



## **List of Prohibited (black list) und Declarable substances (grey list) to ensure environmentally friendly and compliant products**

### **1) Introduction and Purpose:**

KEBA accepts its social responsibilities on a continuing and rigorous basis and is committed to environmental protection and to avoiding environmental damage. We recognize the importance of the efficient use of energy, the careful choice of material and processes, the product design to enable reusability and recycling, the careful use of resources and reducing waste material.

### **2 ) Contents of this lists:**

We consider it as self evident that all legal requirements for environmental protection must be fully respected.

The list of prohibited substances and declarable substances (black and grey list) is intended to ensure the development and production of environmentally friendly products and services in all areas of business.

This list shall reflect an overview about the relevant environmental European Regulations and Directives and the resulting prohibitions and restrictions of hazardous substances. Restrictions of the use of certain hazardous substances in the Electrical- and Electronical industries has to be taken for product development as well as for the procurement of materials, parts and externally produced components.

The KEBA list specifies substances and compounds which are not prohibited in the electrical and electronics industries but the use of which should be avoided or at least reduced as far as it is technically feasible.

“SVHC” – Substances of very high concern, which are published by ECHA <http://echa.europa.eu/web/guest/candidate-list-table/> on the REACH candidate list should be to declare, according to article 33 of the REACH Regulation (EC) No 1907/2006.

SVHC substances must be avoided in product development and have to be replaced with alternatives.

It is the legal responsibility of every product marketing company, that means also of our suppliers, to ensure compliance with all relevant prohibitions, restrictions and declarations. Additionally we expect that our suppliers have a system in place to ensure compliance with these prohibitions, restrictions and declarations.

**KEBA AG**  
**Prohibition and declaration List of dangerous substances (black list & Grey list)**  
27.06.2018 grai

field of application	Stoffbezeichnung	CAS-No	INFORMATION/ DECLARE (D); RESTRICTION (R); AUTHORISATION (A)	LEGAL requirements EU/other countries Regulations REG, Directives DIR	Threshold in % by weight/ in ppm Annex XIV*	SVHC/ properties	Application - Generic examples typically used
additive/agent/precursors	Acrylamide	79-06-01	D	Candidate list	1000 ppm	carcinogenic, mutagene	Acrylamide is used in the manufacture of dyes and polyacrylamide
synthetic/plastics			R	with REG (EU) No 366/2011 in REACH REG Annex XVII, entry 60	≥ 0,1 Gew.-%		Shall not be placed on the market or used as a substance or constituent of mixtures in a concentration, equal to or greater than 0,1 % by weight for grouting applications after 5 November 2012
Inhibitors	Amines, which can form carcinogenic Nitrosamines, selected						
pigment/dyes	certain amines, which can form carcinogenic nitrosamines		R	REACH REG Annex XVII, azocolourants	0,003%	carcinogenic	Restriction in Azodyes for leather and textiles
synthetic/plastics					1000 ppm		inhibitors
rubber					1000 ppm		Polyurethan foam, corrosions inhibitor, rubber, colorants (AZO), herbicides, lubricants
EEE/ Electrical & Electronic Equipment	Antimony trioxide	1309-64-4	D	Directive 67/548/EEC => REG CLP (EC) REG No 1272/2008. ROHS Evaluation proposal for a restriction		is suspected of triggering cancer, hazardous to water	Relais manufacturing, used in Display technique, semi-conductor & Synergist of brominated flame retardant. Antimontrioxid is a synergist (Deca BDE) of flame retardant in plastics. Doping antimon-tin-oxide ATO for display technique, Anti shrinking alloy, Pigment dyes in plastics. ROHS Evaluation proposal for a restriction
flame retardant							
pigment/dyes							
synthetic/plastics							
pigment/dyes	Pyrochlore, antimony lead yellow - C.I. Colour Index Pigment Yellow 41	8012-00-8	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	C.I. Pigment Yellow 41 Naples Yellow C.I. 77588 Sicocer F Orange 2208 for plastic and paints
pigment/dyes	Antifouling paints						
biocides/insecticides/pesticides BPR	Antifouling paints: with ingredient see arsenic, hexachlorocyclohexane HCH, mercury, Arsenic-, tinnorganic -stannous compounds (TBTO;TBT;TPT)		R	BPR Biocidal Products Regulation (EU) 528/2012 see REACH Candidate list	see REG	toxic, environmentally hazardous substances, hazardous to water	Restriction: Colours are prohibited with biocidal substances (arsenic, tinn, mercury). Protective coatings, lacquers equipped with biocides to prevent ships from fouling by microorganisms, plants or animals. stabilizer in synthetics
pigment/dyes							
surface treatment							

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biocides/insecticides/ pesticides BPR	Mercury and its compounds		R	REACH Annex XVII, entry 18		CMR	Shall not be placed on the market, or used, as a substances or in mixtures to prevent the fouling by micro-organisms, plants or animals
	Arsenic and its compounds		R	REACH Annex XVII		CMR	
biocides/insecticides/ pesticides BPR	Tinorganic compounds		R	REACH Annex XVII, entry 20		CMR	
EEE/ Electrical & Electronic Equipment	Arsenic /Arsenic Compounds						
biocides/insecticides/ pesticides BPR	Arsenic and its compounds	1327-53-3	R	REACH REG Annex XVII, entry 19 BPR	see REG	carcinogenic	Prohibited as biocides (antifouling) and wood preservative
glass	Arsenic and its compounds	1327-53-3	D	see Candidate list	1000 ppm	CMR	0,1 % w/w in glass
EEE/ Electrical & Electronic Equipment	Arsenic (III) oxide	1327-53-3	Authorisation	with REG (EU) No 125/2012 => REACH Annex XIV	Annex XIV	carcinogenic	Used in the dying industry, as a pesticides and fungicide, in metallurgy to harden copper, lead or gold in alloys, for manufacturing special glass, used in wood preservatives and EEE electrical and electrical equipment, semiconductor
PCB	Arsenic acid	7778-39-4	Authorisation	REACH Candidate list, Annex XIV REG (EU) No 895/2014	1000 ppm	carcinogenic	Prio Annex XIV mainly used to remove gas bubbles from ceramic glass melt and in the production of laminated printed circuit boards
EEE/ Electrical & Electronic Equipment							
EEE/ Electrical & Electronic Equipment	Arsenic (V) oxide	1303-28-2	Authorisation	with REG (EU) No 125/2012 => REACH REG Annex XIV	Annex XIV	carcinogenic	Used in the dying industry, as a pesticides and fungicide, used in metallurgy to harden copper, lead or gold in alloys, used for manufacturing special glass, used in wood preservatives, EEE electrical and electronical equipment, semiconductor
adhesives	Arsenic and its compounds, Arsenic(III) trioxide; Arsenic(V) oxide, Triethylarsenate, Lead hydrogene arsenate	1303-28-2 1327-53-3 7784-40-9 15606-95-8	R/A	REACH Candidate list, article 33, see Authorisation REACH REG Annex XIV; REG (EU) 2017/1510 as regards CMR substances	1000 ppm siehe REACH VO article 33	carcinogenic	Metal adhesives
EEE/ Electrical & Electronic Equipment							Relays, soft solder, transistors, display technique diodes LED and semiconductor (gallium/indium- arsenid), wafer
surface treatment							Dye stuff
alloys							Lead and copper alloys

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Isolation	Asbestos						
Isolation	Asbestos types	1332-21-4 etc.	R	REACH Regulation Annex XVII & REG (EU) No 126/2013	intentionally added	carcinogenic	Prohibited in articles: Gaskets, friction pads, insulations, adhesives, fill protective coatings, sealants fugue masses, isolations and sound insulating materials, coating materials
pigment/dyes	Azocolourants and azodyes which form certain aromatic amines						
pigment/dyes	4,4' Diaminodiphenyl-methane MDA	101-77-9	Authorisation	REACH Candidate list with REG (EU) No 143 /2011 in Annex XIV	Annex XIV	carcinogenic	Intermediate in the manufacturing of polyurethanes. Hardener for epoxy resins and adhesives, dyes (AZO) and accelerator
synthetic/plastics			R	REACH REG Annex XVII, azocolourants	0,003%	carcinogenic	Restriction in Azodyes for leather and textiles, 0,003% by weight of the finished textile/leather product
pigment/dyes	Azocolourants and azodyes which form certain aromatic amines		D	see REACH Candidate list	0,1 % 1000 ppm		
synthetic/plastics			R	Annex XVII Entry 15 REACH Candidate list		CMR	REACH Annex XVII, azocolourants TRGS 614
pigment/dyes	Benzidine	92-87-5	R	Annex XVII Entry 13		CMR	The European Community's ban applies to azocolourants and azodyes that by reductive cleavage of azo groups may release this aromatic amine.
pigment/dyes	2-Naphthylamine	91-59-8	R	Annex XVII Entry 12		CMR	Azocolourants TRGS 614
pigment/dyes	2,2 Dichloro-4,4 methylenedianiline (MOCA)	101-14-4	Authorisation	Candidate list ; Annex XIV Authorisation	1000 ppm	CMR, carcinogenic	Mainly used as curing agent in resins and in the production of polymer articles and also for manufacture of other substances. The substance may further be used in construction and arts. Restriction see Azo dyes
pigment/dyes	Congo Red C.I. Direct Red	573-58-0	D	Candidate list		CMR	Dyes for textiles and paper
pigment/dyes	Direct Black 38	1937-37-7	D	Candidate list (16.12.2013)		CMR	Used in ink for printers

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pigment/dyes	4,4'-Diaminodiphenylmethan MDA	101-77-9	A/R	Annex XIV		CMR	Annex XIV Autorisation
solvent	benzene	71-43-2	R	REACH REG Annex XVII	0,10%	carcinogenic	As a solvent, substances and preparation
Inhibitors	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	R	BNST is regulated under the Canadian Prohibition	0,10%	CMR	Lubricating agent in motors, storage drives; lubricant additive (antioxidant/corrosion inhibitor/tarnish inhibitor/scavenger/antiscaling agent), mould release agent; organic chemical for industrial use
batteries	Batteries						
batteries	Cadmium		R	DIR 2006/66/EC & adaptations			see Directive and adaptations
batteries	Lead		R	DIR 2006/66/EC & adaptations			see Directive and adaptations
batteries	Mercury		R	DIR 2006/66/EC & adaptations			see Directive and adaptations
batteries	Perchlorate	14797-73-0	R	California Assembly Bill No. 826 - Perchlorate Contamination Prevention Act; implemented July 1, 2006	see act		Lithium batteries; coin cell batteries
solvent	Bis(2-methoxyethyl)ether, Diglyme	111-96-6	Authorisation	Candidate list (17.12.2015) REG (EU) No 895/2014 in Annex XIV	1000 ppm	toxic to reproduction REACH Art 57(c)	Electrolyte in lithium batteries, used also as solvent for battery electrolytes, and possibly in other products such as sealants, adhesives, fuels and automotive care products
batteries	1,3-propanesultone	1120-71-4	D	Candidate list	1000 ppm		1,3 propanesultone may be used as a solvent in battery electrolytes for sealed lithium ion batteries
solvent	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME), Glym, Monoglym	110-71-4	D	Candidate list	1000 ppm	toxic to reproduction REACH Art 57(c)	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries
batteries							

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batteries	1,2-Diethoxyethane, Diethylglycol, Ethylene Glycol Diethyl Ether (EGDEE)	629-14-1	D/R	Candidate list /R	1000 ppm	CMR	Solvent used in battery electrolytes for lithium batteries. May be in found in printing inks and paint strippers
batteries	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme), Ansul Ether 161, NSC 66400	112-49-2	D	Candidate list	1000 ppm	CMR	Solvent may be used in battery electrolytes for lithium batteries. May be in found in printing inks
alloys	Beryllium						
EEE/ Electrical & Electronic Equipment	Beryllium and its compounds	7440-41-7	D	Directive 67/548/EEC => REG CLP (EC) No 1272/2008		toxic by inhalation	Copper or Nickel alloys, electrical contact and spring material, Be/-copper used in IC, berylliumoxide compounds ceramics. Evaluation Proposals ROHS restrictions
WEEE EN 50625:2013							
Isolation							
alloys							
Isolation	Beryllium oxide	1304-56-9	D	REG CLP VO (EC) No 1272/2008		Highly toxic can cause cancer	Ceramics
adhesives	Bisphenol A						
paper	Bisphenol A; 4,4'- isopropylidenediphenol	80-05-7	R	REG (EU) No 2016/2235 in Annex XVII, Entry 66	0,02% by weight	toxic of reproduction	Thermal paper is coated with a reactive layer ( 2. January 2020)
synthetic/plastics	Bisphenol A; 4,4'- isopropylidenediphenol	80-05-7	D	Candidate list , REG (EU) 2017/1510 as regards CMR, proposal for authorisation	1000 ppm	PBT, endocrine disruptor for environment, Endocrine disrupting properties (Article 57(f) - human health)-	chemical precursor for tetra-bisphenol A reactive ligated
EEE/ Electrical & Electronic Equipment							As flame retardant, - tetrabromo - bisphenol A in electrical components
epoxy resin							flame retardant in epoxy resin
flame retardant							chemical precursor for tetrabromo - bisphenol A

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biocides/insecticides/ pesticides BPR	Biocides/Pesticides/Insecticides/ BPR						
biocides/insecticides/ pesticides BPR	Biocidal Additives/Biocidal coatings see Pesticides		D/R	REG (EU) No 528/2012	CMR		Wood preservatives, Packaging, rubber and polymerised materials like rubber, elastomeres, fibers
biocides/insecticides/ pesticides BPR	Methylbromid	74-83-9	R	REG (EU) No 1005/2009	ozon depleting		insecticides/pesticides
surface treatment	Anthracene-	120-12-7	R	Annex XVII /SVHC	CMR	1000 ppm	wood treatment /insecticides/pesticides
Packaging and packaging components	Formaldehyd	50-00-0	R	AT BGBl.194/1990, REACH Restriction Process	CMR	0,10 ml/m <sup>3</sup> (spezielles Prüfverfahren)	Wood, textiles, foams, adhesives, residue in synthetic (monomere phenolic resins and melamines), protection agent.
surface treatment							
biocides/insecticides/ pesticides BPR	Dimethylfumarate	624-49-7	R	REACH REG Annex XVII			Biocide, mold prevention treatment of electronic leather seats, including recliners
Packaging and packaging components				Decision 2009/251/EC REACH Regulation (EU) No 412/2012 Annex XVII		Dimethylfumarate is used as an anti-moulding agent to protect articles during storage and transport, packaging, mold prevention treatments	
additive/agent/precursors	Bor compounds anorganic	1303-86-2	D	BPR Biocidal Products Regulation (EU) 528/2012, see Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Wood preservatives, wooden panels as starch, additive flame retardant
surface treatment							
EEE/ Electrical & Electronic Equipment							
flame retardant							
biocides/insecticides/ pesticides BPR	Triazole		D/R	REACH Candidate list		vPvB	Biocides; UV stabilizer
biocides/insecticides/ pesticides BPR	PCP Pentachlorphenol, DDT Gesarol		R	POP Regulation (EU) No 850/2004 Stockholmer Convention		vPvB, CMR	Fungicides, bactericides, wood protection

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biocides/insecticides/ pesticides BPR	Antifouling (Arsenic, Mercury, Tin/ Stanno-compounds)		R	REACH Annex XVII			Coating, pigments
biocides/insecticides/ pesticides BPR	Pestizide/Insektizide/Bioicide Aldrin, Mirex, Endrin; SCCP;		R	REG (EC) No 850/2004 about POP persistent organic toxic substances	see REG	carcinogenic	POP Regulation - about persistent organic pollutants- Insectizides, flame retardant in synthetic, rubber, dyes and electrical equipment
EEE/ Electrical & Electronic Equipment	Borates /Borates Compounds						
additive/agent/precursors	Bor compounds anorganic		R	BPR Biocidal Products Regulation (EU) 528/2012	see REG		Wood preservatives, wooden panels as starch additive flame retardant
EEE/ Electrical & Electronic Equipment	Bor acid	10043-35-3 11113-50-1	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Boric acid is widely used on account of its consistency- influencing, as flame retardant, antiseptic and preservative properties (wood, cotton, fabrics), stabilizer, In wood veneers/ pressed wooden panels as starch additive, stabilizer in aminoplastic resin, wood preservative
flame retardant							
additive/agent/precursors	Diborontrioxide	1303-86-2	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Used in a multitude of applications, e.g. in glass and glass fibres, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, nuclear, electrical equipment, adhesives, inks/paints, film developing solutions, detergents and cleaners, reagent chemicals, biocides and insecticides
flame retardant							
EEE/ Electrical & Electronic Equipment	Disodium tetraborates, anhydr., Disodium tetraborate decahydrat Disodium tetraborate pentahydrat	1330-43-4, 1303-96-4, 12179-04-3	D	REACH Candidate list	1000 ppm	CMR	Uses include a multitude of application, e.g. in detergents and cleaners, in glass and glass fibres, ceramics industrial fluids, flame retardant, fertilisers, biocides, wood veneers
flame retardant							
detergents	Tetraborodisodium heptaoxide, Hydrat	12267-73-1	D	Candidate list	1000 ppm	CMR	
detergents	Disodium octaborate	12008-41-2	D	Candidate list (191 SVHC)	1000 ppm		Used in anti-freeze products, heat transfer fluids, lubricants and greases, and washing and cleaning products flame retardant/ insulation,



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solvent	1-bromopropane (n-propyl bromide)	106-94-5	Authorisation/R	REACH Candidate list, Annex XIV	1000 ppm	Toxic for reproduction (Article 57 c)	Solvent REG (EU) 2017/999; Authorisation
flame retardant	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)						
EEE/ Electrical & Electronic Equipment	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)		D	see IEC62474 Reference list WEEE DIRECTIVE 2012/19/EU, Annex VII EN 50625-1:2013			Flame retardant for housing, connectors, package molding sealing
EEE/ Electrical & Electronic Equipment	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)		D	see EN 62474 Reference list			Flame retardant in printed wiring board laminate
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]						
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]						
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]						
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls] in combination with antimony compounds]						
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]						
WEEE EN 50625:2013	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]						

