC, Prop 65
		Selenium and its compounds	Se	several	460*		*9.4 ppm in liquids; 37.5 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Strontium and its compounds	Sr	several	56,000*		*1,125 ppm in liquids; 4,500 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Tin and its compounds	Sn	several	180,000*		*3,750 ppm in liquids; 15,000 ppm in brittle, powder-like or pliable products/materials	9/48/EC
		Organostannic compounds	Organic Sn	several	12*		*shall not be used as biocide; 0.2 ppm in liquids; 0.9 ppm in brittle, powder-like or pliable products/materials	REACH 20, 9/48/EC
		Zinc and its compounds	Zn	several	46,000*		*938 ppm in liquids; 3,750 ppm in brittle, powder-like or pliable products/materials	9/48/EC

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		1-( <i>p</i> -Methoxyphenyl)-1-penten- 3-one		104-27-8	Non-use		9/48/EC
		2-Pentylidene-cyclohexanone		25677-40-1	Non-use		9/48/EC
		2,4-Dihydroxy-3- methylbenzaldehyde		6248-20-0	Non-use		9/48/EC
		3,7-Dimethyl-2-octen-1-ol	6,7- Dihydrogera niol	40607-48-5	Non-use		9/48/EC
		3.6,10-Trimethyl-3.5,9- undecatrien-2-one		1117-41-5	Non-use		9/48/EC
		4- <i>tert</i> -Butylphenol		98-54-4	Non-use		9/48/EC
		4-( <i>p</i> -Methoxyphenyl)-3-butene- 2-one		943-88-4	Non-use		9/48/EC
10		4-Ethoxyphenol	4-EP	622-62-8	Non-use		9/48/EC
nces		4-Methoxyphenol	4-MP	150-76-5	Non-use		9/48/EC
gra		4-Phenyl-3-buten-2-one		122-57-6	Non-use		9/48/EC
Allergenic Fragrances		4,6-Dimethyl-8-tert- butylcoumarin		17874-34-9	Non-use		9/48/EC
rgel		5-Methyl-2,3-hexanedione		13706-86-0	Non-use		9/48/EC
Alle		6-lsopropyl-2- decahydronaphthalenol		34131-99-2	Non-use		9/48/EC
		6-Methylcoumarin		92-48-8	Non-use		9/48/EC
		6,10-Dimethyl-3.5,9- undecatrien-2-one		0141-10-6	Non-use		9/48/EC
		7-Ethoxy-4-methylcoumarin		87-05-8	Non-use		9/48/EC
		7-Methoxycoumarin	Herniarin	531-59-9	Non-use		9/48/EC
		7-Methylcoumarin		2445-83-2	Non-use		9/48/EC
		7,11-Dimethyl-4.6,10-dodecatrien-3-one		26651-96-7	Non-use		9/48/EC
		Alanroot oil (Inula helenium)		97676-35-2	Non-use		9/48/EC
		Allylisothiocyanate		57-06-7	Non-use		9/48/EC
		Amyl cinnamal		122-40-7	Non-use		9/48/EC

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		Amylcinnamyl alcohol		101-85-9	Non-use		9/48/EC
		Benzyl alcohol		100-51-6	Non-use		9/48/EC
		Benzyl cyanide	BnCn	140-29-4	Non-use		9/48/EC
		Benzyl salicylate		118-58-1	Non-use		9/48/EC
		Chenopodium oil		8006-99-3	Non-use		9/48/EC
		Cinnamal		104-55-2	Non-use		9/48/EC
		Cinnamyl alcohol		104-54-1	Non-use		9/48/EC
		Citral		5392-40-5	Non-use		9/48/EC
		Costus root oil (Saussurea lappa Clarke)		8023-88-9	Non-use		9/48/EC
		Coumarin		91-64-5	Non-use		9/48/EC
Allergenic Fragrances		Cyclamen alcohol		4756-19-8	Non-use		9/48/EC
agra		Diethyl maleate		0141-05-09	Non-use		9/48/EC
c Fra		Dihydrocoumarin		119-84-6	Non-use		9/48/EC
geni		Dimethyl citraconate		617-54-9	Non-use		9/48/EC
ller <sub>2</sub>		Diphenylamine		122-39-4	Non-use		9/48/EC
4		Ethyl acrylate		140-88-5	Non-use		9/48/EC, Prop 65
		Eugenol		97-53-0	Non-use		9/48/EC
		Fig leaf, fresh and preparations		68916-52-9	Non-use		9/48/EC
		Hexahydrocoumarin		700-82-3	Non-use		9/48/EC
		Hydroabietyl alcohol		13393-93-6	Non-use		9/48/EC
		Hydroxy-citronellal		107-75-5	Non-use		9/48/EC
		Hydroxy- methylpentylcyclohexenecarbox aldehyde		31906-04-04	Non-use		9/48/EC
		Isoeugenol		97-54-1	Non-use		9/48/EC
		Methyl trans-2-butenoate		623-43-8	Non-use		9/48/EC

