Candidate List of Substances of Very High Concern

Article 33: Information on substances in articles

Any supplier of an article 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 shall provide the recipient of the article with sufficient information, available to the supplier, to the **allow safe use** of the article including, as a minimum, the name of that substance.

Every product is made from substances, and substances in articles need to be "registered" if they are intended to be released.

Glenair does not produce any articles designed to release any substances.

For further information on **"Requirements for Substances in Articles"** Go to the folder in the REACH Documents – 4.1.2 states that no notifications are required if the articles are not designed to release any SVHC's.

Surface treatment processes use a wide variety of substances, some of which have already been classified as SVHCs (Substances of Very High Concern) and many more that meet the criteria set out in Article 57 and will probably, at some point in the future, be classified as SVHCs. However, it is extremely unlikely that any of these will be present on the finished component in a concentration above 0.1% on a weight for weight basis. The reason for this statement is explained below:

SVHC - Boric Acid: Boric acid is used in a few surface treatment processes essentially as a pH control agent but will not be present in the finished article.

SVHC – Sodium & Potassium Dichromate: These are used to produce a few passivation type coatings and although chromates will still be present on the finished article, they will not be in the form of sodium or potassium dichromate in a concentration above 0.1% on a weight for weight basis.

SVHC – Cadmium: This substance is used where cadmium plating is a requirement on the surface finish of some of our connectors/ back shell products. We do offer alternatives but as the content of Cadmium on products is ABOVE the threshold BUT they do not that require safety data sheets. We do however offer some guidance on the handling of Cadmium plated parts particularly those that exhibit surface imperfections. (Please refer to the last page)

Glenair **does not** handle or directly use Cadmium and as such is not governed by the 1 Tonne Limit.

The above are only examples and similar logic may be applicable to other substances, but this will be considered on a case-by-case basis as and when further substances are listed as SVHCs under the REACH regulation.

We are aware of our duties under REACH, and we will continue to monitor the SVHC situation via the European Chemicals Agency (ECHA) website and will proactively notify you should the situation arise where any articles processed by us contain SVHCs above the stated threshold.

Substances of very high concern include substances that are:

Carcinogenic, Mutagenic or toxic to Reproduction (CMR) classified in category 1 or 2, Persistent, Bio accumulative and Toxic (PBT) or very Persistent and very Bio accumulative (vPvB) according to the criteria in Annex XIII of the REACH Regulation, and/or identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to humans or the environment of an equivalent level of concern as those above e.g. endocrine disrupters

The following table lists all the current SVHCs and whether any are in use at Glenair.