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EEE/ Electrical & Electronic Equipment	Cadmium /Cadmium Compounds						
EEE/ Electrical & Electronic Equipment	Cadmium u. Cadmium and its compounds	7440-43-9 etc.	R	ROHS Directive 2011/65/EU	0,01% 100 ppm	CMR	In electrical and electronic equipment
synthetic/plastics	Cadmium and its compounds	7440-43-9 etc.	R	REACH REG Annex XVII & REG (EU) No 494/2011, REG (EU) No 835/2012 (additional paragraphs/ entrys point 23) & REG (EU) No 2016/217	see REG (0,01%) 100 ppm	Carcinogenic (Article 57a), Mutagenic (Article 57b), Specific target organ toxicity after repeated exposure (Article 57(f) - human health)	Shall not be used in mixtures and articles produced from synthetic organic polymers (hereafter referred to as plastic material) such as: PVC; PUR; PET; Epoxy resins etc.
pigment/dyes							For the coloring of certain plastics (PVC, PUR see D), paints and varnishes, pigments anti corrosion surface, see REG (EU) No 2016/217
stabilizer							Stabilized vinyl chloride polymers and -copolymer (such as PVC, PUR;), heat stabilizers
EEE/ Electrical & Electronic Equipment							Corrosion protection, surface treatment, cadmium plating hard-soldering/brazing alloy, cable isolation, relay contact, photo diode, voltaic cell, electric contact, relay
surface treatment							Cadmium plating of metal surfaces, corrosion, surface treatment - cadmium plating, cable insulation, phosphor coatings, optical glass
batteries	Cadmium and Cadmium-compounds	7440-43-9 etc.	R	DIR 2006/66/EC & adaptions	see Directive	carcinogenic, mutagenic	On batteries and accumulators, see Directive 2013/56/EU cadmium free batteries
solvent	Chlorinated Hydrocarbons Aliphatic chlorinated Hydrocarbons						
solvent	Chlorinated Hydrocarbons selected, Aliphatic hydrocarbons, selected		R	Reach Regulation (EC) No 1907/2006 Annex XVII	0,1 by weight	toxic, harmful to health/noxious, to water	Surface detergents, cleaning of textiles, solvent, solvent in adhesives
surface treatment	Chloroform Trichlormethan	67-66-3	R	Annex XVII Entry 32			detergents, cleaning of textiles

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impurities	Chlorinated or brominated Dibenzo-p-dioxins or Dibenzofurans, all members						
impurities	chlorinated and brominated Dioxine and Furane	see R		DE ChemVerbotsV & POP Regulation	not intentionally added content	toxic	Impurities in products, as a byproduct in the manufacture of chlorine-or combustion / bromorganic compounds (agent orange Seveso poison) impurities
impurities				DE ChemVerbotsV & POP REG			
flame retardant	Chlorinated Praffins Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)						
surface treatment	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) SCCP	85535-84-8	R	REACH REG Annex XVII, 42		PBT	Shall not be placed on the market, or used as substances. Or as constituents of other substances or mixtures in concentrations greater than 1% by weight, where the substances or mixture is entended for
flame retardant	SCCP Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)		R	Candidate list, REG (EU) No 143/2011 => POP REG (EU) Nr. 519/2012 & REG 2015/2030		PBT	Cables, adapters, Tripods, Storage media, mouse, keyboards, textiles, plasticizer for PVC, flame retardant, 0,15 % in articles
plasticiser/softener	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) SCCP		Authorisation/R	see POP Regulation (EU) No 850/2004 Stockholmer Convention		PBT	See POP Regulation,
EEE/ Electrical & Electronic Equipment	Alkanes, C10-13, chloro	85535-84-8	Authorisation/R	see POP Regulation (EU) No 850/2004 Stockholmer Convention		carcinogenic, readily degradable	Short chain (SCCP), by definition: Chloroparaffins, unbranched, C <sub>x</sub> H <sub>(2x-y+2)</sub> Cl <sub>y</sub> , where x = 10-13 and y = 1-13
flame retardant	Chlorinated paraffins (MCCPs), average chain length (C14-17)			proposals ROHS restriction			Flame retardant, see ROHS evaluation Öko Institut

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plasticiser/softener	Chlorinated Flame retardants CFR (TDCPP, TDCP)						
flame retardant	Dechlorane Plus™	13560-89-9	D	candidate list, public consultation proposed for authorisation under REACH	1000 ppm	vPvB	Flame retardant
flame retardant	anti- (or exo ) Dechlorane Plus™	135821-74-8	D	candidate list	1000 ppm	vPvB	Flame retardant
flame retardant	syn- (or endo ) Dechlorane Plus™	135821-03-3	D	candidate list	1000 ppm	vPvB	Flame retardant
flame retardant	Tris(1-chloro-2-propyl)phosphate (TCPP)	13674-84-5	R	REACH Annex XVII			EN 62474 Reference List, PROP 65
flame retardant	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	Authorisation	Candidate list (13.01.2010)	Toxic for reproduction (Article 57 c);	SVHC/CMR	softener, viscosity regulator, flame retardant additive (PUR) EN 62474-Reference List, PROP 65

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field of application	Stoffbezeichnung	CAS-No	INFORMATION/ DECLARE (D); RESTRICTION (R); AUTHORISATION (A)	LEGAL requirements EU/other countries Regulations REG, Directives DIR	Threshold in % by weight/ in ppm Annex XIV*	SVHC/ properties	Application - Generic examples typically used
surface treatment	Chromium/Chromium compounds/ Chromium hexavalentes and its Compounds						
EEE/ Electrical & Electronic Equipment	Hexavalent chromium (VI)	1333-82-0 etc.	R	ROHS Directive 2011/65/EU	0,10% 1000 ppm	mutagenic and carcinogenic	In electrical and electronic equipment
Leather /textile	Hexavalent chromium (VI)	1333-82-0 etc.	R	REACH Annex XVII (EU) No 301/2014	1000 ppm	CMR	In leather articles & textiles, see Regulation (EU) No 301/2014
Cement	Cement contains chromium (VI), hexavalent chromium	1333-82-0 etc.	R	REACH REG Annex XVII & REG (EU) No 126/2013	see REG	mutagenic and carcinogenic	Cement and cement (contains) preparations are prohibited if their content of soluble chromium VI hydration after more than 0.0002% of the dry weight of the cement
additive/agent/precursors	Further Hexavalent chromium (VI) compounds	18540-29-9	R/Authorisation	REACH REG Annex XVII, Candidate list & Annex XIV	1000 ppm	mutagenic and carcinogenic	Leather products, see Candidate list
surface treatment							Used in mixtures for metal surface treatment (EEE)
surface treatment	Coatings						
pigment/dyes	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (TGIC)	2451-62-9	D	Candidate list	1000 ppm	CMR	powder coatings, coating, laminating, printing ink
pigment/dyes	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	D	Candidate list	1000 ppm	CMR	powder coatings, coating, laminating, printing ink
surface treatment	Cobalt/Cobalt compounds						
EEE/ Electrical & Electronic Equipment	Cobalt compounds		D	Candidate List, current Restriction intentions 20/07/2017		carc, cat. 2 & toxic of reproduction	Cobalt and its compounds is mainly used in the manufacture of surface treatments, pigments or as a catalyst
pigment/dyes	Cobalt (II)dichloride	7646-79-9	D	Candidate list	1000 ppm	genotoxic, DNA damage, mammalian cells	Alloys, galvanic, element in metals, Zn-Co-plating, hard metals, pneumatic panels to indicate water contamination. Proposal for ROHS restriction
EEE/ Electrical & Electronic Equipment							
alloys	Cobalt (II) sulphate	10124-43-3	D	Candidate list	1000 ppm	carciogenic and toxic to reproduction	Alloys, galvanic, element in metals, Zn-Co-plating, hard metals, passivation, plating processes, formulation. Proposal for ROHS Restriction
pigment/dyes							

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surface treatment	Cobalt(II) carbonate	513-79-1	D	Candidate list	1000 ppm	carciogenic and toxic to reproduction	Cobalt and its compounds is mainly used in the manufacture of surface treatments, pigments or as a catalyst
surface treatment	Cobalt(II) diacetate	71-48-7					
pigment/dyes	Cobal(II) dinitrat	10141-05-6					
detergents	Detergents						
detergents	Octamethylcyclotetrasiloxane (D4)	556-67-2	D/R	Candidate list & Annex XVII REG (EU) No 2018/35			Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products
detergents	Decamethylcyclopentasiloxane (D5)	541-02-6	D/R	Candidate list & Annex XVII REG (EU) No 2018/35	1000 ppm	vPvB	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products, textile treatment products and dyes, colours
detergents	Dodecamethylcyclohexasiloxane (D6)	540-97-6	D	Candidate list	1000 ppm	vPvB	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products
detergents	Ethylenediamine (EDA)	107-15-3	D	Candidate list	1000 ppm	Respiratory sensitising properties (Article 57(f) - human health)	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, pH regulators and water treatment products
detergents	borate compounds		D	Candidate list	1000 ppm		see above

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surface treatment	(poly) Fluorinated compounds , perfluorinated compounds, Fluortelomeres, selected						
POP Regulation	Perfluorooctane sulfonates (PFOS)						
detergents	Perfluorooctane sulfonates PFOS	45298-90-6 (Anion) 1763-23-1Acid	R	REACH Annex XVII; REG (EU) No 207/2011=> POP Regulation (EC) No 850/2004	see Regulation	vPvB (Article 57 e)	Surface active agent, wetting agent, galvanic processes, metal plating, in the semiconductors industry, antistatic agent for films and plastic
EEE/ Electrical & Electronic Equipment							
surface treatment							
EEE/ Electrical & Electronic Equipment	Perfluorooctane acid PFOA, (C7F15-X; C8F17-X)	1763-23-1; 335-67-1 acid	Craft - Restriction under consideration	REACH Annex XVII POINT 53/8 risk assessment, Candidate list		vPvB	see POINT 53./8 REACH R ANNEX XVII PFOA The Commission shall keep under review the ongoing risk assessment activities of PFOA, used as surface active agent, wetting agent, galvanic processes
EEE/ Electrical & Electronic Equipment	Perfluorooctane acid PFOA, (C7F15-X; C8F17-X)	335-67-1	R	REG (EU) No 2017/1000 REACH Annex XVII Entry 68	25 ppb see REG	vPvB	PFOA is used as an emulsion stabilizer to manufacture polyvinylidene fluoride (PVDF) and other fluorinated polymers, textiles, paper; EEE semiconductor industry, Touch screens with dirt repellent fittings and stain resistant, oil repellent and hydrophobic effects
textile	PFOS Perfluorooctanoic acid sodium salt	335-95-5	R	POP REG		vPvB	Textile or other coated materials. Intentionally added or 1 microgram/m2 of coated material
surface tratment	PFOS	335-95-5	R	POP REG	0,1 mass %	vPvB	All except textiles or other coated materials. Intentionally added or 0.1 mass% of the part (as the sum of PFOS)

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surface treatment	PFOA - Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA						
surface treatment	PFOA	----	R	Norwegian products regulation Section 2-32	Intentionally added or 1 microgram/m2 of coated material	vPvB	Textiles or other coated materials
surface treatment	PFOA	----	R	Norwegian products regulation Section 2-32	Intentionally added or 0.1 mass% of the part (as the sum of PFOS)	vPvB	All except textiles or other coated materials
detergents	Pentacosfluorotridecanoic acid (PFTrDS; C13-PFCA)	72629-94-8	D	Candidate list (19.12.2012)	1000 ppm	vPvB (Article 57 e)	flourinated detergents used in the coating industry, electronic coating, paints, commercial cleaning, as a degreasing applications/ textile industries
detergents	Tricosfluorododecanoic acid/ C12 Tricosfluorododecansäure ( PFDoDS)	307-55-1	D	Candidate list (19.12.2012)	1000 ppm	vPvB (Article 57 e)	Surfactant and wetting additive for coating formulation, used in floor polish
surface treatment							Flourinated tensides/ detergents
detergents	Henicosfluoroundecanoic acid (C11_PFCA) Perfluoroundecanoic acid (PFUnDS)	2058-94-8	D	Candidate list (19.12.2012)	1000 ppm	vPvB (Article 57 e)	Flourinated tensides/ detergents
surface treatment							
detergents	Heptacosfluorotetra-decanoic acid C14 (PFTDS)	376-06-7	D	Candidate list (19.12.2012)	1000 ppm	vPvB (Article 57 e)	Flourinated tensides/ detergents
surface treatment							
polymeres	PFOA Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA						
EEE/ Electrical & Electronic Equipment	Pentadecafluorooctanoic acid (PFOA_C8)	335-67-1	D	Candidate list (20.06.2013) REG No (EU) 2017/1000	1000 ppm	PBT, CMR	PFOA is used as an emulsion stabilizer to manufacture polyvinylidene fluoride (PVDF) and other fluorinated polymers and elastomers
detergents							flourinated detergents used in the coating industry, electronic coating, paints, commercial cleaning, as a degreasing applications/ textile industries



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detergents	Ammonium pentadecafluorooctanoate (APFO_C8)	3825-26-1	D	Candidate list (20.06.2013) REG No (EU) 2017/1000	1000 ppm	PBT, CMR	APFO is used as an emulsion stabilizer to manufacture polyvinylidene fluoride (PVDF) and other fluorinated polymers and elastomers and can be found in concentrations up to 1% w/w in these plastics
detergents	Sodium pentadecafluorooctanoate	335-95-5	D/R	Reference list 62474	1000 ppm	PBT	Textiles, photographic coatings applied to films, paper or printing plates and other coated consumer products
detergents	Potassium pentadecafluorooctanoate	2395-00-8	D	Reference list 62474	1000 ppm	PBT	
detergents	Silver pentadecafluorooctanoate	335-93-3	D	Reference list 62474	1000 ppm	PBT	
plastic	Pentadecafluorooctanoyl fluoride	335-66-0	D	IEC 62474 Declarable List/Reference list	1000 ppm	PBT	PFOA is used as an emulsion stabilizer to manufacture polyvinylidene fluoride (PVDF) and other fluorinated polymers and elastomers and can be found in
detergents	Methyl pentadecafluorooctanoate	376-27-2	D	Reference list 62474	1000 ppm	PBT	can be found in concentrations up to 1% w/w in these plastics.
detergents	Ethyl pentadecafluorooctanoate	3108-24-5	D	Reference list 62474	1000 ppm	PBT	
surface treatment	Perfluorononan-1-oic-acid and its sodium and ammonium salts (APFO/ PFNA C9-PFA; C9HF17O2)						
surface treatment	Perfluorononan-1-oic-acid (PFNA), Heptadecafluorononanoic acid	375-95-1	D	Candidate list (17.12.2015)	1000 ppm	SVHC/PBT	Surfactant in the production of the fluoropolymer polyvinylidene fluoride (PVDF)
surface treatment	Ammonium salts of perfluorononan-1-oic acid, Ammonium heptadecafluoronononate	4149-60-4	D	Candidate list (17.12.2015)	1000 ppm	SVHC/PBT	Surfactant in the production of the fluoropolymer polyvinylidene fluoride (PVDF)
surface treatment	Sodium salts of perfluorononan-1-oic-acid, Sodium heptadecafluoronononate	21049-39-8	D	Candidate list (17.12.2015)	1000 ppm	SVHC/PBT	Surfactant in the production of the fluoropolymer polyvinylidene fluoride (PVDF)

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surface treatment	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts						
surface treatment	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2	D	Candidate list (17.12.2017)	1000 ppm	PBT	Lubricant, wetting agent, plasticiser and corrosion inhibitor
surface treatment	Decanoic acid, nonadecafluoro-, sodium salt	3830-45-3	D	Candidate list (12.01.2017)	1000 ppm	PBT	Plasticizer, lubricant, corrosion inhibitor
surface treatment	Ammonium nonadecafluorodecanoate	3108-42-7	D	Candidate list (12.01.2017)	1000 ppm	PBT	Plasticizer, lubricant, corrosion inhibitor
surface treatment	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)						
EEE/ Electrical & Electronic Equipment	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)		D	ECHA will include PFHxS in the Candidate list (07.07.2017)	1000 ppm	PBT	Semiconductor industry, Electronic equipment and Components
surface treatment	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-----					carpets, leather, apparel, paper and packaging, pesticides
cooling agent/cleaning agent/fire agent	on certain fluorinated green house gases (2006) Kyoto Protocol						
cooling agent/cleaning agent/fire agent	on certain fluorinated green house gases (2006) Kyoto Protocol		R	Regulation (EU) No 517/2014	see REG		on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006
cooling agent/cleaning agent/fire agent	Sulfur Hexafluoride	2551-62-4	R		see REG	ozone depleting	(SF6)
biocides/insecticides/pesticides BPR	Formaldehyde						
additive/agent/precursors	Formaldehyd	50-00-0	R	AT BGBl.194/1990, REACH Restriction Process		0,10 ml/m <sup>3</sup> (spezielles Prüfverfahren)	Foams, adhesive, residue in synthetic (monomere phenolic resins and melamines), protection agent. Used for the manufacture of other wooden packaging products, textiles
surface treatment							
adhesives	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	Authorisation	REACH Candidate list:Annex XIV	1000 ppm	carcinogenic REACH art. 57(a)	Mainly used for manufacture of other substances. Minor uses are as hardener for epoxy resins, e.g. for the production of rolls, pipes and moulds, and as well for adhesives
synthetic/plastics							

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solvent							
synthetic/plastics	N,N Dimethylformamide, Formyldimethylamine	68-12-2	D	REACH R Annex XVII; Candidate list, Directive 2009/161/EU MAK	1000 ppm	toxic, toxic of reprod.	Special synthetic coating for heat and corrosion- resistant coatings such as wire enamels, solvent,
solvent							Solvent for plastics, special plastic coating (PAN, PVC, PUR). Production of synthetic / artificial leather made of polyurethane;
EEE/ Electrical & Electronic Equipment							Used as electrolyte in electrolytic capacitors rated for low temperature use to -55 Celcius Degree
solvent	Acetamide N,N-Dimethylacetamid (DMAC)	127-19-5	D	REACH Candidate list Article 33	1000 ppm	toxic for reproduction REACH Art 57(c)	Solvent, stabilizer
solvent	1,2 -Dichloroethane (EDC)	107-06-2	Authorisation	REACH Candidate list, Annex XIV	1000 ppm	carcinogenic REACH art. 57(a)	Mainly used for manufacture of other substances. Minor uses as solvent in the chemical and pharmaceutical industry
solvent	1-methyl-2-pyrrolidone (NMP)	872-50-4	R	REACH Annex XVII REG EU no Nr.588/2018			see regulation
solvent	Terphenyl hydrogenated	61788-32-7	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57c)	Used as a plastic additive, solvent, in coatings/inks, in adhesives and sealants, and heat transfer fluids