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		4- <i>tert</i> -Butyl-3-methoxy-2,6-dinitrotoluene	Musk ambrette	83-66-9	Non-use		9/48/EC
10		Oakmoss extracts		90028-68-5	Non-use		9/48/EC
Fragrances		Peru balsam, crude (Exudation of Myroxylon pereirae (Royle) Klotzsch)		8007-00-9	Non-use		9/48/EC
		trans-2-Heptenal		18829-55-5	Non-use		9/48/EC
gen		trans-2-Hexenal diethyl acetal		67746-30-9	Non-use		9/48/EC
Allergenic		trans-2-Hexenal dimethyl acetal		18318-83-7	Non-use		9/48/EC
1		Treemoss extracts		90028-67-4	Non-use		9/48/EC
		Verbena oil (Lippia citriodora Kunth)		8024-12-2	Non-use		9/48/EC

## 7. Additional Restrictions for Formulated Consumer Products

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
CMRs	Category 1 & 2	Substances classified as carcinogenic, mutagenic or toxic for reproduction category 1 or 2 under Regulation (EC) No 1272/2008 (CLP) and listed in Appendices 1-6 of REACH		several	1,000*	*Limit is 200 ppm for gaseous preparations, where specific limits are noted for a substance in Appendices 1-6 of REACH, those take precedence.  The full list of chemicals with CASRNs can be found in Appendices 1-6 of REACH: <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2006R1907:20130701:EN:PDF#page=254">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2006R1907:20130701:EN:PDF#page=254</a> .  A single, fully searchable list is available through Pharos ( <a href="http://www.pharosproject.net/hazard/list/show/306">http://www.pharosproject.net/hazard/list/show/306</a> ).  Note: REACH Appendices 1-6 contain a subset of the substances classified as CMRs under CLP, but all CLP CMRs will be added to the REACH Appendices eventually.	REACH 28-30, Prop 65
		Chloroform		67-66-3	1,000		REACH 32, Prop 65
SL		1,1,2-Trichloroethane	1,1,3=TCA	79-00-5	1,000		REACH 34, Prop 65
Organohalogens		1,1,2,2-Tetrachloroethane	R-130	79-34-5	1,000		REACH 35, Prop 65
ohal		1,1,1,2-Tetrachloroethane	R-130a	630-20-6	1,000		REACH 36, Prop 65
ganı		Pentachloroethane		76-01-7	1,000		REACH 37
ō		1,1-Dichloroethene	DCE	75-35-4	1,000		REACH 38, Prop 65
		Dichloromethane	DCM	75-09-2	1,000		REACH 59, Prop 65
ates		4,4'-Diphenylmethane diisocyanate	MDI	101-68-8	1,000		REACH 56a
Diisocyanates		2,4'- Diphenylmethane diisocyanate	2,4'-MDI	5873-54-1	1,000		REACH 56b
Diisc		2,2'- Diphenylmethane diisocyanate	2,2'-MDI	219-799-4	1,000		REACH 56c
		Acrylamide		79-06-1	1,000		REACH 60, Prop 65
		Toluene		108-88-3	1,000		REACH 48, Prop 65
Other	Organic	2-(2-methoxyethoxy)ethanol	DEGME	111-77-3	1,000		REACH 54
0	Substances	2-(2-butoxyethoxy)ethanol	DEGBE	112-34-5	30,000	Restricted as a constituent of spray paints or spray cleaners in aerosol dispensers	REACH 55
		Cyclohexane		110-82-7	1,000		REACH 57

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		N-methyl-2-pyrrolidone; 1- methyl-2-pyrrolidone	NMP	872-50-4	3,000		REACH 71, Prop 65
Other	Organic	Octamethylcyclotetrasiloxane	D4	556-67-2	1,000	Restricted as a constituent of cosmetic products that under normal conditions of use, are washed off with water after application	REACH 70
Oth	Substances	Decamethylcyclopentasiloxane	D5	541-02-6	1,000	Restricted as a constituent of cosmetic products that under normal conditions of use, are washed off with water after application	REACH 70
		Methanol		67-56-1	6,000	Restricted as a constituent of windscreen washing or defrosting fluids	REACH 69, Prop 65