	Substance name	In Glenair Articles Yes/No	EC (CAS No.)	Date of inclusion	Reason for inclusion	Decision number	Possible Applications
1.	4,4'- Diaminodiphenylmethane (MDA)	NO	202-974-4, 101-77-9	28/10/2008	Carcinogenic (Article 57a)	ED/67/2008	Curing agent for epoxy resin in PCB, preparation of PU, azo dyes in garments
2.	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	NO	201-329-4, 81-15-2	28/10/2008	vPvB (Article 57e)	ED/67/2008	Cosmetics and soap perfumes
3.	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	NO	287-476-5, 85535-84-8	28/10/2008	PBT (Article 57d) vPvB (Article 57e)	ED/67/2008	Leather coating, plasticizer in PVC and chlorinated rubber, flame retardant in plastic & textiles
4.	Anthracene	NO	204-371-1, 120-12-7	28/10/2008	PBT (Article 57d)	ED/67/2008	Source of dyestuff
5.	Benzyl butyl phthalate (BBP)	NO	201-622-7, 85-68-7	28/10/2008	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) – human health)	ED/67/2008 ED/30/2017 EU/2017/4462	Plasticizer for resin, PVC, acrylics
6.	Bis (2-ethylhexyl) phthalate (DEHP)	NO	204-211-0, 117-81-7	28/10/2008	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) – environment) Endocrine disrupting properties (Article 57(f) – human health)	ED/67/2008 ED/30/2017 ED/108/2014 EU/2017/4462	Plasticizer for resin, PVC, blister
7.	Bis(tributyltin) oxide (TBTO)	NO	200-268-0, 56-35-9	28/10/2008	PBT (Article 57d)	ED/67/2008	Pesticide, fungicide in paint
8.	Cobalt dichloride	NO	231-589-4, 7646-79-9	28/10/2008	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/67/2008 ED/31/2011	Cobalt dichloride is mainly used as an intermediate in the manufacture of other cobalt compounds, in tyre adhesion additives, organic textile dyes, and drying agents for paints. Furthermore, it is used in surface treatment processes, as water treatment / corrosion inhibition chemical, as colourant or for discolouring in the production of inorganic pigments & frits, glass, and ceramic ware, in varistors and magnets, as well as in humidity indicators.
9.	Diarsenic pentaoxide	NO	215-116-9, 1303-28-2	28/10/2008	Carcinogenic (Article 57a)	ED/67/2008	Insecticides, weed killer, wood preservatives, coloured glass, dyeing and printing
10.	Diarsenic trioxide	NO	215-481-4, 1327-53-3	28/10/2008	Carcinogenic (Article 57a)	ED/67/2008	Weed killers, timber preservatives, manufacture of special glass
11.	Dibutyl phthalate (DBP)	NO	201-557-4, 84-74-2	28/10/2008	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) – environment) Endocrine disrupting properties (Article 57(f) – human health)	ED/67/2008 ED/30/2017 D(2023)8585-DC EU/2017/4462	Plasticizer, in adhesives and paper coatings; insect repellent for textiles
12.	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: • 1,2,5,6,9,10-hexabromocyclododecane • Gamma-hexabromocyclododecane • Hexabromocyclododecane • Alpha-hexabromocyclododecane • Beta-hexabromocyclododecane	NO	221-695-9, 3194-55-6, 134237-52-8, 247-148-4, 25637-99-4, 134237-50-6, 134237-51-7,	28/10/2008	PBT (Article 57d)	ED/67/2008	

13.	Lead hydrogen arsenate	NO	232-064-2, 7784-40-9	28/10/2008		ED/67/2008	Insecticides
14.	Sodium dichromate	YES <0.1% per articles	234-190-3, 10588-01-9, 7789-12-0	28/10/2008	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c)	ED/67/2008	Chrome-tanning of leather, corrosion inhibitor in paints, mordant in textile dyeing process
15.	Triethyl arsenate	NO	427-700-2, 15606-95-8	28/10/2008	Carcinogenic (Article 57a)	ED/67/2008	Intermediates for semi- conductor
16.	2,4-Dinitrotoluene	NO	204-450-0, 121-14-2	13/01/2010	Carcinogenic (Article 57a)	ED/68/2009	2,4-dinitrotoluene is used in the production of toluene diisocyanate, which is used for the manufacture of flexible polyurethane foams. The substance is also used as gelatinizing-plasticizing agent for the manufacture of explosives.
17.	Anthracene oil	NO	292-602-7, 90640-80-5	13/01/2010	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	The substances are mainly used in the manufacture of other substances such as anthracene and carbon black. They may also be used as reducing agents in blast furnaces, as components in bunker fuel, for impregnating, sealing and corrosion protection.
18.	Anthracene oil, anthracene paste	NO	292-603-2, 90640-81-5	13/01/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	
19.	Anthracene oil, anthracene paste, anthracene fraction	NO	295-275-9, 91995-15-2	13/01/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	
20.	Anthracene oil, anthracene paste, distn. lights	NO	295-278-5, 91995-17-4	13/01/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	
21.	Anthracene oil, anthracene-low	NO	292-604-8, 90640-82-7	13/01/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	
22.	Diisobutyl phthalate	NO	201-553-2, 84-69-5	13/01/2010	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) – human health)	ED/68/2009 ED/30/2017 EU/2017/4462	Diisobutyl phthalate is used as plasticiser for nitrocellulose, cellulose ether, polyacrylate and polycerate dispersions, and as a gelling aid in combination with other plasticisers, which are widely used for plastics, lacquers, adhesives, explosive material and nail polish.
23.	Lead chromate	NO	231-846-0, 7758-97-6	13/01/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/68/2009	Lead chromate is used for manufacturing pigments and dyes, and as a pigment or coating agent in industrial and maritime paint products or varnishes. Further potential uses may be associated with the formulation of detergents and bleaches, photosensitive materials, the manufacture of pyrotechnic powder or the embalming / restoring of art products.
24.	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	YES <0.1% per articles	235-759-9, 12656-85-8	13/01/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/68/2009	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries.