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solvent	based on Glycols Ethyl/Methylglycols & Ethers						
solvent	2-(2-Methoxyethoxy)- ethanol DEGME	111-77-3	R	REACH Annex XVII 27.06.2010 Entry 54	see REG		Shall not be placed on the market after 27.06.2010, for supply to the general public as a constituent of paints, paints strippers & cleaning agents
solvent	2-(2-Butoxyethoxy)- ethanol DEGBE	112-34-5	R	REACH Annex XVII 27.06.2010 Entry 55	see REG		Shall not be placed on the market- for supply to the general public in spray paints /cleaners in aerosol dipencers, see Regulation
batteries	Bis(2-methoxyethyl)ether; Diglyme	111-96-6	Authorisation	REACH Candidate list; Annex XIV	1000 ppm	carcinogenic, mutagenic	Used also as solvent for battery electrolytes, and possibly in other products such as sealants, adhesives, fuels and automotive care products
solvent							
synthetic/plastics	BCME Bischloromethylether 1,1'-Dichlorodimethylether	542-88-1	R	REACH Annex XVII		carcinogenic	Surface treatment of vulcanized rubber. Manufacturing of flame retardant substances
surface treatment							Substances and preparations which are placed on the market and are intended for sale to the general public shall not contain the substance in an individual

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additive/agent/precursors	CMME Chloromethyl-methylether	107-30-2	R	REACH Annex XVII	see REG	carcinogenic	Substances and preparations which are intended for sale to the general public
synthetic/plastics							Surface treatment of vulcanized rubber, the production of flame retardants
surface treatment							
solvent	2ethoxyethyl acetate	111-15-9	D	REACH Candidate list	1000 ppm	CMR	Solvent in coatings, paints and varnishes, but also as intermediate in the manufacture of cyanoacrylate adhesives
solvent	2-ethoxyethanol 2-methoxyethanol	110-80-5 109-86-4	D	REACH Candidate list	1000 ppm	CMR	2-ethoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical
solvent	2-methoxyethylacetate	110-49-6	R	Prop 65		CMR	Paints lacquers
additive/agent/precursors	Methoxyacetic acid	625-45-6	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Manufacture of chemicals and chemical products for industrial purposes, production of cleaning or washing powder, manufacture fabricated metal products
solvent	Diethylglykol, Ethylene Glycol Diethyl Ether EGDE	629-14-1	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Solvent used in electrolytes for lithium batteries
solvent	Triethylenglykol-dimethylether (TEGDME; triglyme), 1,2 Dimethoxyethan Ethylenglycoldimethylether (EGDME)	112-49-2	D	REACH Candidate list	1000 ppm	toxic of reproduction	Lithium batteries. Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor uses in brake fluids and repair of motor vehicles

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EEE/ Electrical & Electronic Equipment	Lead						
batteries	Lead and its compounds	7439-92-1	R	DIR 2006/66/EC & adaptations	see DIR	CMR	On batteries and accumulators, see Directive 2013/56/EU 0,004% mass of battery
EEE/ Electrical & Electronic Equipment	Lead and its compounds	7439-92-1	R	Recast ROHS Directive 2011/65/EU	0,10% 1000 ppm	toxic for reproduction, mutagene etc.	ROHS restriction of the use of certain hazardous substances in electrical and electronic equipment
synthetic/plastics	Lead and its compounds	7439-92-1	R	ROHS, REACH REG ANNEX XVII, prio Annex XIV	0,1% 1000 ppm	toxic for reproduction, mutagene etc.	As a stabilizer in synthetic/ plastic PVC. See ROHS Directive
stabilizer					0,03% 300 ppm		As a stabilizer in synthetic and plastic compounds. See ROHS Directive
pigment/dyes					0,001		In dyes and laquers
EEE/ Electrical & Electronic Equipment	Lead and its compounds	7439-92-1	D	see Candidate list			ROHS exemptions, USV, Used in metals, welding and soldering products, metal surface treatment products, and polymers
EEE/ Electrical & Electronic Equipment	Lead and its compounds	7439-92-1	R/D	US/CA Proposition 65 Case law (California)	300 ppm		0,03 % w/w of surface coating in cables /cords with thermoset of thermoplastic coatings (JIG 101 )
surface treatment	lead (II) chromate	7758-97-6	Authorisation	Candidate list, REG (EU) No 125/2012	Annex XIV	carcinogen cat.2, toxic of reproduction cat.1	Surface treatment, corrosion protection, dyes and pigments
pigment/dyes							
pigment/dyes	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	Authorisation	Candidate list, REG (EU) No 125/2012	Annex XIV	CMR	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)
pigment/dyes	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	Authorisation	Candidate list, REG (EU) No 125/2012	Annex XIV	CMR	Lead sulfochromate yellow (C.I. Pigment Yellow 34)
pigment/dyes	Lead (II) sulfate	7446-14-2	R	REACH Annex XVII	1000 ppm	CMR	In dyes and in pigment
EEE/ Electrical & Electronic Equipment	Lead (II,IV) oxide	1314-41-6	D	Candidate list	1000 ppm	CMR	In dyes and in pigment Orange lead, Lead tetraoxide
pigment/dyes	Lead x sulphate S04	15739-80-7	R	REACH Annex XVII	1000 ppm	CMR	In dyes and in pigment

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pigment/dyes	Lead (II) carbonate	598-63-0	R	REACH Annex XVII	1000 ppm	CMR	In dyes and in pigment
pigment/dyes	Lead hydrocarbonate	1319-46-6	R	REACH Annex XVII	1000 ppm	CMR	In dyes and in pigment
EEE/ Electrical & Electronic Equipment	Lead titanium zirconium oxide Lead titanate zirconate; Lead titanate zirconate (Pb(Ti,Zr)O <sub>3</sub> ); Lead titanate zirconate (PbTiO-1ZrO-1O <sub>3</sub> ); Lead titanium zirconium oxide (PbTiO-1ZrO-1O <sub>3</sub> ); Lead zirconate titanate	12626-81-2	D	Candidate list	1000 ppm	CMR	In piezoelectric components, ultrasound transducers, gas igniters, ultrasonic motors, ceramic capacitors and other electronic components that use piezoelectric materials
PVC	Pentalead tetraoxide sulphate	12065-90-6	D	Candidate list	1000 ppm	CMR	Heat stabilizer for PVC, for example for wiring and cabling insulation
PVC stabilizer	Trilead dioxide phosphonate	12141-20-7	D	Candidate list (19.12.2012)	1000 ppm	CMR	SVHC Heat stabilizer for PVC, for example for wiring and cabling insulation
pigment/dyes	Pyrochlore, antimony lead yellow	8012-00-8	D	Candidate list	1000 ppm	CMR	Used as yellow pigment for coloring plastics and paint
EEE/ Electrical & Electronic Equipment	Lead (II) bis(methane) sulfonate	17570-76-2	R	REACH Candidate list	1000 ppm	toxic of reproduction	Mainly used in plating processes (both electrolytic and electroless) for electronic components (such as printed circuit boards). The substance seems to also be used for batteries in special applications

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Isolation	Refractory Ceramic fibres						
Isolation	Aluminosilicate, Refractory Ceramic Fibres	-----	D	REACH Candidate list		carcinogenic REACH art. 57(a)	Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection
Isolation	Zirconia Aluminosilicate, Refractory Ceramic Fibres	-----	D	REACH Candidate list		carcinogenic REACH art. 57(a)	Thermal insulation for high temperature test equipment
Isolation	the glassy from undirected (silicate) fibers with a mass content of over 18% oxides, exist of sodium, potassium, calcium, magnesium and barium	-----	see exemption	CLP R (EC) No 1272/2008; REACH REG		Artificial fibers (biopersistent) Carcinogens: category 2	Technical isolation, heat and sound insulation in buildings
additive/agent/precursors	on substances that deplete the ozone layer						
cooling agent/cleaning agent/fire agent	CFCs, halons Ozone-depleting substances CFCs, HCFCs; (fully halogenated / partially halogenated CFCs), PFCs, Halone (Montreal Protocol)	on substances that deplete the ozone layer	R	Recast EC REG No 1005/2009 & Supplement EC REG No 744/2010		see REG	On substances that deplete the ozone layer
solvent			R	Recast EC REG No 1005/2009 & Supplement EC REG No 744/2010		see REG	Aerosols, refrigerants, foams, cleaning degreasing, drying and solvent, fire extinguishing medium. Use in cooling, heating and air conditioning systems



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alloys	Nickel						
EEE/ Electrical & Electronic Equipment	Nickel, Dinickeltrioxid	7440-02-0 1314-06-3	D/R	CLP Regulation		Nickel is suspected of triggering cancer, awareness- allergization through skin contact, noxious	Nickel alloy and corrosion protection, resistor constatan REACH ANNEX XVII in articles intended to come into direct and prolonged contact with the skin such as: jewelery, human decoration, rivet buttons, tighteners. Skin contact must be avoided
surface treatment							
alloys							
alloys	Nickel compounds	7440-02-0	D/R	CLP Regulation			Proposals for restriction
alloys	Nickel(II) sulfate / sulphate	7786-81-4	D/R	CLP Regulation			Proposals for restriction
alloys	Nickel sulfamate	13770-89-3	D/R	CLP Regulation			Proposals for restriction. Used in galvanic nickel plating/ processes
batteries	Perchlorate						
batteries	Perchlorates		D/R currently regulated	California Assembly Bill No. 826 - Perchlorate Contamination Prevention Act; 2006		see act	EN 62474 Reference list California Assembly Bill No. 826 - Perchlorate Contamination Prevention Act; implemented July 1, 2006. 6 x 10 <sup>-7</sup> mass% of battery or product part
batteries	Lithium Perchlorate	7791-03-9	D/R			see act	Lithium batteries; coin cell batteries
synthetic/plastics	Phenole /Alkylphenole						
synthetic/plastics	Phenole	108-95-2	D	CLP (EC) No 1272/2008	1000 ppm	CMR	Residual monomer in phenolic resins, epoxy resins, anti-oxidant in phenol derivatives, decomposition product in polymeric materials, wooden materials and textiles
detergents	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	D	Candidate list	1000 ppm	PBT, endocrine	Unreacted process chemical, adhesives, rubber, coatings, resins

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stabilizer	UV adsorber stabilizer						
synthetic/plastics stabilizer	Phenol, 2-(2H-benzotriazol-2-yl)- 4,6,bis(1,1dimethyl-ethyl) UV 320	3846-71-7	R/A	Japan (Chemical Substances control Law)	1000 ppm	PBT, vPvB	UV-stabilizer in plastics for trim parts
synthetic/plastics stabilizer	2-(2H-benzotriazol-2-yl)-4,6- ditertpentylphenol (UV-328)	25973-55-1	R/A	Candidate list (17.12.2014)	1000 ppm	PBT, vPvB	UV-stabilizer in plastics for trim parts
synthetic/plastics stabilizer	2,4-di-tert-butyl-6-(5-chlorobenzo- triazol-2-yl)phenol (UV-327)	3864-99-1	R/A	Japan (Chemical Substances control Law) Monitoring	1000 ppm	PBT, vPvB	UV adsorber
				Candidate list (17.12.2015)	1000 ppm	PBT, vPvB	UV adsorber
stabilizer	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6- (sec-butyl)phenol (UV-350)	36437-37-3	D/R	Candidate list (17.12.2015)	1000 ppm	PBT, vPvB	UV-stabilizer in plastics, rubber and coatings
stabilizer	Benzophenone	119-61-9	D	California PROP 65		CMR,	UV-stabilizer

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flame retardant	Polybrominated PBDEs& PBBs						
synthetic/plastics	Polybrominated Biphenyles (PBB) & Polybrominated Diphenylethers PBDE	-----	R	ROHS D 2002/95/EC => Recast ROHS Directive 2011/65/EU see POP Regulation	0,10% 1000 ppm	vPvB	Electrical and electronic equipment, flame retardants in printed circuit boards / Plastic Mouldings
EEE/ Electrical & Electronic Equipment	Polybrominated Biphenyles (PBB) & Polybrominated Diphenylethers PBDE						
flame retardant	Polybrominated Biphenyles (PBB) & Polybrominated Diphenylethers PBDE						
synthetic/plastics	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	R	ROHS , Reach Candidate list	0,10%	vPvB	Flame retardant restricted since 2008 by a decision C- 14/06 and C-295/06
flame retardant							
flame retardant	Hexabromocyclododecan (HBCDD) and its isomere (α-HBCDD, β-HBCDD, γ- HBCDD)	25637-99-4	Authorisation	REACH Candidate list, REACH REG (EC) No 143 /2011 in Annex XIV,	Annex XIV	persistent und toxisch	Flame retardants in plastic parts REG (EU) 2016/460 => POP Regulation (EC) No 850/2004
synthetic/plastics							
flame retardant	Hexabromocyclododecan (HBCDD) and its isomere (α-HBCDD, β-HBCDD, γ- HBCDD)		R	POP REGULATION; REG 2016/293	100 ppm	vPvB	isolation, insulating material
flame retardant	Hexabromocyclododecane (HBCDD)	25637-99-4, 3194-55-6	Authorisation	REACH Annex XIV/POP REG	see REG	vPvB	Exemption EPS, XPS Autorisation 2017 labeling identification & obligation in insulating material
flame retardant	alpha-hexabromocyclododecane	134237-51-7	Authorisation	REACH Annex XIV/POP REG	see REG	vPvB	flame retardant
flame retardant	beta-hexabromocyclododecane	134237-50-6	Authorisation	REACH Annex XIV/POP REG	see REG	vPvB	flame retardant
flame retardant	gamma-hexabromocyclododecane	134237-52-8	Authorisation	REACH Annex XIV/POP REG	see REG	vPvB	flame retardant

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detergents	Phenol /Nonylphenole						
surface treatment	Nonylphenole (NPE)	25154-52-3	A/R	REACH REG Annex XVII & REG (EU) No 2016/26	1,00%	harmful to health (caused oestrogenic effects), irritand, caustic, hazardous to environment	Degreasing of metal surfaces. Raw materials for synthetic resins and coatings. Non ionogenic tenside, cleaning products for commercial / industrial purposes
detergents	Nonylphenoethoxylate	9016-45-9					Surface active agent (surfactant), additives and lubrication solvent
detergents	4-Nonylphenol, branched and linear & ethoxylated	-----	Authorisation	Candidate list, REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR toxic of reproduction, mutagene, endocrine	Surface active agent (surfactant), additives and lubrication solvent
additive/agent/precursors	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-----	Authorisation	Candidate list, REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR toxic of reproduction, mutagene, endocrine	Ingredient of polymer dispersions in the production of paints, paper, inks, adhesives, and carpet subpages. Also use as an emulsifier in polymer films for leather and textile surfaces
adhesives							
Isolation	Polychlorinated/ brominated Biphenyls (PCBs) and specific substitutes						
EEE/ Electrical & Electronic Equipment	PCB polychlorinated Biphenyle	1336-36-3	R	see DIR 96/59/EC, REACH REG Annex XVII, POP Regulation	see REG		Capacitors, electrical devices in a closed system: Transformers resistors, inductors plasticizers in paints, sealants, insulation, synthetic/plastics and fluorescent
EEE/ Electrical & Electronic Equipment	Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3	R	REACH REG Annex VII	see REG		Isolator in transformers and power capacitors, hydraulic fluids
Isolation	Monomethylbromo diphenylmethane (DBBT)	99688-47-8	R	REACH REG Annex VII	see REG		Isolator in transformers and power capacitors, hydraulic fluids
Isolation	Monomethyldi-chlorodiphenylmethan (Ugilec 121 oder 21 )	81161-70-8			see REG		
Isolation	Monomethyltetrachlor-diphenylmethan (Ugilec 141)	76253-60-6	R	REACH REG Annex VII	see REG		Isolator in transformers and power capacitors, hydraulic fluids

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synthetic/plastics	Polychlorinated Naphthalenes PCN						
EEE/ Electrical & Electronic Equipment	Naphthalene, chloro derivatives	70776-03-3	R	AT BGBl. No 210/1993 POP (EU) No 519/2012	mandatory	CMR toxic of reproduction, mutagene, endocrine	The Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 1 chemical substances: Japanese law), and Regulation of the European Parliament and of the Council on persistent organic pollutants EU No 519/2012
EEE/ Electrical & Electronic Equipment	Polychlorinated, Naphthaline (PCN),	-----	R	AT BGBl. No 210/1993 POP (EU) No 519/2012			As a byproduct in the metals production
EEE/ Electrical & Electronic Equipment	Polychlorinated Terphenyle PCTs						
synthetic/plastics	Polychlorinated Terphenyle (PCT), all isomeres and congeneres	61788-33-8	R	Directive 96/59/EC, REACH Annex XVII			Capacitors, electrical devices in a closed system: Transformers resistors, inductors plasticizers in paints, sealants, insulation, synthetic/plastics and fluorescent
surface treatment	Pentachlorophenol (PCP) , salts &	87-86-5	R	REACH Annex XVII	see DIR (0,005%)		Treatment of wood
electrodes	Radioactive substances / elementes						
EEE/ Electrical & Electronic Equipment	Radioactive elementes Uranium, Plutonium, Radon, Americum, Thorium, Cesium, Strontium etc.		R	DIR 92/3/EG, REG (Euratom) No 1493/93		radioactiv	Electrodes, measuring instrument, lightning conductors, thorium in welding electrodes
flame retardant	Phosphat						
flame retardant	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	Authorisation	with REG (EU) No 125/2012 REACH Annex XIV	Annex XIV	CMR	Plasticizer and viscosity regulator with flame-retardant properties (eg PUR used)
solvent							
flame retardant	Trixylyl phosphate	246-677-8	D	REACH Candidate list		Toxic for reproduction (Article 57 c)	Trixylyl phosphate (TXP) is a flame retardant which can be found in a range of plastics including PVC, polyurethane, vinylite, cellulosic resin and natural and synthetic rubber, plastcisers
textile	Tris (2,3 dibromopropyl) phosphate	126-72-7	R	Annex XVII, PROP 65	see Annex XVII	CMR	flame retardant in textiles, come in contact with skin

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textiles	Tris(aziridinyl)phosphin oxide	545-55-1	R	Reach Regulation (EC) No 1907/2006 Annex XVII	see Annex XVII	CMR	flame retardant in textiles, come in contact with skin
textiles	Textile						
textiles	Azocolourants		R	OEKO TEX Standard, Annex XVII	see Öko Tex Standard	CMR	textile straps, auxiliaries, detergents, colours, pigments see restricted substances listed in the OEKO Standard 100; AZO colourants, Cadmium compounds, Nickel, sulphur compounds, PAK
textiles	Disperse Blue 1, Direct Blue 6, Direct brown 95		R	CAN Prop 65	1000 ppm	CMR	colourants and pigments (OEKO TEX Standard 100)
solvent	Toloul						
additive/agent/precursors	2,4-Dinitrotoluol (2,4-DNT)	121-14-2	Authorisation	with REG EU No 125/2012 in Annex XIV	Annex XIV		Basic material for dyes and PUR
solvent	Toloul	108-88-3	R	REACH REG Annex XVII, entry 48			Restriction for spray paints, adhesives
solvent	Trichlorobenzene (TCB)	120-82-1	R	REACH REG Annex XVII, entry 49			Substances and preparations, dielectric in transformers, herbicides
extender oils	PAH's Polycyclic aromatic hydrocarbons, solvent for rubber, laquers						
extender oils	PAH's Polycyclic aromatic hydrocarbons			REACH annex XVII Entry 50	see REG	CMR	Extender oils and tyres, Carbon Black Pigment 7
pigment/dyes	PAH's Polycyclic aromatic hydrocarbons		D/R	REACH REG Annex XVII & R (EU) No 1272/2013		carcinogenic	Extender oils and tyres, Carbon Black Pigment 7
extender oils				Candidate list (Anthracen, Chrysen BaP); Check for PAH at the GS Mark (Germany); Regulation PAH 1272/2013			PAH's contaminated softening oils, black pigment dye (carbon black 7) lacquers in rubber and flexible (soft) plastics/rubber. See document AfPS GS 2014:01 Testing 18 PAH
Rubber/synthetic/ plastics							