#### 8. Additional Restrictions for **Textile Materials**

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Max. allowable concentration (ppm)	Restriction Notes	Restriction Source
		2-naphthylamine		91-59-8	30		REACH 43, Prop 65
		2,4,5-trimethylaniline		137-17-7	30		REACH 43, Prop 65
		3,3'-dichlorobenzidine		91-94-1	30		REACH 43, Prop 65
		o-dianisidine		119-90-4	30		REACH 43, Prop 65
		3,3'-dimethylbenzidine		119-93-7	30		REACH 43, Prop 65
		4-Aminoazobenzene		60-09-3	30		REACH 43, Prop 65
		4-chloro- <i>o</i> -toluidine	4-COT	95-69-2	30		REACH 43, Prop 65
		4-chloroaniline		106-47-8	30		REACH 43, Prop 65
		4-methoxy- <i>m</i> -phenylenediamine		615-05-4	30	This restriction applies to the concentration of aromatic amines in the finished product. While not intentionally added, these	REACH 43, Prop 65
	Aromatic Amines	4-methyl- <i>m</i> -phenylenediamine		95-80-7	30	aromatic amines can be present in textile materials as a breakdown product formed through reductive cleavage from certain azocolourants. Compliance with this restriction is most effectively evaluated by determining whether any azocolourants capable of producing any of these aromatic amines through reductive cleavage were used in the dying of a fabric.  Alternatively, the analytical tests methods set forth in Appendix 10 of REACH (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2006R190 7:20130701:EN:PDF#page=517) may be used to verify compliance with this set of restrictions.	REACH 43, Prop 65
		4,4'-methylene-bis-(2-chloro- aniline	MOCA, MBOCA	101-14-4	30		REACH 43, Prop 65
	(Anilines)	4,4'-methylenedi-o-toluidine		838-88-0	30		REACH 43, Prop 65
		4,4'-diaminodiphenylmethane	MDA	101-77-9	30		REACH 43, Prop 65
		4,4'-oxydianiline		101-80-4	30		REACH 43, Prop 65
		4,4'-thiodianiline	TDA	139-65-1	30		REACH 43, Prop 65
		5-nitro-o-toluidine		99-55-8	30		REACH 43
		6-methoxy- <i>m</i> -toluidine	<i>p</i> -Cresidine	120-71-8	30		REACH 43, Prop 65
		1,1'-biphenyl-4,4'-diamine and its salts	Benzidine	92-87-5	30		REACH 43, Prop 65
		4-aminobiphenyl xenylamine		92-67-1	30		REACH 43, Prop 65
		o-aminoazotoluene		97-56-3	30		REACH 43, Prop 65
		o-anisidine		90-04-0	30		REACH 43, Prop 65
		o-toluidine		95-53-4	30		REACH 43, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Maximum threshold (ppm)	Restriction Notes	Restriction Source
Aromatics	Azo Dye	Chromate(2-), [1-[(5-chloro-2-hydroxyphenyl) azo]-2-naphthalenolato(2-)][4-hydroxy-3-[(2-hydroxy-3,5-dinitrophenyl)azo]-7-[(4-methoxypheny l)amino]-2-naphthalenesulfonato(3-)]-, disodium		118685-33-9	1,000		REACH 43
	Phenol Derivatives	Nonylphenol ethoxylates		several	100		REACH 46a
Flame Retardant		Tris(aziridinyl)phosphinoxide		545-55-1	*	*Shall not be used in textile articles, such as garments, undergarments and linen, intended to come into contact with the skin	REACH 7
gens		Perfluorooctane sulfonic acid	PFOS, C-8	1763-23-1	*	*1 ug/m²	POPs
Organohalogens	Fluorinated Compounds	Perfluorooctane sulfonates	PFOS, C-8 salts	several	*	*1 ug/m²	POPs
Orga		Perfluorooctanesulfonyl flouride	PFOSF, C-8	307-35-7	*	*1 ug/m <sup>2</sup>	POPs