							Applications comprise the production of agricultural equipment, vehicles and aircraft as well as road and airstrip painting.
25.	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	YES <0.1% per articles	215-693-7, 1344-37-2	13/01/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/68/2009	Lead sulfochromate yellow (C.I. Pigment Yellow 34) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries. Applications comprise the production of agricultural equipment, vehicles and aircraft as well as road and airstrip painting. The substance is further used for camouflage or ammunition marking in the defence area.
26.	Pitch, coal tar, high temp.	NO	266-028-2, 65996-93-2	13/01/2010	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED/68/2009	Pitch, coal tar, high temp. is mainly used in the production of electrodes for industrial applications. Smaller volumes are dedicated to specific uses such as heavy-duty corrosion protection, special purpose paving, manufacture of other substances and the production of clay targets.
27.	Tris(2-chloroethyl) phosphate	NO	204-118-5, 115-96-8	13/01/2010	Toxic for reproduction (Article 57c)	ED/68/2009	Tris(2-chloroethyl) phosphate is mainly used as an additive plasticiser and viscosity regulator with flame-retarding properties for acrylic resins, polyurethane, polyvinyl chloride and other polymers. Other fields of application are adhesives, coatings, flame resistant paints and varnishes. The main industrial branches to use TCEP are the furniture, the textile and the building industry.
28.	Acrylamide	NO	201-173-7, 79-06-1	30/03/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/68/2009	
29.	Ammonium dichromate	NO	232-143-1, 7789-09-5	18/06/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c)	ED/30/2010	Ammonium dichromate is mainly used as an oxidising agent. Other known uses are in the manufacture of photosensitive screens and as mordant in the manufacture of textiles. Minor uses seem to comprise metal treatment and laboratory analytical agent.
30.	Boric acid • Boric acid, crude natural • Boric acid	YES <0.1% per articles	234-343-4, 11113-50-1, 233-139-2, 10043-35-3	18/06/2010	Toxic for reproduction (Article 57c)	ED/30/2010	Boric acid is widely used on account of its consistency-influencing, flame-retarding, antiseptic and preservative properties. It is a component of detergents and cleaners, adhesives, toys, industrial fluids, brake fluids, glass, ceramics, flame retardants, paints, disinfectants, cosmetics, food additives, fertilisers, insecticides and other products.
31.	Disodium tetraborate, anhydrous	YES <0.1% per articles	215-540-4, 12179-04-3, 1303-96-4, 1330-43-4,	18/06/2010	Toxic for reproduction (Article 57c)	ED/30/2010	Disodium tetraborate and tetraboron disodium heptaoxide form the same compounds in aqueous solutions. Uses include a multitude of applications, e.g. in detergents and cleaners, in glass and glass fibres, ceramics, industrial fluids, metallurgy, adhesives, flame retardants, personal care products, biocides, fertilisers.