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extender oils	Acenaphthylene (ANY)	208-96-8		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
pigment/dyes	Acenaphtene (ANA)	83-32-9		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Flourene (FLU/FLO)	86-73-7		AFPS GS 2014:01		CMR	Diphenylenmethan, 9H Floren, o-Biphenylmethan,
pigment/dyes	Phenanthrene (PHE)	85-01-8		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
pigment/dyes	Anthracene, Paranaphthalin (ANT)	120-12-7		Candidate list; Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Fluoranthene (FLT)	206-44-0		AFPS GS 2014:01		CMR	1,8-(o-Phenylen)naphthalin, Benzo[jk]fluoren
pigment/dyes	Pyrene (PYR)	129-00-0		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Naphthaline /Naphthalen (NAP)	91-20-3		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Indeno[1,2,3-cd]perylene (IPY)	193-39-5		AFPS GS 2014:01		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Benzo[ghi]perylen (BPE)	191-24-2		Candidate list 191		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	<i>Benzo[a]anthracene (BaA)</i>	56-55-3		REACH Annex XVII, Candidate list		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Chrysene (CHR)	218-01-9		REACH Annex XVII, Candidate list		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Benzo[b]fluoranthene (BbF/BbFA)	205-99-2		REACH Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Benzo[j]fluoranthene (BjF)	205-82-3		REACH Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Benzo[k]fluoranthene (BkFBkFA)	207-08-9		REACH Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Benzo[e]pyrene (BeP)	192-97-2		REACH Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
pigment/dyes	Benzo[a]pyrene (BaP)	50-32-8		Candidate list; Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH
extender oils	Dibenzo[a,h]anthracene (DBA/DBaHA)	53-70-3		REACH Annex XVII		CMR	AfPS GS 2014:01 Testing 18 PAH

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surface treatment	Anthracenoel/paste**	91995-15-2	D	REACH Candidate list	1000 ppm	CMR,	see REACH Regulation Annex XVII Restriction wood treatment
pigment/dyes	Anthracene (PAH)	120-12-7	D	see REACH Candidate list	1000 ppm	PBT, environmental hazard	Manufacturing of dyes, insecticide, in black pigments (carbon black / pigment 7)
surface treatment	Anthracenöl/paste**	**	D	see REACH Candidate list & Annex XVII	1000 ppm	carcinogen- can cause genetic defects	Paints, wood preservatives, plasticizers / rubber, biocides, reducing agent (PAH)
synthetic/plastics	upper heavy anthracene oel, anthracene oel), coal tar, naphthaline, creosote, Acenapthen-fraction	65996-91-0	R	REACH Annex XVII Entry 31		carcinogenic	wood treatment/wood protection
surface treatment		65996-32-2 84650-04-4 90640-84-9				carcinogenic	wood treatment/wood protection
surface treatment	coal tar	65996-93-2	R/A	Candidate list, REG (EU) No 2017/999 Annex XIV	1000 ppm	CMR	wood treatment/wood protection
surface treatment	anthracene oel	90640-80-5	R/A	Candidate list, REG (EU) No 2017/999 Annex XIV	1000 ppm	CMR	wood treatment/wood protection
biocides/insecticides/pesticides BPR	Naphthaline oels	84650-04-4	R			CMR	wood treatment/wood protection
catalyst/accelerator	ETU Ethylenethiourea /Imidazolidine-2-thione	96-45-7	D	Candidate list	1000 ppm	Toxic for reproduction (Article 57 c);	Imidazolidine-2-thione is used as a catalyst in some acrylic adhesive glues which may be used in adhesive tapes (for example, double sided adhesive tapes which may be used to hold the back-light in place in mobile phones



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plasticiser	Phthalates / Plasticisers						
plasticiser	Phthalates, Selected Group 1 (BBP, DBP, DEHP)	117-81-7 84-74-2 85-68-7	R	REACH Annex XVII,	see REG	CMR,	in toys and childcare products
plasticiser	Phthalates, Selected Group 2 ( DINP, DIDP, DNOP)	28553-12-0& 68515-48-0; 26761-40-0& 68515-49-1, 117-84-0	R	REACH Annex XVII,	see REG	CMR	in toys and childcare products
synthetic/plastics	Phthalates		R	REACH Candidate list; Annex XVII; Annex XIV; ROHS	see REG	CMR	Shall not be used as substances or mixture. Shall not be used as substances or in mixture, in concentrations greater than 0,1 % by weight of the plasticed material, in toys and childcare articles
EEE/ Electrical & Electronic Equipment	DEHP; DBP; BBP; DIBP		R	ROHS2 / Directive (EU) 2015/863 amending Annex II as regards the List of restricted substances	1000 ppm	CMR, endocrine	Plasticisers in plastics (PVC) and foams, insulation for electrical cables, sealant in the automotive industry
elastomere							As plasticisers in plastics PVC; elastomeres, adhesives, dyes and laquers
plasticiser	DEHP; DBP; BBP; DIBP		R/Autorisation	With REG (EU) No 143/2011 & REG (EU) No 125/2012 in Annex XIV	1000 ppm /	CMR, endocrine	As plasticisers in plastics PVC; elastomeres, adhesives, dyes and laquers
plasticiser							Rain coats, textiles
synthetic/plastics	PHTHALATE		D	see Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Plasticisers in plastics (PVC) and foams. Insulation for electrical cables. Sealant in the automotive industry. Authorisation Annex XIV
plasticiser							
pigment/dyes							

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EEE/ Electrical & Electronic Equipment	Bis/Di(2-ethylhexyl) phthalate (DEHP)	117-81-7	Authorisation	REACH; ROHS		endocrine	ROHS Annex II Directive 2015/863/EU
EEE/ Electrical & Electronic Equipment	Dibutylphthalate (DBP)	84-74-2	Authorisation	REACH; ROHS		endocrine	ROHS Annex II Directive 2015/863/EU
EEE/ Electrical & Electronic Equipment	Benzylbutylphthalate (BBP)	85-68-7	Authorisation	REACH; ROHS		endocrine	ROHS Annex II Directive 2015/863/EU
EEE/ Electrical & Electronic Equipment	Diisobutyl phthalate	84-69-5	Authorisation	REACH; ROHS		endocrine	ROHS Annex II Directive 2015/863/EU
synthetic/plastics	Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	R	REACH Annex XVII		CMR	REACH Annex XVII, California PROP 65
synthetic/plastics	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	R	REACH Annex XVII		CMR	REACH Annex XVII
synthetic/plastics	Di-n-octyl phthalate (DNOP)	117-84-0	R	REACH Annex XVII		CMR	REACH Annex XVII
plasticiser	Bis(2-methoxyethyl) phthalate	117-82-8	A	Candidate list / REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR	Candidate list
plasticiser	Diisopentylphthalate (DIPP)	605-50-5	A	Candidate list / REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR	Plasticiser in synthetic
plasticiser	N-pentyl-isopentylphthalate	776297-69-9	A	Candidate list / REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR	Plasticiser in synthetic
plasticiser	Dipentyl phthalate (DPP)	131-18-0	A	Candidate list / REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR	Plasticiser in synthetic
plasticiser	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	A	Candidate list / REG (EU) No 2017/999 in Annex XIV	1000 ppm	CMR	Candidate list DIHP
plasticiser	[Phthalato(2-)]dioxotrilead	69011-06-9	D	Candidate list	1000 ppm	CMR	Plasticiser in synthetic
plasticiser	Diisodecyl phthalate (DIDP)	68515-49-1, 26761-40-0	D	Group 2, PROP 65	1000 ppm	CMR	Plasticiser in synthetic
plasticiser	Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	D	Group 2, California PROP 65	1000 ppm	CMR	Used as a plasticizer for PVC (D - EN 62474 Declarable List)

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plasticiser	Di-n-hexyl Phthalate (DnHP)	84-75-3	D	Candidate list, California PROP 65	1000 ppm	CMR	Dihexyl phthalate (DnHP) is used as a plasticiser in PVC and other plastic polymers
plasticiser	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	D	Candidate list (15.06.2017)	1000 ppm	CMR	Used as a plasticizer for certain plastics and rubbers
plasticiser	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	A	Candidate list; Annex XIV	1000 ppm	CMR	Plasticiser in synthetic respectively paints, lacquers, coating and lamination REG (EU) 2017/999
plasticiser	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DiHP)	68515-50-4	D	Candidate list	1000 ppm	CMR	Candidate list
plasticiser	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	A	Candidate list; Annex XIV	1000 ppm	CMR	Candidate list 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) REG (EU) 2017/999
plasticiser	Dicyclohexyl phthalate (DCHP)	84-61-7	D	Candidate list	1000 ppm	CMR	Used in plastisol, PVC, Rubber, plastic articles
synthetic/plastics	Polyvinylchlorid						
plastic	PVC	9002-86-2	D	ROHS			plasticiser/softener
stabilizer	Lead	see below lead compounds	D	REACH/ROHS	1000 ppm	CMR	300 ppm as stabilizer in PVC EN 62474:2012 (JIG101)
stabilizer	Sulfurous acid, lead salt, dibasic	62229-08-7	D	Candidate list	1000 ppm	CMR	Heat stabilizer for PVC, for example for wiring and cabling insulation
stabilizer	Trilead dioxide phosphonate	12141-20-7	D	Candidate list	1000 ppm	SVHC/CMR	SVHC Heat stabilizer for PVC, for example for wiring and cabling insulation
stabilizer	Tetralead trioxide sulphate	12202-17-4	D	Candidate list	1000 ppm	CMR	Heat stabilizer for PVC, for example for wiring and cabling insulation
stabilizer	Pentalead tetraoxide sulphate	12065-90-6	D	Candidate list	1000 ppm	CMR	Heat stabilizer for plastics; for example, non-transparent PVC
stabilizer	Lead oxide sulfate	12036-76-9	D		1000 ppm	CMR	Heat stabilizer for PVC used for wiring and cabling insulation

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stabilizer	Dibutyltin dichloride (DBTC)	683-18-1	D	Candidate list	1000 ppm	CMR	Ingredient in some paint thinner and as heat stabilizer for PVC, semirigid
stabilizer	DOTE/MOTE	15571-58-1	D	Candidate list	1000 ppm	CMR	The reaction mass of DOT E and MOT E is added to PVC plastic to make it more stable to heating. The most commonly used reaction mass contains 70% DOT E and 30% MOT E and the addition rate in PVC is typically between 1 and 2.5%
stabilizer	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOT E)	15571-58-1	D	Candidate list	1000 ppm	CMR	PVC stabilizer
stabilizer	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 DOT E and MOT E)		D	Candidate list	1000 ppm	CMR	PVC stabilizer
packaging	Packaging and packaging components						
Packaging and packaging components	heavy metals (lead, cadmium, hexavalentes chromium, mercury)		R	Directive 94/62/EC amending and approximation D 2005/20/EC	Σ100 ppm 0,01 %(ges.)	CMR	Packaging and packaging components
Packaging and packaging components	Cobalt dichloride Co (II) chloride	7646-79-9		Candidate list		CMR	desiccant bag, drying agent in packaging
Packaging and packaging components	Dimethylfumarate	624-49-7	R	Decision 2009/251/EC REACH REG (EU) No 412/2012 Annex XVII		PBT, environmental hazard	Dimethylfumarate is used as an anti-moulding agent to protect articles during storage and transport, packaging, mold prevention treatments
Packaging and packaging components	Tar oils and creosotes		R	REACH Annex XVII		CMR	not content permitted in wood and wooden materials

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Packaging and packaging components	Boric acid	10043-35-3	D	Candidate list	1000 ppm	CMR	In wood veneers/ pressed wooden panels as starch additive, flame retardant and stabilizer in aminoplastic resin, wood preservative, as flame retardant in wood, cotton and other plant derived material
Packaging and packaging components	/Anthracene PAH's Polycyclic aromatic hydrocarbons		R	REACH ANNEX XVII		CMR	wood
Packaging and packaging components	Formaldehyd		AT	see AT REG		CMR	Textiles, wood
epoxy resin	Hexahydromethylphthalic anhydride						
hardener	Hexahydromethylphthalic anhydride	25550-51-0	D	Candidate list	1000 ppm	CMR	Primary use is as a hardener for epoxy resins
hardener	Hexahydro-4-methylphthalic anhydride	19438-60-9	D	Candidate list	1000 ppm	CMR	Primary use is as a hardener for epoxy resins
hardener	Hexahydro-1-methylphthalic anhydride	48122-14-1	D	Candidate list	1000 ppm	CMR	Primary use is as a hardener for epoxy resins
hardener	Hexahydro-3-methylphthalic anhydride	57110-29-9	D	Candidate list	1000 ppm	CMR	Primary use is as a hardener for epoxy resins
	Mercury /Mercury compounds						
batteries	mercury and its compounds	7439-97-6	R	D 2006/66/EC & adaptations	see D	toxix for reproduction	On batteries and accumulators, see Directive 2013/56/EU, mercuryfree batteries, silver-oxide button cells, alkaline batteries, zink carbon batteries, 0,0001 mass% of battery
EEE/ Electrical & Electronic Equipment	mercury and its compounds	7439-97-6	R	Directive 2011/65/EU	0,10% 1000 ppm	toxix for reproduction	In electrical and electronic equipment
surface treatment				REACH Annex XVII		toxix for reproduction	As wood protection, antifouling
catalyst/accelerator	Phenylmercury and its compounds		R	REG (EU) 848/2012	0,01%	CMR	Phenylmercury compounds are used as catalyst in the production of polyurethane (octobre/2017 entry 62)

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POP R(EC) No 850/2004 POP Persistent organic Pollutants POP Regulation (EU) No 850/2004							
biocides/insecticides/ pesticides BPR	DDT (1,1,1-Trichlor-2,2-bis (4-chlorophenylethane) & Isomere Gesarol	50-29-3	R	POP Regulation (EU) No 850/2004 Stockholmer Convention		carcinogenic, poison, tox	Wood protection, insecticides
biocides/insecticides/ pesticides BPR	Pesticides; Hexachlorobenzene (HCB), Hexabromobiphenyl Hexachlorobutadiene Endosulphan,	118-74-1 6355-01-8 87-68-3	R	POP REG (EC) No 850/2004 & (EU) No 519/2012		carcinogenic	Insecticides, plasticiser and flame retardant. HCB is a contaminant of PCP
biocides/insecticides/ pesticides BPR	HCH Hexachlorocyclohexane Lindan	58-89-9		POP Regulation		CMR	Insecticides,
biocides/insecticides/ pesticides BPR	Mirex Dodecapentacyclo (x) decan	2385-85-5		POP Regulation		CMR	Insecticides,
flame retardant	SCCP (short chained chlorinated paraffins	85535-84-8	R	REG (EU) No 2015/2030		PBT	in polymeres
flame retardant	HBCDD	25637-99-4	R	REG (EU) No 2016/293 was published to amend POP REG		PBT	The prohibition will not apply if the concentration of HBCDD equal to or below 100 mg/kg (0.01% by weight) when it occurs in substances, preparations, articles or as constituents of the flame-retarded parts of articles
stabilizer	Tinorganic compounds (TBT, TPT, DBT, DOT)						
surface treatment	Trisubstituted organostannic compounds such as Tributyltin- (TBT) compounds and triphenyltinn- (TPT) compounds		R	Regulation (EC) No 276/2010 => (REACH Annex XVII)	see REG	CMR	Tri-substituted organostannic compounds such as tributyltin (TBT) compounds and triphenyltin (TPT) compounds shall not be used after 1 July 2010 in articles where the concentration in the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin
stabilizer	DBT Dibutyltin- compounds		R	REG (EC) Nr. 276/2010 amending REACH Annex XVII	see REG	CMR	Dibutyltin (DBT) compounds shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin

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stabilizer	DOT Dioctyltin- compounds		R	REG (EC) Nr. 276/2010 amending REACH Annex XVII	see REG	CMR	Shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin
biocides/insecticides/ pesticides BPR	Tin compounds/Organotin as DBT; DOT; TBTO		D	see REACH Candidate list	1000 ppm	CMR	Antifouling, Antiseptic, antifungal agent, paint, pigment, stabilizer for PVC; curing catalyst for silicone resin and urethane resin, foaming agent
surface treatment	DBB Di-i-oxo-di-n-butylstanniohydroxy- borane, tin organic compounds	75113-37-0	R	REACH Annex XVII	0,10%	toxic for reproduction	Substances and preparations, in antifouling paints
stabilizer	Bis(tributyltin)oxide TBTO Tributylzinnoxide	56-35-9	D	REACH Candidate list	1000 ppm	Persistent, bioaccumulative and toxic	Antifouling, Antiseptic, antifungal agent, paint, pigment, stabilizer for PVC; PCP, foaming agent
adhesives	Dibutyltin dichloride (DBTC)	683-18-1	D	REACH Candidate list	1000 ppm	Toxic for reproduction (Article 57 c)	Additive in rubber, stabilizer in PVC plastic, catalyst in the production of polyurethanes and silicones, for use in insulations and coatings. Silicone rubber (sealants, dental products, paper coatings), polyurethane (foam plastics, protective coatings), glass (coatings), insulation in electronic products and cables  Most of OP appears to be used as an intermediate for the production of resins, non-ionic surfactants and rubber additives
additive/agent/precursors							
stabilizer							
synthetic/plastics							
stabilizer	Dibutyltin (DBT) compounds		R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR
synthetic/plastics	Dibutyltin oxide	818-08-6	R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR
stabilizer	Dioctyltin (DOT) compounds		R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR
REACH Annex XVII	Dioctyl Tin Oxide	870-08-6	R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR
stabilizer	Tri-substituted organostannic compounds		R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR
stabilizer	Other tri-substituted organostannic compounds	-	R	REACH Annex XVII	1000 ppm	CMR	Stabilizer, catalyst, additive in textiles, rubber, PUR

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additive/agent/precursors	4-Nitrobiphenyl						
additive/agent/precursors	4-Nitrobiphenyl and its salts, all members		R	Reach Annex XVII Regulation (EC) No 552/2009			Impurities in textile and leather paints, antioxidants in lubricants, rubber/latex, plastics
impurities	4-Nitrobiphenyl	92-93-3		Entry 14			impurities
plastic	Methandiisocyanate(MDI)						
adhesives	Methylendiphenyl - Diisocyanate (MDI) & Isomeres	26447-40-5 101-68-8 5873-54-1 219-799-4	R	REACH Annex XVII after 27.10.2010 & R (EU) No 126/2013	see REG		Shall not be placed on the market - for supply to the general public as a constituent of mixtures in concentration equal to or greater than 0,1% by weight of MDI see Regulation. PUR FOAM
adhesives	Cyclohexane	110-82-7	R	REACH Annex XVII after 27.06.2010	see REG		Shall not be placed on the market - for supply to the general public as a constituent of neopren-based contact adhesives see Regulation



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	Legends						
SVHC	<b>SVHC properties</b>	Category of very high concern					
SVHC	REACH Regulation 1907/2006 article 57 a, b ,c, d, e, f						
SVHC	CMR	cancer(a), mutagene (b), toxic of reproduction (c)					
SVHC	PBT	persistent, bioaccumulativ, toxic (d)					
SVHC	vPvB	very persistent,very bioaccumulativ, toxic (e)					
SVHC	endocrine disruptor	Equivalent level of concern having probable serious effects to human health (f)					
	ECHA	European Chemical Agency					
	REG	Regulation					
	D declarable	substances is to declare according to article 33 REACH Regulation 1907/2006 "Duty to conform of SVHC substances of very high concern"					
	A	AUTHORISATION					
	R	RESTRICTION - substance is restricted					
	EEE	EEE electrical and electronical equipment (EEE)					
	PCB	Printed circiut board					
	detergents	A detergent is a surfactant or a mixture of surfactants with "cleaning properties in dilute solutions. As detergent substances used in cleaning agents and detergents are called to facilitate a cleaning process. They lower the interfacial tension between the surface to be cleaned, the dirt, and the solvent (usually water) down. It refers to both naturally occurring and synthetic surfactants (emulsifiers and wetting agents).					