## 9. Additional Restrictions for **Footwear, Apparel & Jewelry Products**

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Maximum threshold (ppm)	Restriction Notes	Restriction Source
Inorganics	Metals & Metalloids	Nickel compounds	Ni	several	500*	This restriction applies to metallic materials intended to come into direct and prolonged contact with the skin, in particular jewelry and metallic parts of garments and apparel products such as rivet buttons, tighteners, rivets, zippers, and metal marks. It also applies to any other product containing metallic materials intended to come into direct and prolonged contact with the skin such as mobile phones and cases, glasses and sun-glasses, wristwatch cases, watch straps, tighteners, etc.  *Alternatively, compliance with this restriction for alloys containing more than 500 ppm nickel, may be demonstrated by having an accredited laboratory conduct leaching tests on the material in accordance with the standards adopted by the European Committee for Standardization. In this case, the test must show that nickel release rates are below 0.5 ug/cm2/week or below 0.2 ug/cm2/week for parts of products inserted into pierced ears and other pierced parts of the human body. As of the time of writing the applicable test methods are EN 1811 and if nickel-containing alloy is coated additionally EN 12472. EN 16128 is to be used for glasses. Any future applicable test methods that may be released by the European Committee for Standardization for nickel leaching tests are also to be used.	REACH 27, Prop 65
		Lead compounds	Pb	several	200	This threshold applies to Pb in jewelry or apparel applications (buttons, zippers, bracelets, etc.) instead of the 1,000 ppm threshold on the general Banned List	REACH 43, Prop 65
Polycyclic Aromatic Hydrocarbons (PAHs)		Benzo[a]anthracene	ВаА	56-55-3	1		REACH 72, Prop 65
Aro		Benzo[b]fluoranthene	BbFA	205-99-2	1		REACH 72, Prop 65
lic,		Benzo[a]pyrene	ВаР	50-32-8	1		REACH 72, Prop 65
/cyc		Benzo[e]pyrene	BeP	192-97-2	1		REACH 72
oly dra		Benzo[j]fluoranthene	BjFA	205-82-3	1		REACH 72, Prop 65
" Í		Benzo[k]fluoranthene	BkFA	207-08-9	1		REACH 72, Prop 65
		Chrysene	CHR	218-01-9	1		REACH 72, Prob 65
		Dibenzo[a,h]anthracene	DBAhA	53-70-3	1		REACH 72, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Maximum threshold (ppm)	Restriction Notes	Restriction Source
		1,4,5,8- tetraaminoanthraquinone	C.I. Disperse Blue 1	2475-45-8	50		REACH 72, Prop 65
		Benzenamine, 4,4'-(4- iminocyclohexa-2,5- dienylidenemethylene)dianiline hydrochloride	C.I. Basic Red 9	569-61-9	50		REACH 72, Prop 65
ursors		[4-[4,4'- bis(dimethylamino)benzhydrylid ene]cyclohexa-2,5-dien1- ylidene]dimethylammonium chloride	C.I. Basic Violet 3 with ≥ 0,1 % of Michler's ketone	548-62-9	50		REACH 72, Prop 65
rec		4-chloro-o-toluidinium chloride		3165-93-3	30		REACH 72
<u>-</u>		2-Naphthylammoniumacetate		553-00-4	30		REACH 72
Dyes and Dye Precursors		[4-[4,4'- bis(dimethylamino)benzhydrylid ene]cyclohexa-2,5-dien1- ylidene]dimethylammonium chloride	C.I. Basic Violet 3 with ≥ 0,1 % of Michler's ketone	548-62-9	50		REACH 72
		4-chloro-o-toluidinium chloride		3165-93-3	30		REACH 72
		2-Naphthylammoniumacetate		553-00-4	30		REACH 72
		4-methoxy-m-phenylene diammonium sulphate; 2,4- diaminoanisole sulphate		39156-41-7	30		REACH 72, Prop 65
		2,4,5-trimethylaniline hydrochloride		21436-97-5	30		REACH 72
		Quinoline		91-22-5	50		REACH 72
Phthalates		1,2-benzenedicarboxylic acid; diC 6-8-branched alkylesters, C 7- rich		71888-89-6	1,000*	Threshold applies individually or in combination with other phthalates on this RSL.	REACH 72
<u>al</u> a1		Bis(2-methoxyethyl) phthalate		117-82-8	1,000*		REACH 72
Ę		Diisopentylphthalate		605-50-5	1,000*		REACH 72
		Di-n-pentyl phthalate	DPP	131-18-0	1,000*		REACH 72
		Di-n-hexyl phthalate	DnHP	84-75-3	1,000*		REACH 72, Prop 65
		α,α,α,4-tetrachlorotoluene; p- chlorobenzotrichloride		5216-25-1	1		REACH 72, Prop 65
_		α,α,α-trichlorotoluene; benzotrichloride		98-07-7	1		REACH 72, Prop 65
Other	Organic	α-chlorotoluene; benzyl chloride		100-44-7	1		REACH 72, Prop 65
Ō	Substances	Formaldehyde		50-00-0	75		REACH 72, Prop 65
		N-methyl-2-pyrrolidone; 1- methyl-2-pyrrolidone	NMP	872-50-4	3,000		REACH 72, Prop 65
		N,N-dimethylacetamide	DMAC	127-19-5	3,000		REACH 72, Prop 65

	Sub-Grouping	Chemical(s) Name	Acronym or Trade Name	CAS Number(s)	Maximum threshold (ppm)	Restriction Notes	Restriction Source
Other	Organic Substances	N,N-dimethylformamide; dimethyl formamide	DMF	68-12-2	3,000		REACH 72, Prop 65