32.	Potassium chromate	YES Plating <0.1% per articles	232-140-5, 7789-00-6	18/06/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/30/2010	Potassium chromate is used as a corrosion inhibitor for treatment and coating of metals, for manufacture of reagents, chemicals and textiles, as a colouring agent in ceramics, in the manufacture of pigments/inks and in the laboratory as analytical agent.
33.	Potassium dichromate	YES <0.1% per articles	231-906-6, 7778-50-9	18/06/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c)	ED/30/2010	Potassium dichromate is used for chrome metal manufacturing and as corrosion inhibitor for treatment and coating of metals. It is further used as textile mordant, as laboratory analytical agent, for cleaning of laboratory glassware, in the manufacture of other reagents and as oxidising agent in photolithography.
34.	Sodium chromate	NO	231-889-5, 7775-11-3	18/06/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c)	ED/30/2010	Sodium chromate is mainly used as an intermediate in the manufacture of other chromium compounds as well as a laboratory analytical agent, but this use is limited. Other potential uses are mentioned in the literature but whether they occur in the EU is not clear.
35.	Tetraboron disodium heptaoxide, hydrate	NO	235-541-3, 12267-73-1	18/06/2012	Toxic for reproduction (Article 57c)	ED/30/2010	
36.	Trichloroethylence	YES <0.1% per articles	201-167-4, 79-01-6	18/06/2010	Carcinogenic (Article 57a)	ED/30/10	Trichloroethylene is mainly used as intermediate in the manufacture of chlorinated and fluorinated organic compounds. Other uses are for cleaning and degreasing of metal parts or as solvent in adhesives
37.	2-Ethoxyethanol	NO	203-804-1, 110-80-5	15/12/2010	Toxic for reproduction (Article 57c)	ED/95/2010	2-ethoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.
38.	2-Methoxyethanol	YES <0.1% per articles	203-713-7, 109-86-4	15/12/2010	Toxic for reproduction (Article 57c)	ED/95/2010	2-methoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.
39.	Acids generated from chromium trioxide and their oligomers. • Dichromic acid • Oligomers of chromic acid and dichromic acid • Chromic acid	NO	236-881-5, 13530-68-2 231-801-5, 7738-94-5	15/12/2010	Carcinogenic (Article 57a)	ED/95/2010	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 in waterborne wood preservatives. Minor uses are e.g. in the manufacture of pigments and paints, in catalyst and detergent manufacture, and as an Oxidising agent.
40.	Chromium trioxide	YES Plating <0.1% per articles	215-607-8, 1333-82-0	15/12/2010	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/95/2010	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 paints, in catalyst and detergent manufacture, and as an Oxidising agent.
41.	Cobalt (II) carbonate	NO	208-169-4, 513-79-1	15/12/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	Ed/95/2010	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.

42.	Cobalt (II) diacetate	NO	200-755-8, 71-48-7	15/12/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/95/2010	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.
43.	Cobalt (II) dinitrate	NO	233-402-1, 10141-05-6	15/12/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/95/2010	Cobalt (II) dinitrate is mainly used in the manufacture of other chemicals including catalysts. Further applications may include surface treatment and batteries.
44.	Cobalt (II) sulphate	YES Plating <0.1% per articles	233-334-2, 10124-43-3	15/12/2010	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/95/2010	Cobalt (II) sulphate is mainly used in the manufacture of other chemicals including pigments and possibly catalysts and driers. Further applications comprise surface treatments (such as electroplating), corrosion prevention, decolourisation (in glass, pottery), in batteries, animal food supplements and soil fertilisers
45.	1,2,3-trichloropropane	NO	202-486-1, 96-18-4	20/06/2011	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/31/2011	1,2,3-trichloropropane is mainly used as intermediate in the manufacture of chlorinated solvents and agricultural products. It is also used as monomer. In the past 1,2,3-trichloropropane was used as solvent, paint and varnish remover and as degreasing agent.
46.	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	NO	276-158-1, 71888-89-6,	20/06/2011	Toxic for reproduction (Article 57c)	ED/31/2011	No registration for DIHP 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 plasticiser in PVC and in sealants, coatings and potentially printing inks.
47.	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	NO	271-084-6, 68515-42-4	20/06/2011	Toxic for reproduction (Article 57c)	ED/31/2011	No registration for DHNUP 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 PVC, foam, adhesives and coatings.
48.	1-methyl-2-pyrrolidone (NMP)	YES <0.1% per articles	212-828-1, 872-50-4	20/06/2011	Toxic for reproduction (Article 57c)	ED/31/2011	1-methyl-2-pyrrolidone is mainly used as solvent in coatings, cleaning products, for electronic equipment manufacture, as well as in semiconductor industry, petrochemical processing, pharmaceuticals and agrochemicals.
49.	2-ethoxyethyl acetate	NO	203-839-2, 111-15-9	20/06/2011	Toxic for reproduction (Article 57c)	ED/31/2011	No registration for 2-ethoxyethylacetate 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 solvent in coatings and in the chemical industry, but also as intermediate in the manufacture of cyanoacrylate adhesives.
50.	Hydrazine	NO	206-114-9, 302-01-2, 7803-57-8	20/06/2011	Carcinogenic (Article 57a)	ED/31/2011	Hydrazine is mainly used as an intermediate in the manufacture of hydrazine derivatives, as a monomer in polymerisations, as a corrosion inhibitor in water treatment and for metal reduction and refining of chemicals. It is also used as a propellant for aerospace vehicles and as fuel in military (emergency) power units.