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REACH	<b>REACH Regulation (EC) No 1907/2006</b>	REACH Regulation (EC) No 1907/2006 (Registration, Evaluation, Authorisation & Restriction of Chemicals)					
REACH	<b>Objectives</b>	The purpose of this Regulation is to ensure a high level of protection of human health and the environment, including the promotion of alternatives methods for assessment of hazards enhancing competitiveness and innovation.					
REACH	<b>ECHA</b>	European Chemical Agency see newest press					
REACH	<b>REACH ANNEX XVII</b>	Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (71. Entries)					
REACH	REACH Regulation (EC) No 552/2009	Directive 76/769/EEC inclusive adoption is repealed (01.06.2009) published Commission Regulation EC No 552/2009 => amending REACH Regulation (EC) No 1907/2006 as regards Annex XVII					
REACH	<b>Regulation (EU) No 126/2013</b>	With Regulation (EU) No 126/2013 - Amendments in Annex XVII of REACH Regulation (EC) No 1907/2006					
REACH ANNEX XVII	REG (EU) No 1271/2013	PAH Regulation (EU) No 1271/2013 Annex XVII Supplement					
REACH ANNEX XVII	REG (EU) No 2017/1000	PFOA Regulation (EU) No 2017/1000 Annex XVII Entry 68					
REACH ANNEX XVII	REACH ANNEX XVII	Regulation (EU) EU 2017/1510 amending the Appendices to Annex XVII to Regulation (EC) No 1907/2006 Entry Updates as regards CMR substances & CLP					
REACH PAH	<b>AFPS GS 2014:01</b>	PAH New PAH Requirement under ProdSG for German Market. Product Safety Commission (AfPS) GS Specification. Testing and assessment of PAH polycyclic aromatic hydrocarbons in the course of awarding the GS mark. Specification pursuant to article 21(1) no. 3 of the Product Safety Act (ProdGS)					
REACH	<b>Candidate list/SVHC</b>	Certain substances that may have serious and often irreversible effects on human health and the environment can be identified as Substances of Very High Concern (SVHCs), and these substances will be published on the Candidate list.					
REACH	<b>SVHC</b>	SVHC substances of very high concern. The criteria are given in article 57 of the REACH Regulation. Substances with CMR PBT or vPvB properties, see ECHA <a href="https://echa.europa.eu/de/candidate-list-table">https://echa.europa.eu/de/candidate-list-table</a>					
REACH	Substances properties	CMR	carcinogen, mutagen, toxic of reproduction				
REACH	Substances properties	PBT	persistent, bioaccumulative and toxic				
REACH	Substances properties	vPvB	very persistent and very bioaccumulative				
REACH	Substances properties	vPvB	very persistent and very bioaccumulative				

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REACH	SVHC						Candidate list of substances of very high concern (SVHC) for authorisation first list published by ECHA (European Chemical Agency) at 28.10.2008. SVHC added to the Candidate List twice a year by ECHA published. SEE ECHA Candidate list
REACH	<b>Article 33</b>						Duty to communicate information on substances (SVHC) in articles - containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (see Article 33 & Candidate list)
REACH	<b>EuGH Decison Case C-106/14</b>						Judgment of the European Court CASE C-106/14. ECJ judgment Press release No. 100/15. As the term "product" should be understood, was controversial between the member state. On September 10, 2015, the European Court has ruled that the limit for the content of substances of concern (SVHC) in articles of 0.1% mass -% also applies to products that are part of another product. This means that producers, importers and suppliers of articles have the obligations under Article 33 of the REACH Regulation also to comply if the limit is exceeded only in a partial product
REACH	ANNEX XIV* Authorisation						REACH Annex XIV, LIST OF SUBSTANCES SUBJECT TO AUTHORISATION
REACH	ANNEX XIV* Authorisation						The authorisation process aims to ensure that substances of very high concern (SVHCs) are progressively replaced by less dangerous substances or technologies where technically and economically feasible alternatives are available
REACH	ANNEX XIV* Authorisation						The REACH Regulation requires that ECHA recommends from the "Candidate List" priority substances for inclusion in Annex XIV of REACH (the "Authorisation List") and for these substances proposes Annex XIV entries (i.e. transitional arrangements and, where relevant, exemptions and review periods) to the European Commission, taking into account the opinion of the Member State Committee. The European Commission finally decides, by "comitology" procedure (with scrutiny), which substances will be included in Annex XIV and what the associated entries will be.
REACH Annex XIV	REG (EC) No 143/2011 & corrigendum						First substances of very high concern - added to Annex XIV with Regulation (EU) No 143/2011 SVHC
REACH Annex XIV	REG (EC) No 125/2012						SVHC - added to Annex XIV with Regulation (EU) No 125/2012 SVHC
REACH Annex XIV	REG (EC) No 348/2013						further substances are added to Annex XIV (22 SVHC in Annex XIV)
REACH Annex XIV	REG (EC) No 895/2014						of 14. August 2014 amending Annex XIV to Regulation (EC) No 1907/2006 (31. SVHC Annex XIV Fomaldehyde, Arsenic acid, Diglyme, 1,2 Dichlorethan, Moca and Chromate compounds)
REACH Annex XIV	REG (EU) No 2017/999						of 13.Juni 2017 amending Annex XIV to Regulation (EC) No 1907/2006 (43. Entry in Annex XIV + nine SVHC: 1-Bromopropane CAS 106-945-5, further Phthalates,Nonylphenole)
REACH Annex XIV	Poposals						Public consultation on 18 substances for authorisation under REACH BPA, Dechlorane Plus
CLP	<b>CLP Regulation (EC) Nr. 1278/2008</b>						CLP Regulation (EC) No 1272/2008 (Classification, labelling and packaging of substances and mixtures)
CLP							legends: Directive 67/548/EEC inclusive adoption shall be repealed (see transitional period article 60/61) => CLP 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

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ROHS	EEE electrical and electronic equipment	EEE electrical and electronic equipment (EEE)					in electronic an integrated circuit IC, lead accumulatore, plastic PVC, microcircuit, chip semiconductor devices, as well as passive components, LEDs
ROHS	<b>ROHS</b>						On the restriction of the use of certain hazardous substances in electrical and electronic equipment
ROHS	<b>ROHS2 DIRECTIVE 2011/65/EU</b>						ROHS Directive 2002/95/EC is repealed with effect from 3 January 2013 => RECAST Directive 2011/65/EU January 2013 published at 8. June 2011. Member states shall adopt and published, by 2 January 2013
ROHS	<b>Directive EU 2015/863</b>						COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 of 31 March 2015 amending Annex II (PHTHALATES DEHP; BBP; DBP, DIBP) to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances
ROHS Proposals	<b>ROHS Exemptions</b>						see Öko Institut ROHS Evaluation and <a href="http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm">http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm</a>
ROHS Proposals	<b>ROHS Substance Restrictions</b>						see Öko Institut ROHS Evaluation Consultation Proposals for New Substance Restriction Diaanimony trioxide, TBBPA Tertrabromobisphenol A, Indium Phosphide; Medium Chain Chlorinated paraffins (MCCPs), Beryllium and its compounds, Nickel sulphate and Nickel sulfamate, Cobalt dichloride and Cobalt sulphate <a href="http://rohs.exemptions.oeko.info/index.php?id=127">http://rohs.exemptions.oeko.info/index.php?id=127</a>
JIG	<b>Joint Industry Guide</b>						JIG- 101 Joint Industry Guide, Material Composition Declaration for Electrotechnical Products
ROHS	<b>CENELEC EN 50581:2012</b>						ROHS2 Article 7 (b) : Manufacture draw up the required technical documentations and carry out the internal production control procedure in line with module A of Annex II to Decision No 768/2008/EC or have it carried out. - Decision No 768/2008/EC Annex II; modul A Method for the declaration of Conformity, Technical Documents; internal production control EN 50581/IEC 62476/ IEC 62474
ROHS	CENELEC EN 62474:2012						Materialdeclaration of dangerous substances & substances of very high concern in EEE
ROHS	CENELEC EN 62474:2012						Reference list Substance group
ROHS	CENELEC EN 62474:2012						Declarable Substance list include: substances of very high concern (candidate list), substances of the WEEE Directive Annex VII and substances, which are restricted by other laws or are subject to declaration (other countries/EEE Industry) in Electrical & Electronic Equipment (EEE).
ROHS	CENELEC EN 62321- x-x :2015						chemical Analytical Test Results
ROHS	CENELEC EN 50581 :2012						EN 62474:2012 will be replaced by IEC 63000 in approximately 2020/2021 => ROHS3
ROHS	IPC						Data Exchange Standards IPC. Material Declaration Management. IPC-1752A provides a standard for companies in the supply chain to share information on materials in products
ROHS	CENELEC EN						European Committee for Electrotechnical Standardization
ROHS	IEC						International Electrotechnical Commission IEC: International Standards and Conformity Assessment for all electrical, electronic and related technologies /CH Switzerland

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WEEE	WEEE DIRECTIVE 2012/19/EU						WEEE 2012/19/EU Waste of Electrical and Electronic Equipment, selective treatment Annex VII plastic with brominated flame retardants, mercury components CCFL, Beryllium copper, EN 50625-1:2013
WEEE	EN 50625-1:2013						Selective Treatment Annex VII of the Directive WEEE2012/19/EU Treatment of waste CENELEC STANDARD EN 50625-1:2013

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Batteries	Directive 2006/66/EC						on batteries and accumulators and waste batteries and accumulators Review
Batteries							Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators entered into force on 26 September 2006 (BGBl. II No 159/2008 AT). Decision 2009/603/EC and Regulation (EU) No 1103/2010 establishing, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, rules as regards capacity labelling of portable secondary (rechargeable) and automotive batteries and accumulators
Batteries	Directive 2013/56/EU						DIRECTIVE 2013/56/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20. November 2013
Batteries							amending Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators as regards the placing on the market of portable batteries and accumulators containing cadmium intended for use in cordless power tools, and of button cells with low mercury content, and repealing Commission Decision 2009/603/EC
POP	POP REG(EC) No 850/2004						Regulation (EC) No 850/2004 about persistent organic pollutants POP (Stockholmer Convention 2004 defined), R (EC) No 1195/2006 & R (EC) No 304/2009, R (EU) No 756/2010 & R (EU) No 757/2010, R (EU) No 519/2012. SVHC added to the POP Regulation SCPP, HBCDD, Endosulfan, Hexachlorbutadien HCB
Biocides BPR	Biocides BPR 528/2012						BPR
Biocides BPR	Biocides BPR 528/2012						Recast REGULATION (EU) No 528/2012 concerning the making available on the market and use of biocidal products, Biocidal Product Regulation BPR, Regulation (EU) 528/2012
Biocides BPR	Biocides BPR 528/2012						The Biocidal Products Directive 98/8/EC (BPD) & amendments, the classification of biocides is broken down in four main group and into 23 product types (i.e. application categories), with several comprising different subgroups
Biocides BPR	Biocides BPR 528/2012						Disinfectants and general biocidal products
Biocides BPR	Biocides BPR 528/2012						Preservatives: for examples - wood, preservatives, rubber and polymerised materials (synthetics) protection, dyestuffs, synthetics
Biocides BPR	Biocides BPR 528/2012						Pest control: Pesticides
Biocides BPR	Biocides BPR 528/2012						Other Biocides: Antifouling products
Biocides BPR	Biocides BPR 528/2012						Pesticides are substances or mixture of substances intended for preventing, destroying, repelling or mitigating any pest

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Packaging and packaging components	Directive 94/62/EC						on packaging and packaging waste
Packaging and packaging components	Directive 2004/12/EC						On packaging and packaging waste Directive 94/62/EC amending => D 2005/20/EC. See Directive 2002/72/EC relating to plastic materials and articles intended to come into contact with foodstuffs
Packaging and packaging components	Directive 2013/2/EU						Adoption of Annex I in the Directive 94/62/EC
textiles	OEKO-TEX Standard 100						The STANDARD 100 by OEKO-TEX® is a globally uniform, independent testing and certification system for textile raw, intermediate and end products at all processing stages as well as the accessories used. The standard contains restrictions REACH Annex XVII, XIV, Nickel, restricted AZO, Cadmium, PCP. Oeko-Tex® has established four product classes to which the successfully tested textile products can be assigned. The intensity of skin contact with the product plays a major role.
Ozon	Ozon depleting substances						Ozon depleting substance (Montreal protocol & Kyoto protocol)
Ozon	Ozon depleting substances						On substances that deplete the ozon layer (2000) => Regulation (EC) No 1005/2009 & supplement R (EC) 744/2010.
Ozon	About certain Fluorinated Green house gases						Regulation (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing R (EC) No 842/2006
Other Regulation/other Countries	Japan Chemical Substance Control Law						Japan Chemical Substance Control Law (Japan CSCL) The Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (hereinafter the "Chemical Substances Control Law") was firstly enacted in 1973 to prevent environmental pollution by chemical substances that pose a risk to human health or the environment. That latest amendment was made in 2009. Full implementation of amended CSCL started from 1 April 2011.
Other Regulation/other Countries	CAN Gazette						Prohibition of Certain Toxic Substances Regulations, 2012, CANADA Acts (SOR/2012-285)
Other Regulation/other Countries	TSCA						Chemicals under the Toxic Substances Control Act (TSCA). EPA United States Environmental Protection Agency
Other Regulation/other Countries	Chemicals Control Act (CCA) in Korea						If you export a chemical product to South Korea, you not only need to comply with K-REACH, but also need to comply with Korean Chemicals Control Act (CCA). The CCA (previously toxic chemicals control act or TCCA) passed national assembly in May in 2013 and it comes into force in Jan 2015. It is a new law focusing on chemical reporting and chemical accident prevention. In this article, we will summarize the major obligations of chemical manufacturers and importers under CCA and how to prepare a letter of confirmation for CCA
Other Regulation/other Countries	California Bill						California Assembly Bill No. 826 - Perchlorate Contamination Prevention Act; implemented July 1, 2006

**KEBA AG**  
**Prohibition and declaration List of dangerous substances (black list & Grey list)**  
**27.06.2018 grai**

field of application	Stoffbezeichnung	CAS-No	INFORMATION/ DECLARE (D); RESTRICTION (R); AUTHORISATION (A)	LEGAL requirements EU/other countries Regulations REG, Directives DIR	Threshold in % by weight/ in ppm Annex XIV*	SVHC/ properities	Application - Generic examples typically used
Other Regulation/other Countries	California PROP 65						California Propositions (Prop 65) The list contains a wide range of naturally occurring and synthetic chemicals that are known to cause cancer or birth defects or other reproductive harm. These chemicals include additives or ingredients in pesticides, common household products, food, drugs, dyes, or solvents. Listed chemicals may also be used in manufacturing and construction, or they may be byproducts of chemical processes, such as motor vehicle exhaust. May 25, 2018. 29 of the these 66 substances are already regulated under ROHS, REACH Restrictions, Candidate list and POP Regulation. 37 are new.
Other Regulation/other Countries	Turkish KKDİK Regulation 2017						On 23 June 2017, the Ministry of Environment and Urbanization(MoEU) in Turkey published its REACH-like KKDİK regulation