51.	Strontium chromate	NO	232-142-6, 7789-06-2	20/06/2011	Carcinogenic (Article 57a)	ED/31/2011	Strontium chromate is mainly used as corrosion inhibitor in coating mixtures used in the aeronautic/aerospace sector, in the coil coating sector of steel and aluminium and in the vehicle coating sector.
52.	1,2-dichloroethane	NO	203-458-1, 107-06-2	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use in production of other substances. Minor use as solvent in the chemical and pharmaceutical industry.
53.	2,2'-dichloro-4,4'-methylenedianiline	YES <0.1% per articles	202-918-9, 101-14-4	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Used as a curing agent in resins and in the production of polymer articles and production of other substances. Further use in construction and arts.
54.	2-Methoxyaniline; o-Anisidine	NO	201-963-1, 90-04-0	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use in production of dyes for tattooing and coloration of paper, polymers and aluminum foil.
55.	4-(1,1,3,3-tetramethylbutyl)phenol	NO	205-426-2, 140-66-9	19/12/2011	Endocrine disrupting properties (Article 57(f) – environment)	ED/77/2011	Main use in production of polymer preparations and ethoxylates. Further use as a component in adhesives, coatings, inks and rubber articles.
56.	Aluminosilicate Refractory Ceramic Fibres *are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight* Refractories, fibers, aluminosilicate	NO	-	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011 ED/95/2012	Industrial insulation materials.
57.	Arsenic acid	NO	231-901-9, 7778-39-4	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Used to remove gas bubbles from ceramic glass melt and in the production of laminated printed circuit boards.
58.	Bis(2-methoxyethyl) ether	YES >0.1% per articles	203-924-4, 111-96-6	19/12/2011	Toxic for reproduction (Article 57c)	ED/77/2011	Used as solvent or process chemical in various applicants. Used also as solvent for battery electrolytes and in other products (sealants, adhesives, fuels and automotive care products).
59.	Bis(2-methoxyethyl) phthalate	NO	204-212-6, 117-82-8	19/12/2011	Toxic for reproduction (Article 57c)	ED/77/2011	Main uses in the past were as plasticiser in polymeric materials and paints, lacquers and varnishes, including printing inks.
60.	Calcium arsenate	NO	231-904-5, 7778-44-1	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Present in complex raw materials imported for manufacture of copper, lead and other precious metals. Main use as precipitating agent in copper smelting and to manufacture diarsenic trioxide.
61.	Dichromium tris(chromate)	NO	246-356-2, 24613-89-6	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use in mixtures for metal surface treatment in aeronautic/ aerospace, steel and aluminum coating sectors.
62.	Formaldehyde, oligomeric reaction products with aniline	NO	500-036-1, 25214-70-4	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Raw materials for production of other substances. Minor use as hardener for epoxy resins, e.g. in rolls, pipes and moulds and adhesives.
63.	Lead diazide, Lead azide	NO	236-542-1, 13424-46-9	19/12/2011	Toxic for reproduction (Article 57c)	ED/77/2011	Use as initiator or booster in detonators (civilian and military) and as initiator in pyrotechnics.

64.	Lead dipicrate	NO	229-335-2, 6477-64-1	19/12/2011	Toxic for reproduction (Article 57c)	ED/77/2011	Explosive compounds like lead diazide and lead styphnate may be used in detonator mixtures together with the two other mentioned lead compounds.
65.	Lead styphnate	NO	239-290-0, 15245-44-0	19/12/2011		ED/77/2011	Use as a primer for small caliber and rifle ammunition. Other common uses are in munition pyrotechnics, powder actuated devise and detonators for civilian use.
66.	N, N-dimethylacetamide	NO	204-826-4, 127-19-5	19/12/2011	Toxic for reproduction (Article 57c)	ED/77/2011	Used as solvent in production of other substances and fibres for clothing and other applications. Also used as reagent, and in products (industrial coatings, polyimide films, paint strippers and ink removers).
67.	Pentazinc chromate octahydroxide	NO	256-418-0, 49663-84-5	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use in coatings in vehicle coating and aeronautic/ aerospace sectors.
68.	Phenolphthalein	NO	201-004-7, 77-09-8	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use as PH indicator (laboratory), for the production of PH indicator paper and in medicinal products.
69.	Potassium hydroxyoctaoxodizincatedichromate	NO	234-329-8, 11103-86-9	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011	Main use in coatings in aeronautic/ aerospace, steel and aluminum coil coating and vehicle coating sectors.
70.	Trilead diarsenate	NO	222-979-5, 3687-31-8	19/12/2011	Carcinogenic (Article 57a) Toxic for reproduction (Article 57c)	ED/77/2011	Used in complex raw materials imported for production of copper, lead and other precious metals. During the metallurgical refinement process, it is transformed to calcium arsenate and diarsenic trioxide.
71.	Zirconia Aluminosilicate Refractory Ceramic Fibres *are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight* • Refractories, fibers, aluminosilicate	NO	-	19/12/2011	Carcinogenic (Article 57a)	ED/77/2011 ED/95/2012	Industrial insulation materials
72.	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	NO	203-794-9, 110-71-4	18/06/2012	Toxic for reproduction (Article 57c)	ED/87/2012	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries.
73.	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	NO	203-977-3, 112-49-2	18/06/2012	Toxic for reproduction (Article 57c)	ED/87/2012	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.
74.	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	YES <0.1% per articles	219-514-3, 2451-62-9	18/06/2012	Mutagenic (Article 57b)	ED/87/2012	Mainly used as a hardener in resins and coatings. Also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilisers for plastics.

75.	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	NO	423-400-0, 59653-74-6	18/06/2012	Mutagenic (Article 57b)	ED/87/2012	Mainly used as solder mask ink in the EU. Also used in electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing, coatings, tools, adhesives, lining materials and stabilisers for plastics.
76.	4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	NO	209-218-2, 561-41-1	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	Used in the formulation of writing inks and potentially other inks, as well as for dyeing a variety of materials.
77.	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	NO	202-027-5, 90-94-8	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	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.
78.	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	NO	208-953-6, 548-62-9	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	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.
79.	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	NO	219-943-6, 2580-56-5	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	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.
80.	Diboron trioxide	NO	215-125-8, 1303-86-2	18/06/2012	Toxic for reproduction (Article 57c)	ED/87/2012	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.
81.	Formamide	NO	200-842-0, 75-12-7	18/06/2012	Toxic for reproduction (Article 57c)	ED/87/2012	Mainly used as an intermediate in the manufacture of agrochemicals, pharmaceuticals and industrial chemicals. Minor uses as a solvent, as a laboratory reagent for quality control purposes in forensic laboratories, hospitals, pharmaceutical companies, food and drinks manufacturers and research laboratories. The substance seems to also be used as a plasticiser.
82.	Lead (II) bis(methanesulfonate)	NO	401-750-5, 17570-76-2	18/06/2012	Toxic for reproduction (Article 57c)	ED/87/2012	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.
83.	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	NO	202-959-2, 101-61-1	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	Used as an intermediate in the manufacture of dyes and other substances
84.	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	NO	229-851-8, 6786-83-0	18/06/2012	Carcinogenic (Article 57a)	ED/87/2012	Mainly used in the formulation of printing and writing inks, for dyeing paper and in mixtures such as windscreen washing agents.