**REACH candidate list  
191 SVHC 27.06.2018**

SVHC	field of application	Substances	CAS-No.	Basis for Identification as a SVHC	Reason for proposing	application - Generic examples - typically used in	ECHA published
1	pigment/dyes	Anthracene	120-12-7	Persistent, bioaccumulative and toxic	PBT	Anthracene is mainly used as a basic material for the production of pigment/dyes, especially anthraquinone pigment/dyes. Anthraquinone is also used as a catalyst in production of wood pulp.	28.10.2008
2	pigment/dyes	MDA 4,4' Diaminodiphenylmethane	101-77-9	Carcinogen, cat. 2	CMR	pigment/dyes, especially reactiv and indanthren-pigment/dyes, vat dyes, intermediate/interstage product in synthetic resins, adhesives, vulcanization accelerator	28.10.2008 => <b>ANNEX XIV 2011</b>
3	plasticiser	<b>DBP Dibutyl phthalate</b>	<b>84-74-2</b>	<b>Toxic for reproduction, cat.2, endocrine</b>	<b>endocrine</b>	<b>Used as a plasticiser in polymers, such as PVC. Endocrine disrupting properties Article 57 (f)</b>	<b>28.10.2008 =&gt; ANNEX XIV 2011</b>
4	EEE/ Electrical & Electronic Equipment	Cobalt dichloride	7646-79-9	Carcinogen, cat. 2	CMR	Used for electroplating processes (galvanoplasty), used for manufacturing vitamin B12. Additive in the rubber manufacturing to improve the adhesion of the rubber (tire industry), dye mordants, dry agents	28.10.2008
5	EEE/ Electrical & Electronic Equipment	Diarsenic pentaoxide	1303-28-2	Carcinogen, cat.1	CMR	Used in the dyeing industry, as a pesticides, in metallurgy (to harden copper, lead or gold in alloys), for manufacturing special glass, in wood preservatives, EEE electrical and electrical equipment	28.10.2008 => <b>ANNEX XIV 2012</b>
	pigment/dyes						
6	EEE/ Electrical & Electronic Equipment	Diarsenic trioxide	1327-53-3	Carcinogen, cat.1	CMR	Used as a starting point for the preparation of elemental arsenic, arsenic alloys and arsenide semiconductor, EEE electrical and electrical equipment, used as decolorizing agent for glass and enamels, wood preservatives	28.10.2008 => <b>ANNEX XIV 2012</b>
	pigment/dyes						
7	EEE/ Electrical & Electronic Equipment	Sodium dichromate, dihydrate	7789-12-0	Carcinogen, cat.1B, Mutagen, cat. 1B Toxic for reproduction, cat. 1B	CMR	Used for metal finishing, aiding corrosion resistance: the main process is chrome plating –electroplating, uses are in conversion coating, passivating and anodizing, paints and plastic coloration	28.10.2008 => <b>ANNEX XIV 2013</b>
	pigment/dyes						

8	fragrances	<b>5-tert-butyl-2,4,6-trinitro-m-xylene (MUSK xylene)</b>	81-15-2	Very persistent and very bioaccumulative	vPvB	fragrances	28.10.2008 => ANNEX XIV 2011
9	plasticiser	<b>DEHP Bis (2-ethyl)(hexyl)phthalate)</b>	117-81-7	<b>Toxic for reproduction, cat.2, endocrine</b>	endocrine	<b>Used as a plasticiser in polymers, such as PVC. Endocrine disrupting properties (Article 57(f) - human health</b>	<b>28.10.2008 =&gt; ANNEX XIV 2011</b>
10	flame retardant	<b>HBCDD Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (<math>\alpha</math>-HBCDD, <math>\beta</math>-HBCDD, <math>\gamma</math>-HBCDD)</b>	25637-99-4	Persistent, bioaccumulative and toxic	PBT	flame retardant	28.10.2008 =>Anhang XIV 2011 => <b>POP Regulation 2016/293 &amp; 2016/460</b>
11	plasticiser/softener	<b>SCCP`s Alkanes C10-13, chloro (Short Chain Chlorinated Paraffins)</b>	85535-84-8	Persistent, bioaccumulative and toxic	PBT	flame retardant, surfactant	28.10.2008 =>Anhang XIV=>
	flame retardant						<b>POP Regulation (EU) No 519/ 2012</b>
12	pigment/dyes	Bis(tributyltin)oxide TBTO	56-35-9	Persistent, bioaccumulative and toxic	PBT	antifouling (insecticides, biocides), stabilizer PVC	28.10.2008
13	pigment/dyes	<b>Lead hydrogen arsenate</b>	7784-40-9	Carcinogen, cat. 1 Toxic for reproduction cat.1	CMR	electrical and electronical equipment (EEE): In electronics an integrated circuit ( also known as IC, microcircuit, chip, miniaturized electronics)- semiconductor devices, as well as passive components, biocides, antifouling	28.10.2008
	EEE/ Electrical & Electronic Equipment						
14	pigment/dyes	Triethyl arsenate	15606-95-8	Toxic for reproduction, cat.2	CMR	electrical and electronical equipment (EEE) in electronic - integrated circuit IC, lead accumulators, plastic PVC, microcircuit, chip semiconductor devices, as well as passive components, biocides/antifouling	28.10.2008
	EEE/ Electrical & Electronic Equipment						
15	plasticiser	Benzyl butyl phthalate BBP	85-68-7	<b>Carcinogen, cat. 1, endocrine</b>	endocrine	<b>Adhesives, sealants and coating products. Endocrine disrupting properties (Article 57(f) - human health)</b>	28.10.2008 => ANNEX XIV 2011

ECHA published (2nd)							
16	additive	2,4-Dinitrotoluene (2,4 DNT)	121-14-2	Carc. 1B; muta. 2; repr. 2; acute tox.3	CMR	basic product - dyes and Polyurethane (PUR)	13.01.2010 => <b>ANNEX XIV 2012</b>
17	pigment/dyes	Anthracene oil	90640-80-5	Persistent, bioaccumulative and toxic; very persistent very bioaccumulative, carcinogene cat.2, mutagene. cat.2 ** (ppm)	**PBT CMR vPvB depending on concentration	basic product, fungicide, biocides protection treatment see REACH Annex XVII, corrosion protection, reduction agent	<b>13.01.2010 =&gt; Annex XIV 2017</b>
18	surface treatment	Anthracene oil, anthracene paste, distr. Lights	91995-17-4				13.01.2010
19		Anthracene oil, anthracene paste, anthracene fraction	91995-15-2				13.01.2010
20		Anthracene oil, anthracene-low	90640-82-7				13.01.2010
21		Anthracene oil, anthracene paste	90640-81-6				13.01.2010
22	plasticiser	<b>Diisobutyl phthalate DIPB</b>	<b>84-69-5</b>	<b>Toxic for reproduction, cat.2, endocrine</b>	endocrine	<b>Coating products, fillers, putties, plasters, modelling clay and polymers. Endocrine disrupting properties (Article 57(f) - human health)</b>	13.01.2010 => <b>ANNEX XIV 2012</b>
23	Isolation	Aluminosilicate, Refractory Ceramic Fibres		carcinogen cat.2	CMR	ceramic fibre	13.01.2010
24	Isolation	Zirconia Aluminosilicate, Refractory Ceramic Fibres		carcinogen cat.2	CMR	ceramic fibre	13.01.2010
25	pigment/dyes	Lead chromate	7758-97-6	carcinogen cat.2, toxic of reproduction cat.1	CMR	colour pigment, corrosion protection	13.01.2010 => <b>ANNEX XIV 2012</b>
26	pigment/dyes	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	carcinogen cat.2, toxic of reproduction cat.1	CMR	colour pigment	13.01.2010 => <b>ANNEX XIV 2012</b>
27	pigment/dyes	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	carcinogen cat.2, toxic of reproduction cat.1	CMR	colour pigment	13.01.2010 => <b>ANNEX XIV 2012</b>
28	flame retardant	Tris(2-chloroethyl)phosphate TCEP	115-96-8	toxic of repr. cat.2	CMR	softener, viscosity regulator, flame retardant additive (PUR)	13.01.2010 => <b>ANNEX XIV 2012</b>
29	EEE/ Electrical & Electronic Equipment	Coal tar pitch, high temperature	65996-93-2	PBT; vPvB; carc. cat.2	PBT/CMR	mainly used as a binding agent in the production of carbon electrodes for metal industry, heavy duty corrosion protection, basic product	<b>13.01.2010 =&gt; Annex XIV 2017</b>
ECHA published (3rd)							
30	additive	acrylamide	79-06-1	carcinogenic, mutagene	CMR	acrylamide is used in the manufacture of dyes and polyacrylamide	30.03.2010 => <b>Annex XVII</b>

ECHA published (4th)							
31	additive	Trichloroethylene	79-01-6	Carcinogen, cat.1B,	CMR	is mainly used as intermediate in the manufacture of chlorinated and fluorinated organic compound. Other uses are for cleaning and degreasing of metal parts	18.06.2010 => <b>ANNEX XIV 2013</b>
32	EEE/ Electrical & Electronic Equipment	<b>Boric acid</b>	10043-35-3 11113-50-1	toxic for reproduction, cat.	CMR	Boric acid is widely used on account of its consistency-influencing, flame retarding, antiseptic and preservative properties.	18.06.2010
	detergents						
33	EEE/ Electrical & Electronic Equipment	Disodium tetraborate, anhydrous, Disodium tetraborate decahydrate Disodium tetraborate pentahydrate	1330-43-4, 1303-96-4, 12179-04-3	toxic for reproduction, cat.	CMR	Uses include a multitude of application, e.g. in detergents and cleaners, in glass and glass fibres, ceramics industrial fluids, flame retardant, fertilisers, biocides	18.06.2010
	detergents						
34	EEE/ Electrical & Electronic Equipment	Tetraboron disodium heptaoxide, hydrate	12267-73-1	toxic for reproduction, cat.	CMR	Uses include a multitude of application, e.g. in detergents and cleaners, in glass and glass fibres, ceramics industrial fluids, flame retardant, fertilisers, biocides	18.06.2010
	detergents						
35	additive	Sodium chromate	7775-11-3	carcinogen, cat.1 mutagen cat. 1, toxic of reproduction cat. 1	CMR	sodium chromate is used as an intermediate in the manufacture of other chromium compounds.	18.06.2010 => <b>ANNEX XIV 2013</b>
36	surface treatment	Potassium chromate	7789-00-6	carcinogen, cat.1 mutagen cat. 1	CMR	potassium chromate is used as a corrosion inhibitor for treatment and coating of metals	18.06.2010 => <b>ANNEX XIV 2013</b>
37	additive	Ammonium dichromate	7789 09 -5	carcinogen, cat.1 mutagen cat. 1, toxic of reproduction cat. 1	CMR	is mainly used as an oxidising agent. Other uses in the manufacture of photosensitive screens	18.06.2010 => <b>ANNEX XIV 2013</b>
38	surface treatment	Potassium dichromate	7778-50-9	carcinogen, cat.1 mutagen cat. 1, toxic of reproduction cat. 1	CMR	potassium dichromate is used for chrome metal manufacturing and as corrosion inhibitor for treatment and coating of metals. Further use as a textile mordant	18.06.2010 => <b>ANNEX XIV 2013</b>

ECHA published (5th)							
39	EEE/ Electrical & Electronic Equipment	Cobalt(II)sulphate	10124-43-3	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Cobalt(II) sulphate is mainly used in the manufacture of other chemicals including pigments and possibly catalysts, driers. Further applications comprise surface treatments, such as electroplating, corrosion prevention, decolourisation in glass, pottery in batteries, animal food supplements and soil fertilisers	15.12.2010
	pigment/dyes						
	surface treatment						
40	additive	Cobalt(II) dinitrate	10141-05-6	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Cobalt(II) dinitrate is mainly used in the manufacture of other chemicals including catalysts. Further applications may include surface treatment and in batteries	15.12.2010
	surface treatment						
41	additive	Cobalt (II) carbonate	513-79-1	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Cobalt(II) carbonate is mainly used in the manufacture of catalysts. Minor uses may include as a feed additive, in the manufacture of other chemicals including pigments, and as an adhesive in ground coat frit.	15.12.2010
	pigment/dyes						
42	pigment/dyes	Cobalt(II) diacetate	71-48-7	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Cobalt(II) diacetate is mainly used in the manufacture of catalysts or as a catalyst. Minor uses may include the manufacture of other chemicals including pigments, surface treatments, in alloys, dyes, rubber adhesion, and as a feed additive.	15.12.2010
	surface treatment						

43	solvent	2-Methoxyethanol	109-86-4	Toxic to reproduction in accordance with REACH Art. 57(c)	CMR	2-methoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.	15.12.2010
44	solvent	2-Ethoxyethanol	110-80-5	Toxic to reproduction in accordance with REACH Art. 57(c)	CMR	2-ethoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.	15.12.2010
45	pigment/dyes	Chromtrioxide	1333-82-0	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Chromium trioxide is mainly used in metal finishing, such as electroplating (e.g. hard chrome and decorative plating), conversion coatings and brightening. It is also used as a fixing agent in waterborne wood preservatives. Minor uses are e.g. in the manufacture of pigments and pints, in catalyst and detergent manufacture, and as an oxidising agent.	15.12.2010 => ANNEX XIV 2013
	EEE/ Electrical & Electronic Equipment						
	surface treatment						
46	EEE/ Electrical & Electronic Equipment	Acids generated from chromium(VI) trioxide and their oligomers. Group containing Chromic acid Dichromic Oligomers of chromic acid and dichromic	77-38-94-5 13530-68-2 Not yet assigned	toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	Acids generated from chromium trioxide and their oligomers are mainly used in metal finishing, such as electroplating (e.g. hard chrome and decorative plating), conversion coatings and brightening. It is also used as a fixing agent	15.12.2010 => ANNEX XIV 2013
	pigment/dyes						
	surface treatment						
ECHA published (6th)							
47	surface treatment	strontium chromate	7789-06-2	carcinogenic REACH art. 57(a)	CMR	Strontium chromate as a rust-and corrosion-resistant pigment (in coating mixtures)in paints, varnishes and oil paints	20.06.2011 => Anhang XIV 2014
48	solvent	2-ethoxyethyl acetate	111-15-9	toxic to reproduction REACH Art 57(c)	CMR	solvent in coatings, paints and varnishes, but also as intermediate in the manufacture of cyanoacrylate adhesives.	20.06.2011
49	plasticiser	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	toxic to reproduction REACH Art 57(c)	CMR	DHNUP plasticizer in PVC (mainly used in CAN)	20.06.2011
50	additive	Hydrazine	7803-57-8 302-01-2	carcinogenic REACH art. 57(a)	CMR	Reducing agent / corrosion inhibitor	20.06.2011

51	solvent	1-methyl-2-pyrrolidone (NMP)	872-50-4	toxic to reproduction REACH Art 57(c)	CMR	NMP is due to its thermal stability and high polarity is often used as a solvent. Solvent for polymers such as acrylates, epoxies, polyurethanes, polyvinyl chloride, polyimides, Polyamidimid. Production of polyurethane foam (PUR foam).	20.06.2011
52	solvent	1,2,3-trichloropropane	96-18-4	Carcinogenic and toxic to reproduction in accordance with REACH Art. 57(a) and 57(c)	CMR	1,2,3-trichloropropane is used as a solvent for oils, fats, waxes and special polymers, as well as a trifunctional crosslinker (eg Polysulfidelastomeren) and heterocyclic synthesis.	20.06.2011
53	plasticiser	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	toxic to reproduction REACH Art 57(c)	CMR	DIHP plasticisers in PVC	<b>20.06.2011=&gt; Annex XIV 2017</b>
	additive	Cobaltdichlorid	7646-79-9	further properties toxic to reproduction REACH Art 57(c)	CMR	Synthesis and use of other substances in electroplating, pigments in textile dyes and wastewater treatment	20.06.2011
ECHA published (7th)							
54	surface treatment	Dichromium tris(chromate)	24613-89-6	carcinogenic REACH art. 57(a)	CMR	Mainly used in mixtures for metal surface treatment in the aeronautic/aerospace, steel and aluminium coating sectors.	19.12.2011 <b>=&gt; Annex XIV 2014</b>
55	surface treatment	Potassiumhydroxyoctaoxo dizincate dichromate	11103-86-9	carcinogenic REACH art. 57(a)	CMR	Mainly used in coatings in the aeronautic/ aerospace, steel and aluminium coil coating and vehicle coating sectors.	19.12.2011 <b>=&gt; Annex XIV 2014</b>
56	surface treatment	Penta- zinc chromate-octa-hydroxide	49663-84-5	carcinogenic REACH art. 57(a)	CMR	Mainly used in coatings in the vehicle coating and aeronautic / aerospace sectors.	19.12.2011 <b>=&gt; Annex XIV 2014</b>
	Isolation	Aluminosilicate Refractory Ceramic Fibres (RCF)	-----	carcinogenic REACH art. 57(a)	CMR	Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (buildings and industrial process equipment)	19.12.2011
	Isolation	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	-----	carcinogenic REACH art. 57(a)	CMR	Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications	19.12.2011
57	additive	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	carcinogenic REACH art. 57(a)	CMR	Prio Annex XIV Mainly used for manufacture of other substances. Minor uses are as hardener for epoxy resins, e.g. for the production of rolls, pipes and moulds, and as well for adhesives.	19.12.2011 <b>=&gt; Annex XIV 2014</b>

58	plasticiser	Bis(2-methoxyethyl)phthalate	117-82-8	toxic to reproduction REACH Art 57(c)	CMR	No registration for this phthalate compound has been submitted to ECHA. Hence, the substance seems not to be manufactured in or imported to the EU in quantities above 1 t/y. Main uses in the past were as plasticiser in polymeric materials and paints, lacquers, printing inks.	19.12.2011=> <b>Annex XIV 2017</b>
59	pigment/dyes	2-Methoxy-aniline; o-Anisidine	90-04-0	carcinogenic REACH art. 57(a)	CMR	Mainly used in the manufacture of pigment/dyes for tattooing and coloration of paper, polymers and aluminium foil.	19.12.2011
60	additive	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	Art. 57 (f), equivalent level of concern endocrine disrupting properties		Mainly used in the manufacture of polymer preparations and of ethoxylate surfactants. Further used as a component in adhesives, coatings, inks and rubber articles.	19.12.2011
61	solvent	1,2-Dichloroethane (EDC)	107-06-2	carcinogenic REACH art. 57(a)	CMR	Prio Annex XIV Mainly used for manufacture of other substances. Minor uses as solvent in the chemical and pharmaceutical industry.	19.12.2011 => <b>Annex XIV 2014</b>
62	solvent	Bis(2-methoxyethyl)ether, Diglyme	111-96-6	toxic to reproduction REACH Art 57(c)	CMR	Prio Annex XIV used primarily as a reaction solvent or process chemical in a wide variety of applications. Used also as solvent for battery electrolytes, and possibly in other products such as sealants, adhesives, fuels and automotive care products.	19.12.2011 => <b>Annex XIV 2014</b>
63	EEE/ Electrical & Electronic Equipment	arsenic acid	7778-39-4	carcinogenic REACH art. 57(a)	CMR	mainly used to remove gas bubbles from ceramic glass melt and in the production of laminated printed circuit boards	19.12.2011 => <b>Annex XIV 2014</b>
	additive						
64	additive	Calciumarsenate	7778-44-1	carcinogenic REACH art. 57(a)	CMR	Calcium arsenate is present in complex raw materials, that are used mainly for copper and lead refining. The substance is used to precipitate nickel from the molten metal and to manufacture diarsenic trioxide.	19.12.2011
65	biocides/ insecticide/ pesticide	Trilead diarsenate	3687-31-8	carcinogenic REACH art. 57(a) & (c) toxic of reproduction	CMR	Trilead diarsenate is present in complex raw materials for manufacture of copper, lead and a range of precious metals. The trilead diarsenate contained in the raw materials is in the metallurgical refinement process transformed to calcium arsenate and diarsenic trioxide.	19.12.2011