85.	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	NO	284-032-2, 84777-06-0	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
86.	1,2-Diethoxyethane	NO	211-076-1, 629-14-1	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
87.	1-bromopropane (n-propyl bromide)	NO	203-445-0, 106-94-5	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
88.	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine • ZOLDINE MS-PLUS	NO	421-150-7, 143860-04-2	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
89.	4,4'-methylenedi-o-toluidine	NO	212-658-8, 838-88-0	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
90.	4,4'-oxydianiline and its salts	NO	202-977-0, 101-80-4	19/12/2012	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/169/2012	Technical Information is not Available.
91.	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated *[covering well-defined substances and UVCB substances, polymers and homologues]* • 20-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-3,6,9,12,15,18-hexaoxaicosan-1-ol • 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethanol • Polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenyl ether • Poly(oxy-1.2-ethanediyl), a-[(1,1,3,3-tetramethylbutyl)phenyl]-w-hydroxy • 2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethanol	NO	219-682-8, 2497-59-8, 2315-61-9, 9002-93-1, 9036-19-5, 2315-67-5	19/12/2012	Endocrine disrupting properties (Article 57(f) – environment)	ED/169/2012	Technical Information is not Available.
92.	4-Aminoazobenzene	NO	200-453-6, 60-09-3	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
93.	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	NO	202-453-1, 95-80-7	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
94.	4-Nonylphenol, branched and linear *[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]* 4-(1-Ethyl-1,4-dimethylpentyl)phenol p-isononylphenol 4-(1-Ethyl-1-ethyl-1-methylhexy)phenol p-(1,1-dimethylheptyl)phenol Phenol, 4-nonyl-, branched p-(1-methylocty)phenol p-nonylphenol 4-(1-Ethyl-1,3-dimethylpentyl)phenol 4-(1,1,5-Trimethylhexy)phenol Phenol, nonyl-, branched Nonylphenol 4-(3-ethylheptan-2-yl)phenol Isononylphenol	NO	142731-63-3, 247-770-6, 26543-97-5, 257-907-1, 52427-13-1, 250-339-5, 30784-30-6, 284-325-5, 84852-15-3, 241-427-4, 17404-66-9, 203-199-4, 104-40-5, 186825-36-5, 521947-27-3, 291-844-0, 90481-04-2, 246-672-0, 25154-52-3 186825-39-8, 234-284-4, 11066-49-2	19/12/2012	Endocrine disrupting properties (Article 57(f) – environment)	ED/169/2012	Technical Information is not Available.

95.	6-methoxy-m-toluidine (p-cresidine)	NO	204-419-1, 120-71-8	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
96.	[Phthalato(2-)]dioxotrilead	NO	273-688-5, 69011-06-9	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
97.	Acetic acid, lead salt, basic	NO	257-175-3, 51404-69-4	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
98.	Biphenyl-4-ylamine	NO	202-177-1, 92-67-1	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
99.	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	NO	214-604-9, 1163-19-5	19/12/2012	PBT (Article 57d) vPvB (Article 57e)	ED/169/2012	Technical Information is not Available.
100.	Cyclohexane-1,2-dicarboxylic anhydride *[all possible combinations of the cis- and trans-isomers]* • cis-cyclohexane-1,2-dicarboxylic anhydride • trans-cyclohexane-1,2-dicarboxylic anhydride • Cyclohexane-1,2-dicarboxylic anhydride	YES <0.1% per articles	236-086-3, 13149-00-3, 238-009-9, 14166-21-3, 201-604-9, 85-42-7,	19/12/2012	Respiratory sensitising properties (Article 57(f) – human health)	ED/169/2012	Technical Information is not Available.
101.	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide) (ADCA)	NO	204-650-8, 123-77-3	19/12/2012	Respiratory sensitising properties (Article 57(f) – human health)	ED/169/2012	Technical Information is not Available.
102.	Dibutyltin dichloride (DBTC)	NO	211-670-0, 683-18-1	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
103.	Diethyl sulphate	NO	200-589-6, 64-67-5	19/12/2012	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/169/2012	Technical Information is not Available.
104.	Diisopentyl phthalate	NO	210-088-4, 605-50-5	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
105.	Dimethyl sulphate	NO	201-058-1, 77-78-1	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
106.	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	NO	201-861-7, 88-85-7	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
107.	Dioxobis(stearato)trilead	NO	235-702-8, 12578-12-0	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
108.	Fatty acids, C16-18, lead salts	NO	292-966-7, 91031-62-8	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
109.	Furan	NO	203-727-3, 110-00-9	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
110.	Henicosafluoroundecanoic acid	NO	218-165-4, 2058-94-8	19/12/2012	vPvB (Article 57e)	ED/169/2012	Technical Information is not Available.
111.	Heptacosafluorotetradecanoic acid	NO	206-803-4, 376-06-7	19/12/2012	vPvB (Article 57e)	ED/169/2012	Technical Information is not Available.