66	solvent	N,N-Dimethylacetamide (DMAC)	127-19-5	toxic to reproduction REACH Art 57(c)	CMR	Used as solvent, mainly in the manufacture of various substances and in the production of fibres for clothing and other applications. Also used as reagent, and in products such as industrial coatings, polyimide films, paint strippers and ink removers.	19.12.2011
67	additive	2,2'-Dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	carcinogenic REACH art. 57(a)	CMR	Mainly used as curing agent in resins and in the production of polymer articles and also for manufacture of other substances. The substance may further be used in construction and arts.	19.12.2011 => <b>Annex XIV 2014</b>
68	additive	Phenolphthalein	77-09-8	carcinogenic REACH art. 57(a)	CMR	Mainly used as laboratory agent (in pH indicator solutions), for the production of pH-indicator paper and in medicinal products.	19.12.2011
69	pyrotechnic agent	Lead azide Lead diazide	13424-46-9	toxic to reproduction REACH Art 57(c)	CMR	Mainly used as initiator or booster in detonators for both civilian and military uses and as initiator in pyrotechnic devices.	19.12.2011
70	pyrotechnic agent	Lead styphnate	15245-44-0	toxic to reproduction REACH Art 57(c)	CMR	Mainly used as a primer for small calibre and rifle ammunition. Other common uses are in munition pyrotechnics, powder actuated devices and detonators for civilian use.	19.12.2011
71	pyrotechnic agent	Lead dipicrate	6477-64-1	toxic to reproduction REACH Art 57(c)	CMR	No registration for this substance has been submitted to ECHA. Lead dipicrate is an explosive like lead diazide and lead styphnate. It may be used in low amounts in detonator mixtures together with the two other mentioned lead compounds.	19.12.2011
ECHA published (8th)							
72	solvent	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	Toxic for reproduction (Article 57 c)	CMR	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor uses in brake fluids and repair of motor vehicles.	18.06.2012
73	solvent	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	Toxic for reproduction (Article 57 c)	CMR	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries.	18.06.2012
	batteries			Toxic for reproduction (Article 57 c)			

74	flame retardant	Diboron trioxide	1303-86-2	Toxic for reproduction (Article 57 c)	CMR	Used in a multitude of applications, e.g. in glass and glass fibres, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, nuclear, electrical equipment, adhesives, inks/paints, film developing solutions, detergents and cleaners, reagent chemicals, biocides and insecticides.	18.06.2012
	EEE/ Electrical & Electronic Equipment			Toxic for reproduction (Article 57 c)			
75	solvent	Formamide	75-12-7	Toxic for reproduction (Article 57 c)	CMR	Mainly used as an intermediate in the manufacture of agrochemicals, pharmaceuticals and industrial chemicals. Minor uses as a solvent, The substance seems to also be used as a plasticiser.	18.06.2012
	solvent			Toxic for reproduction (Article 57 c)			
76	EEE/ Electrical & Electronic Equipment	Lead(II) bis(methanesulfonate)	17570-76-2	Toxic for reproduction (Article 57 c)	CMR	Mainly used in plating processes (both electrolytic and electroless) for electronic components (such as printed circuit boards). The substance seems to also be used for batteries in special applications.	18.06.2012
	batteries						
77	surface treatment	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	2451-62-9	Mutagenic (Article 57 b)	CMR	Mainly used as a hardener in resins and coatings. Also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilizers for plastics.	18.06.2012
	EEE/ Electrical & Electronic Equipment						
78	EEE/ Electrical & Electronic Equipment	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione ( $\beta$ -TGIC)	59653-74-6	Mutagenic (Article 57 b)	CMR	Mainly used as a solder mask ink in the EU. Also used in electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing, coatings, tools, powder paints, adhesives, lining materials and stabilizers for plastics.	18.06.2012
	stabilizer						
79	pigment/dyes	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	Carcinogenic (Article 57 a)	CMR	Used as an intermediate in the manufacture of triphenylmethane dyes and other substances. Further potential uses include use as an additive (photosensitiser) in dyes and pigments, in dry film products and as a process chemical in the production of electronic circuit boards.	18.06.2012
	EEE/ Electrical & Electronic Equipment						
80	pigment/dyes	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	Carcinogenic (Article 57 a)	CMR	Used as an intermediate in the manufacture of pigment/dyes and other substances.	18.06.2012

81	pigment/dyes	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	Carcinogenic (Article 57 a)	CMR	Used in the formulation of inks, cleaners, and coatings, as well as for dyeing paper, packaging, textiles, plastic products, and other types of articles. It is also used in diagnostic and analytical applications.	18.06.2012
82	pigment/dyes	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	Carcinogenic (Article 57 a)	CMR	Used mainly for paper colouring and inks supplied in printer cartridges and ball pens. Further uses include staining of dried plants, use as a marker for increasing the visibility of liquids, staining in microbial and clinical laboratories.	18.06.2012
83	pigment/dyes	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	Carcinogenic (Article 57 a)	CMR	Used in the formulation of writing inks and potentially other inks, as well as for dyeing a variety of materials.	18.06.2012
84	pigment/dyes	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	Carcinogenic (Article 57 a)	CMR	Mainly used in the formulation of printing and writing inks, for dyeing paper and in mixtures such as windscreen washing agents.	18.06.2012
ECHA published (9th)							
85	EEE/ Electrical & Electronic Equipment flame retardant	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	PBT (Article 57 d); vPvB (Article 57 e)	PBT/vPvB	flame retardant in synthetic/plastic and textiles.	19.12.2012

86	surface treatment	Pentacosafuorotridecanoic acid	72629-94-8	vPvB (Article 57 e)	vPvB	flourinated detergents used in the coating industry, electronic coating, paints, commercial cleaning, as a degreasing applications/ textile industries	19.12.2012
87	surface treatment	Tricosafuorododecanoic acid	307-55-1	vPvB (Article 57 e)	vPvB	surfactant and flow, level and wetting additive for coating formulation. As used in floor polish	19.12.2012
88	surface treatment	Henicosafuoroundecanoic acid (C11-PFCA) Perfluoroundecanoic acid	2058-94-8	vPvB (Article 57 e)	vPvB	flourinated detergents, textile industrie, fire fighting fluid see above fluorinated detergent	19.12.2012
89	surface treatment	Heptacosafuorotetradecanoic acid	376-06-7	vPvB (Article 57 e)	vPvB	see above fluorinated tensides/detergent	19.12.2012
90	additive	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	Equivalent level of concern having probable serious effects to human health (Article 57 f)		Azo pigment/dyes, azodicarbonamide is used in the production of foamed plastics as an additive, is also used in synthetic leather. Further other uses as an antioxidant and catalyst agent	19.12.2012
91	additive	Cyclohexane-1,2-dicarboxylic anhydride [1] cis-cyclohexane-1,2-dicarboxylic anhydride [2] trans-cyclohexane-1,2-icarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and rans-isomers [1] are covered by this entry, Hexahydro-3-methlphthalic anhydride	85-42-7 13149-00-3 14166-21-3 57110-299	Equivalent level of concern having probable serious effects to human health (Article 57 f)		unsaturated polyester resin co-monomers, used as a monomer in the manufacture of resins, raw material for pvc-plasticizers and rust inhibitors	19.12.2012
	hardener					Hardener for epoxy resins	

92	EEE/ Electrical & Electronic Equipment	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- stereoisomeric 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	Equivalent level of concern having probable serious effects to human health (Article 57 f)		Hardener (HHPA&MHHPA) for Epoxy Resins, raw material for adhesion resins	19.12.2012
	hardener					Hardener (HHPA&MHHPA) for Epoxy Resins, raw material for adhesion resins	
93	detergents	4-Nonylphenol, branched and linear[ <i>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</i> ]			CMR, endocrine	Nonylphenol is used mainly for the production of nonylphenol ethoxylates (NPEs), it is also included in fungicides and plasticizers for cellulose esters	<b>19.12.2012 =&gt; Annex XIV 2017</b>
94	additive	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]		Equivalent level of concern having probable serious effects to the environment (Article 57 f)	CMR	Ingredient of polymer dispersions in the production of paints, paper, inks, adhesives, and carpet subpages. Also use as an emulsifier in polymer films for leather and textile surfaces	19.12.2012 => Annex XIV 2017
	adhesives						
95	additive	Methoxyacetic acid	625-45-6	Toxic for reproduction (Article 57 c)	CMR	Manufacture of chemicals and chemical products for industrial purposes, production of cleaning or washing powder, manufacture fabricated metal products	19.12.2012
96	solvent	N,N-dimethylformamide	68-12-2	Toxic for reproduction (Article 57 c)	CMR	Solvent for plastics, special plastic coating (PAN, PVC, PUR). Production of synthetic / artificial leather made of polyurethane;	19.12.2012

97	additive	Dibutyltin dichloride (DBTC)	683-18-1	Toxic for reproduction (Article 57 c)	CMR	An additive in rubber, a stabilizer in PVC plastic, a catalyst in the production of polyurethanes and silicones, for use in insulations and coatings. Silicone rubber (sealants, dental products, paper coatings), polyurethane (foam plastics, protective coatings), glass (coatings), insulation in electronic products and cables	19.12.2012
	stabilizer				CMR		
98	pigment/dyes	<b>Lead monoxide (Lead oxide)</b>	1317-36-8	Toxic for reproduction (Article 57 c)	CMR	Use for the production of lead oxide, production of lead-acid batteries and the production of crystal glass and ceramics	19.12.2012
99	pigment/dyes	<b>Orange lead (Lead tetroxide)</b>	1314-41-6	Toxic for reproduction (Article 57 c)	CMR	Use in adsorbents, dyes and pigments, for the production of lead oxide, production of lead-acid batteries and the production of crystal glass and ceramics	19.12.2012
100	EEE/ Electrical & Electronic Equipment	Lead bis(tetrafluoroborate)	13814-96-5	Toxic for reproduction (Article 57 c)	CMR	used in electroplating processes and laboratory applications, regulated under ROHS	19.12.2012
101	EEE/ Electrical & Electronic Equipment	Trilead bis(carbonate)dihydroxide	1319-46-6	Toxic for reproduction (Article 57 c)	CMR	see REACH 1907/2006 Annex XVII (paints and pigments) and ROHS Directive 2011/65/EU EEE-Electrical & Electronic Equipment. Stabilizer in PVC	19.12.2012
102	pigment/dyes	<b>Lead titanium trioxide</b>	12060-00-3	Toxic for reproduction (Article 57 c)	CMR	Ultrasonic transducer, ceramic capacitor, paints and Pigmentes Basic Sulfate White Lead ( CI 77633; Pigment White 2),	19.12.2012
103	EEE/ Electrical & Electronic Equipment	<b>Lead titanium zirconium oxide</b>	12626-81-2	Toxic for reproduction (Article 57 c)	CMR	For the production of semiconductors for electronic and optical products	19.12.2012

104	glass products	Silicic acid, lead salt	11120-22-2	Toxic for reproduction (Article 57 c)	CMR	Stone, plaster, cement, glass and ceramic products	19.12.2012
105	glass products	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <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	Toxic for reproduction (Article 57 c)	CMR	lacquer paints cement and glass and ceramic products	19.12.2012
106	solvent	1-bromopropane (n-propyl bromide)	106-94-5	Toxic for reproduction (Article 57 c)	CMR	solvent	19.12.2012 =>Annex XIV R EU No(2017/999)
107	additive	Methyloxirane (Propylene oxide)	75-56-9	Carcinogenic (Article 57a); Mutagenic (Article 57b)	CMR	Intermediate in the polymer and chemical production. Cellulose modifier	19.12.2012
108	plasticiser	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	Toxic for reproduction (Article 57 c)	CMR	plasticiser in synthetic respectively paints, lacquers, coating and lamination	<b>19.12.2012 =&gt; Annex XIV 2017</b>
109	plasticiser	Diisopentylphthalate (DIPP)	605-50-5	Toxic for reproduction (Article 57 c)	CMR	plasticiser in synthetic	19.12.2012 => Annex XIV 2017
110	plasticiser	N-pentyl-isopentylphthalate	776297-69-9	Toxic for reproduction (Article 57 c)	CMR	plasticiser in synthetic	19.12.2012
111	solvent	1,2-diethoxyethane	629-14-1	Toxic for reproduction (Article 57 c)	CMR	Use as an inert solvent in the preparation of some resins, and in detergent	19.12.2012
112	additive	Acetic acid, lead salt, basic	51404-69-4	Toxic for reproduction (Article 57 c)	CMR	production of fine chemicals	19.12.2012
113	stabilizer	Lead oxide sulfate	12036-76-9	Toxic for reproduction (Article 57 c)	CMR	stabilizer in plastic (PVC)	19.12.2012

114	stabilizer	[Phthalato(2-)]dioxotrilead	69011-06-9	Toxic for reproduction (Article 57 c)	CMR	Plastic Auxiliary Agents, Lead stabilizer compounds in PVC	19.12.2012
115	stabilizer	Dioxobis(stearato)trilead	12578-12-0	Toxic for reproduction (Article 57 c)	CMR	stabilizer in the polymers industry (PVC) Dioxobis(stearato)trilead (Dibasic lead stearate)	19.12.2012
116	stabilizer	Fatty acids, C16-18, lead salts	91031-62-8	Toxic for reproduction (Article 57 c)	CMR	use in the production of pvc products. stabilizer	19.12.2012
117	surface treatment	Lead cynamidate	20837-86-9	Toxic for reproduction (Article 57 c)	CMR	Anticorrosive effect/ Anticorrosive pigments	19.12.2012
118	surface treatment	Lead dinitrate	10099-74-8	Toxic for reproduction (Article 57 c)	CMR	Anticorrosive pigments	19.12.2012
119	stabilizer	Pentalead tetraoxide sulphate	12065-90-6	Toxic for reproduction (Article 57 c)	CMR	stabilizer in the polymers industry, used in PVC processing in the stabilizer sector and is an essential and irreplaceable transition material in the battery manufacturing process	19.12.2012
120	pigment/dyes	Pyrochlore, antimony lead yellow C.I. Pigment Yellow 41	8012-00-8	Toxic for reproduction (Article 57 c)	CMR	C.I.- Colour Index Pigment Yellow 41 Naples Yellow C.I. 77588 Sicocer F Orange 2208	19.12.2012
121	stabilizer	Sulfurous acid, lead salt, dibasic	62229-08-7	Toxic for reproduction (Article 57 c)	CMR	stabilizer in synthetic /Plastic (PVC)	19.12.2012
122	additive	Tetraethyllead	78-00-2	Toxic for reproduction (Article 57 c)	CMR	Antiknock agent only used in aviation petrol	19.12.2012
123	stabilizer	Tetralead trioxide sulphate	12202-17-4	Toxic for reproduction (Article 57 c)	CMR	use in the production of pvc products	19.12.2012
124	stabilizer	Trilead dioxide phosphonate	12141-20-7	Toxic for reproduction (Article 57 c)	CMR	use in the production of pvc products	19.12.2012



125	solvent	Furan	110-00-9	Carcinogenic (Article 57a)	CMR	Intermediate in the production of - related compounds such as Tetrahydrofuran, and various polymers, resins and pharmaceuticals	19.12.2012
126	additive	Diethyl sulphate	64-67-5	Carcinogenic (Article 57a); Mutagenic (Article 57b)	CMR	used for the alkylation of diethyl phenols, amines and thiols, and the DNA sequencing	19.12.2012
127	additive	Dimethyl sulphate	77-78-1	Carcinogenic (Article 57a)	CMR	Precursor by the manufacturing of cosmetics, dyes, pharmaceutical and agrarcultural products. Industrially methylation of carboxylic, phenoles, thiophenoles and amines. The substances is used in DNA sequencing.	19.12.2012
128	additive	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	Toxic for reproduction (Article 57 c)	CMR	manufacturing of certain azo colorants. Moisture regulator or reaction inhibitor in polyurethanes, coatings, surfaces, sealants and elastomers.	19.12.2012
129	biocides/ insecticide/ pesticide	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	Toxic for reproduction (Article 57 c)	CMR	Dinoseb used as a pesticides. Restricted in Germany, Austria and Switzerland.	19.12.2012
130	pigment/dyes	4,4'-methylenedi-o-toluidine	838-88-0	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes	19.12.2012
131	pigment/dyes	4,4'-oxydianiline and its salts	101-80-4	Carcinogenic (Article 57a); Mutagenic (Article 57b)	CMR	Manufacturing of Azo dyes	19.12.2012
132	pigment/dyes	4-aminoazobenzene	60-09-3	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes	19.12.2012
133	pigment/dyes	4-methyl- <i>m</i> -phenylenediamine (toluene-2,4-diamine)	95-80-7	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes and sulphur dyes, as a intermediate in the production of PUR polyurethane synthetic	19.12.2012
134	pigment/dyes	6-methoxy- <i>m</i> -toluidine (p-cresidine), Anisidine, 5-methyl IUPAC Name: 2-Methoxy-5-methylaniline	120-71-8	Carcinogenic (Article 57a)	CMR	Intermediate in the manufacturing of dyes (as a coupling component for azo dyes) and pigments.	19.12.2012
135	pigment/dyes	Biphenyl-4-ylamine	92-67-1	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes	19.12.2012

136	pigment/dyes	o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes	19.12.2012
137	pigment/dyes	o-toluidine	95-53-4	Carcinogenic (Article 57a)	CMR	Manufacturing of Azo dyes	19.12.2012
138	solvent	N-methylacetamide	79-16-3	Toxic for reproduction (Article 57 c)	CMR	Uses as a solvent. Methylacetamide is used as an intermediate in the production of life science, agricultural chemicals, electronic materials and in the construction industry	19.12.2012
ECHA published (10th)							
139	EEE/ Electrical & Electronic Equipment	Cadmium	7440-43-9	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)		see Restriction REACH Regulation Annex XVII and ROHS	20.06.2013
140	EEE/ Electrical & Electronic Equipment	Cadmium oxide	1306-19-0	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)		see Restriction REACH Regulation Annex XVII and ROHS	20.06.2013
141	surface treatment	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	CMR	flourinated detergents used in the coating industry, electronic coating, paints,commercial cleaning, as a degreasing applications/ textile industries	20.06.2013
142	surface treatment	Pentadecafluorooctanoic acid (PFOA)	335-67-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	PBT	flourinated detergents used in the coating industry, electronic coating, paints,commercial cleaning, as a degreasing applications/ textile industries	20.06.2013
143	plasticiser	Dipentyl phthalate (DPP)	131-18-0	Toxic for reproduction (Article 57 c)	84-75-3	Plasticiser in plastic material	<b>20.06.2013</b> <b>=&gt; Annex XIV 2017</b>

144	surface treatment	4-Nonylphenol, branched and linear, ethoxylated *		Equivalent level of concern having probable serious effects to the environment (Article 57 f)	endocrine	tenside/detergents	<b>20.06.2013</b> => Annex XIV 2017
ECHA published 11th							
145	EEE/ Electrical & Electronic Equipment	Lead di(acetate)	301-04-2	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)		in articles (e.g. parts, components, sub-assemblies etc) which are supplied for use in hardware products and electrical and electronic equipment	16.12.2013
146	EEE/ Electrical & Electronic Equipment	Cadmium sulphide	1306-23-6	Carcinogenic (Article 57a);		Cadmium sulphide is used as a yellow colorant in plastics, glass and ceramics, and is found in photoelectric devices including photoresistors, solar cells and piezoelectric transducers	16.12.2013
147	flame retardant	Trixylyl phosphat	25155-23-1	Toxic for reproduction (Article 57 c);		Trixylyl phosphate (TXP) is a flame retardant which can be found in a range of plastics including PVC, polyurethane, TPE, vinylite, cellulosic resin and natural and synthetic rubber	16.12.2013
148	plasticiser	Dihexyl phthalate (DnHP)	84-75-3	Toxic for reproduction (Article 57 c);		Dihexyl phthalate (DnHP) is used as a plasticiser in PVC and other plastic polymers.	16.12.2013
149	pigment/dyes	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	Carcinogenic (Article 57a);		C.I. Direct Black 38 is used to color plastics, cellulose, silk, nylon, acetate, wood and leather.	16.12.2013
150	pigment/dyes	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	Carcinogenic (Article 57a);		C.I. Direct Red 28 , also known as Congo Red, is used to color plastics, textiles, paper and PVA.	16.12.2013
151	catalysator	Imidazolidine-2-thione (ETU)	96-45-7	Toxic for reproduction (Article 57 c);		Imidazolidine-2-thione is used as a catalyst in some acrylic adhesive glues which may be used in adhesive tapes (for example, double sided adhesive tapes which may be used to hold the back-light in place in mobile phones and vulcanization accelerator	16.12.2013

ECHA published (12 th )							
152	galvanotechnique	Cadmium chloride	10108-64-2	CMR; Equivalent level of concern having probable serious effects to human health (Article 57 f)		Cadmium chloride is used for the synthesis of various compounds of cadmium and Galvanotechnique	16.06.2014
153	plasticiser	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	Toxic for reproduction (Article 57 c)		plasticiser /softener in plastic	16.06.2014
154	bleaching agent	Sodium peroxometaborate	76321-04-4	Toxic for reproduction (Article 57 c)		washing powder, oxidation & cleaning agents	16.06.2014
155	bleaching agent	Sodium perborate; perboric acid, sodium salt	---	Toxic for reproduction (Article 57 c)		washing powder, sodium perborate CAS No 15120-21-5, Perboric acid-sodium salt CAS No 11138-47-9	16.06.2014
ECHA published (13 th )							
156	EEE/ Electrical & Electronic Equipment	Cadmium fluoride	7790-79-6	CMR; Equivalent level of concern having probable serious effects to human health (Article 57 f)	CMR	Use in research applications, e.g. in solid ionic transport studies. Cadmium fluoride is fluorescent and can therefore be used in certain phosphorus for luminescent screens. (ROHS Directive regulated)	17.12.2014
157	EEE/ Electrical & Electronic Equipment	Cadmium sulphate	10124-36-4, 31119-53-6	CMR; Equivalent level of concern having probable serious effects to human health (Article 57 f)	CMR	Might be used as intermediate for industrial production of inorganic cadmium compounds, and as laboratory reagent. Impurities in pigments (plastic, ceramic, glass, rubber, paper, ink). As an additive it might increase the performance of lead acid batteries. (ROHS Directive regulated)	17.12.2014
158	stabilizer	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	PBT (Article 57 d); vPvB (Article 57 e)	PBT; vPvB	UV-320 is used as a UV protection agent for PVC and can also be used for PET, PC, PA, ABS and other polymers. Typical addition rates are 0.20-0.50% w/w of the polymer, depending on the polymer and the desired level of UV protection.	17.12.2014
159	stabilizer	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	PBT (Article 57 d); vPvB (Article 57 e)	PBT; vPvB	UV-328 is used as a UV protection agent in plastics, rubber and polyurethane. Typical addition rates are 0.10-1.0% w/w of the polymer, depending on the polymer and the desired level of UV protection.	17.12.2014

160	stabilizer	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	Toxic for reproduction (Article 57 c)	CMR	The reaction mass of DOTE and MOTE is added to PVC plastic to make it more stable to heating. The most commonly used reaction mass contains 70% DOTE and 30% MOTE and the addition rate in PVC is typically between 1 and 2.5%.	17.12.2014
161	stabilizer	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)	-----	Toxic for reproduction (Article 57 c)	CMR	The reaction mass of DOTE and MOTE is added to PVC plastic to make it more stable to heating. The most commonly used reaction mass contains 70% DOTE and 30% MOTE and the addition rate in PVC is typically between 1 and 2.5%.	17.12.2014
ECHA published (14 th )							
162	plasticiser	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	Toxic for Reproduction (Article 57 c)	PBT	The phthalates are may be used as plasticizers in PVC and other plastic polymers. The phthalates are included in the REACH Candidate List because they are chemically very similar to dihexyl phthalate and may be used as substitutes for dihexyl phthalate	15.06.2015
163	fragances	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]	-----	vPvB (Article 57 e)		fragances	15.06.2015
		<b>EuGH C106/14 PRESS RELEASE 10.09.2015</b>					

ECHA published (15 th)							
164	plastic	1,3-propanesultone	1120-71-4	Carcinogenic (Article 57 a)	CMR	1,3 propanesultone may be used as a solvent in battery electrolytes for sealed lithium ion batteries	17.12.2015
165	UV stabilisator	2,4-di-tert-butyl-6-(5-chlorobenzo- triazol-2-yl)phenol (UV-327)	3864-99-1	vPvB (Article 57 e)	vPvB	UV327 is used as a UV protection agent in plastics, rubber and polyurethane. Typical addition rates are 0,2-0,5% w/w of the polymer, depending on the polymer and the desired level of UV protection.	17.12.2015
166	UV stabilisator	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	vPvB (Article 57 e)	vPvB	UV350 is used as a UV protection agent in plastics, rubber and polyurethane.	17.12.2015
167	solvent	Nitrobenzene	98-95-3	Toxic for reproduction (Article 57 c)	CMR	solvent	17.12.2015
168	EEE/ Electrical & Electronic Equipment	Perfluorononan-1-oic-acid and its sodium and ammonium salts		Toxic for reproduction (Article 57c)#PBT (Article 57 d)	PBT	PFNA may be found in PVDF plastic up to 1% w/W of plastic.	17.12.2015
		Perfluorononan-1-oic-acid	375-95-1				
		Ammonium salts of perfluorononan-1-oic-acid	4149-60-4				
		Sodium salts of perfluorononan-1-oic-acid	21049-39-8				
ECHA published (16 th)							
169	pigment/dyes	Benzo[def]chrysene, Benzo[a]pyrene (BaP)	50-32-8		CMR; PBT; vPvB	PAH in softener and Carbon Black CI 7 (Soot)	20.06.2016
ECHA published (17 th)							
170	precursors	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	Toxic for reproduction (Article 57c)	PBT	Manufacture of polycarbonate, epoxy resins and chemicals; hardener in epoxy resins and chemicals, hardener in epoxy resins	12.01.2017

171	surface treatment	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2; 3830-45-3; 3108-42-7	Toxic for reproduction (Article 57c), PBT (Article 57d)	CMR,PBT	Lubricant, wetting agent, plasticiser and corrosion inhibitor	12.01.2017
172	precursors	p-(1,1-dimethylpropyl)phenol	80-46-6	Equivalent level of concern having probable serious effects to environment (Article 57f)		Manufacture of chemicals and plastic products	12.01.2017
173	detergents	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]		Equivalent level of concern having probable serious effects to environment (Article 57f)		Manufacture of polymers; formulation into lubricants	12.01.2017
ECHA published (18 th)							
	plastic	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	Endocrine disrupting properties (Article 57(f) - environment)		endocrine disrupting properties:Manufacture of polycarbonate, as a hardener for epoxy resins, as an anti-oxidant for processing PVC and in thermal paper production	07.07.2017
174	surface treatment	Perfluorohexane-1-sulphonic acid and its salts (PFHxS),	-----	vPvB (Article 57e)		Manufacture of polycarbonate, as a hardener for epoxy resins, as an anti-oxidant for processing PVC and in thermal paper production	07.07.2017

ECHA published (19 th )							
	surface	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	Endocrine disrupting properties (Article 57(f) - human health)	endocrine	Manufacture of polycarbonate, as a hardener for epoxy resins, as an anti-oxidant for processing PVC and in thermal paper production	15.01.2018
175	extender oils	Chrysene (PAK/PAH)	218-01-9	carcinogenic Article 57a, PBT 57d, vPvB 57e	CMR, PBT, vPvB	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.	15.01.2018
176	extender oils	Benz[a]anthracene (PAK/PAH)	56-55-3	carcinogenic Article 57a, PBT 57d, vPvB 57e	CMR, PBT, vPvB	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.	15.01.2018
177	EEE/ Electrical & Electronic Equipment	Cadmium nitrate	10325-94-7	CMR ( Article 57 a, b, c, Specific target organ toxicity after repeated exposure (Article 57 (f) human health)	CMR,	Used for the manufacture of glass, porcelain and ceramic products and in laboratory chemicals.	15.01.2018
178	EEE/ Electrical & Electronic Equipment	Cadmium hydroxide	21041-95-2	CMR, see above	CMR	Used for the manufacture of electrical, electronic and optical equipment and in laboratory chemicals.	15.01.2018
179	additive	Cadmium Carbonate	513-78-0	CMR, see above	CMR	Used as a pH regulator and in water treatment products, laboratory chemicals, cosmetics and personal care products.	15.01.2018
180	flame retardant	Dechlorane Plus, Dechloran A	-----	vPvB (article 57 e)	vPvB	Used as a non-plasticising flame retardant, used in adhesives and sealants and in binding agents	15.01.2018
181	additive	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear	-----	endocrine disrupting 57 (f)	endocrine	Used as a lubricant additive in lubricants and greases	15.01.2018



ECHA published (20 update)							
182	detergents	Octamethylcyclotetrasiloxane (D4)	556-67-2	PBT (Article 57d), vPvB (Article 57e)	vPvB	Used in washing and cleaning products, polishes and waxes and cosmetics and personal care products	27.06.2018
183	detergents	Decamethylcyclopentasiloxane (D5)	541-02-6	PBT (Article 57d), vPvB (Article 57e)	vPvB	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products, textile treatment products and dyes	27.06.2018
184	detergents	Dodecamethylcyclohexasiloxane (D6)	540-97-6	PBT (Article 57d), vPvB (Article 57e)	vPvB	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products	27.06.2018
185	EEE/ Electrical & Electronic Equipment	Lead	7439-92-1	toxic for reproduction (Article 57c)	CMR	Used in metals, welding and soldering products, metal surface treatment products, and polymers	27.06.2018
186	detergents	Disodium octaborate	12008-41-2	toxic for reproduction (Article 57c)	CMR	Used in anti-freeze products, heat transfer fluids, lubricants and greases, and washing and cleaning products, insulation/damping	27.06.2018
187	pigment/dyes	Benzo[ghi]perylene (PAH)	191-24-2	PBT (Article 57d), vPvB (Article 57e)	vPvB	impurities in other substances (carbon black, extenderr)	27.06.2018
188	additive	Terphenyl hydrogenated	61788-32-7	vPvB (Article 57e)	vPvB	Used as a plastic additive, solvent, in coatings/inks, in adhesives and sealants, and heat transfer fluids	27.06.2018
189	stabilizer	Ethylenediamine (EDA)	107-15-3	expiratory sensitising properties (Article 57(f) - human health)	sensitive	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, pH regulators and water treatment products	27.06.2018
190	precursors	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	expiratory sensitising properties (Article 57(f) - human health)	sensitive	Used in the manufacture of esters and polymers	27.06.2018
191	plasticiser	Dicyclohexyl phthalate (DCHP)	84-61-7	Toxic for reproduction (Article 57c) endocrine /human (57 f)	Endocrine disrupting properties	Used in plastisol, PVC, rubber and plastic articles	27.06.2018

<b>ECHA</b>	<b>European Chemical Agency</b>		
EEE	Electrical and Electronic Equipment		
	EEE electrical and electronic equipment (EEE) in electronic an integrated circuit IC, lead		
Article 57 a,b,c,d,e,f,			
SVHC	substance of very high concern		
CMR	cancer (a), mutagene (b), toxic of reproduction (c)		
PBT	bioaccumulativ, toxic (d)		
vPvB	very persistent very bioaccumulative (e)		
Article (f)	equivalent level of concern (f)		endocrine disrupting properties
<b>candidate list</b>	Being part of the authorisation process, these substances (SVHC) may be included in <b>Annex XIV</b> of the REACH regulation. Substances will then be subject to authorisation and can no longer be placed on the market or used by any company without obtaining a prior authorisation from the European Commission.		
<b>EuGH Decison Case C-106/14 10.09.2015</b>	Judgment of the European Court CASE C-106/14. ECJ judgment Press release No. 100/15. As the term "product" should be understood, was controversial between the member state. On September 10, 2015, the European Court has ruled that the limit for the content of substances of concern (SVHC) in articles of 0.1% mass -% also applies to products that are part of another product. This means that producers, importers and suppliers of articles have the obligations under Article 33 of the REACH Regulation also to comply if the limit is exceeded only in a partial product		
28.10.2008	first candidate list published by ECHA, 28.10.2008 ( without cyclododecan)		
13.01.2010	ECHA has added 14 chemical substances to the Candidate List of Substances of Very High Concern (SVHC) for authorisation		
30.03.2010	acrylamide( 30 candidate) included in the REACH candidate list of very high concern for authorisation		
18.06.2010	ECHA adds eight substances to the Candidate List for authorisation (popsals 08.03.10)		
15.12.2010	ECHA adds further eight substances to the Candidate List for Authorisation (status 15.12.2010 46 SVHC)		
17.02.2011	amending Annex XIV to Regulation (EC) No 1907/2006 with REG (EC) <b>No 143/2011</b> => <b>REACH ANNEX XIV</b> MDA SCCP HBCDD Phthalates (BBP;DBP; DeHP)		

14.04.2011	<b>REG (EU) No 366/2011</b> amending REACH REG EC No 1907/2006, <b>Annex XVII Acrylamid</b> Shall not be placed on the market or used as a substance or constituent of mixtures in a concentration, equal to or greater than 0,1 % by weight for grouting applications after 5 November 2012.'
20.06.2011	Seven new substances have been added to the Candidate List of Substances of Very High Concern (SVHC) for authorisation (Public consultation -new proposals 21.2.11). Cobaltdichloride further hazardous properties SVHC. Strontiumchromate, DHNUP, DIHP, 1,2,3 Trichloropropane; 2 Ethoxyacetate, 1 Methyl 2 pyrrolidone
19.12.2011	Public Consultation (29.8.2011) of 20 SVHC added to the candidate list 19.12.2011
21.12.2011	ECHA recommends thirteen substances of very high concern for authorisation ANNEX XIV (Consultation 21.12.2011)Trichloroethylene, Chromtrioxide, Acid generated from Chromtrioxid, Natriumdichromat, Kaliumdichromat, Ammoniumdichromat, Kaliumchromat, Natriumchromat, Cobalt II sulphate, Cobaltdichloride, Cobaltdinitrat, Cobaltdicarbonat, Cobaltdiacetat
14.02.2012	Diarsenicpentaoxide, Lead Chromate; Lead sulfochromate (C.I Pigment Yellow 34) Lead chromate molybdate sulfate red (C.I Pigment Red 104); Tris (2-chloroethyl)phosphate (TCEP) 2,4 Dinitrotoloul 2,4 DNT) (Public 17.12.2011)
18.06.2012	Candidate List updated with thirteen new Substances of Very High Concern
19.06.2012	Short chained chlorinated paraffins (SCCP) added to POP Regulation. With Regulation (EU) No. 519/2012
19.12.2012	54 new SVHC added to the candidate list (public Consultation 20.06.12
17.04.2013	new SVHC Proposals- SVHC's for Authorisation => <b>Regulation (EU) No 348/2013 Annex XIV (22 SVHC are listed in Annex XIV</b>
20.06.2013	6 SVHC (Cadmium, Cadmiumoxide, APFO, PFOA, DPP, 4-Nonylphenol)- substances added to the candidate list (Proposals 10 SVHC 04.03.2013)
16.12.2013	(SVHC) for authorisation
16.06.2014	Candidate list updated with four substances
14.08.2014	Regulation (EU) <b>No 895/2014 Annex XIV REACH 31 SVHC entries</b>
17.12.2014	Six new substances of very high concern (SVHCs) added to the Candidate List and one entry updated (poposal 17092014)
15.06.2015	Candidate list update
02.07.2015	ECHA proposes 15 substances for authorisation
17.12.2015	Entry updated in the Candidate List for authorisation on 17 December 2014 and the SVHC property (168 SVHC):
20.06.2016	New SVHC Benzo(a) pyrene BaP CAS-Nr. 50-32-8
12.01.2017	4 new SVHC added to the REACH candidate list (state 173 SVHC) Bisphenol A & PFOA
13.06.2017	<b>REGULATION (EU) No 2017/999 =&gt; ANNEX XIV</b> 1-Bromopropan; DIPP; Carbonicacidphthalates, Nonyl-
07.07.2017	One new substance added to the Candidate List, several entries updated . ECHA has added the substance PFHxS to the Candidate List. Entries for bisphenol A and four phthalates ( <b>DEHP; BBP; DBP, DIBP</b> ) have been updated to include endocrine-disrupting properties for human health. The Candidate List of substances of very high concern (SVHCs) for authorisation now contains <b>174 substances</b> .

15.01.2018	ECHA has added seven new substances of very high concern (SVHC) to the Candidate List and updated the entry for bisphenol A (BPA) following the SVHC identification process with the involvement of the Member State Committee (MSC). The Candidate List of substances of very high concern (SVHCs) for authorisation now contains 181 substances.
15.01.2018	Bisphenol A : 173 SVHC - toxic for reproduction (Article 57 c), 174 SVHC Endocrine disrupting properties ( Article 57 (f) environment, 181 SVHC Endocrine disrupting properties ( Article 57 (f) human health
27.06.2018	10 new substances added to the Candidate List (191 SVHC)
27.06.2018	Proposals Public Consultation on 18 substances proposed for Authorisation under REACH: BPA, Declorane Plus BPA published on the Candidate list , 12.01.2017 173 SVHC, listed (2nd) 07.07.2017 174 SVHC and endocrine properties, 181 SVHC 15/01/2018