112.	Hexahydromethylphthalic anhydride *[including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers]* • Hexahydro-1-methylphthalic anhydride • Hexahydromethylphthalic anhydride • Hexahydro-3-methylphthalic anhydride • Hexahydro-4-methylphthalic anhydride	NO	256-356-4, 48122-14-1, 247-094-1, 25550-51-0, 260-566-1, 57110-29-9, 243-072-0, 19438-60-9,	19/12/2012	Respiratory sensitising properties (Article 57(f) – human health)	ED/169/2012	Technical Information is not Available.
113.	Lead bis(tetrafluoroborate)	NO	237-486-0, 13814-96-5	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
114.	Lead cyanamidate	NO	244-073-9, 20837-86-9	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
115.	Lead dinitrate	NO	233-245-9, 10099-74-8	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
116.	Lead monoxide (lead oxide)	NO	215-267-0, 1317-36-8	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
117.	Lead oxide sulfate	NO	234-853-7, 12036-76-9	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
118.	Lead titanium trioxide	NO	235-038-9, 12060-00-3	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
119.	Lead titanium zirconium oxide	NO	235-727-4, 12626-81-2	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
120.	Methoxyacetic acid	NO	210-894-6, 625-45-6	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
121.	Methyloxirane (Propylene oxide)	NO	200-879-2, 75-56-9	19/12/2012	Carcinogenic (Article 57a) Mutagenic (Article 57b)	ED/169/2012	Technical Information is not Available.
122.	N,N-dimethylformamide	NO	200-679-5, 68-12-2	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
123.	N-methylacetamide	NO	201-182-6, 79-16-3	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
124.	N-pentyl-isopentylphthalate	NO	776297-69-9	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
125.	o-aminoazotoluene	NO	202-591-2, 97-56-3	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
126.	o-Toluidine	NO	202-429-0, 95-53-4	19/12/2012	Carcinogenic (Article 57a)	ED/169/2012	Technical Information is not Available.
127.	Orange lead (lead tetroxide)	NO	215-235-6, 1314-41-6	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.

128.	Pentacosafluorotridecanoic acid	NO	276-745-2, 72629-94-8	19/12/2012	vPvB (Article 57e)	ED/169/2012	Technical Information is not Available.
129.	Pentalead tetraoxide sulphate	NO	235-067-7, 12065-90-6	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
130.	Pyrochlore, antimony lead yellow	NO	232-382-1, 8012-00-8	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
131.	Silicic acid ($H_2Si_2O_5$), 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]*	NO	272-271-5, 68784-75-8	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
132.	Silicic acid, lead salt	NO	234-363-2, 11120-22-2	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
133.	Sulfurous acid, lead salt, dibasic	NO	263-467-1, 62229-08-7	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
134.	Tetraethyllead	NO	201-075-4, 78-00-2	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
135.	Tetralead trioxide sulphate	NO	235-380-9, 12202-17-4	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
136.	Tricosafluorododecanoic acid	NO	206-203-2, 307-55-1	19/12/2012	vPvB (Article 57e)	ED/169/2012	Technical Information is not Available.
137.	Trilead bis(carbonate) dihydroxide	NO	215-290-6, 1319-46-6	19/12/2012	Toxic for reproduction (Article 57c)	ED/169/2012	Technical Information is not Available.
138.	Trilead dioxide phosphonate	NO	235-252-2, 12141-20-7	19/12/2012	Toxic for reproduction (Article 57 c)	ED/169/2012	Technical Information is not Available.
139.	4-Nonylphenol, branched and linear, ethoxylated *[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]*	NO	**799-990-1**,	20/06/2013	Equivalent level of concern having probable serious effects to the environment (Article 57 f)	ED/69/2013	Technical Information is not Available.
140.	Ammonium pentadecafluorooctanoate (APFO)	NO	223-320-4, 3825-26-1	20/06/2013	Toxic for reproduction (Article 57c) PBT (Article 57d)	ED/69/2013	Technical information is not Available.
141.	Cadmium	YES >0.1% per articles	231-152-8, 7440-43-9	20/06/2013	Carcinogenic (Article 57a) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/69/2013	Technical information is not Available.
142.	Cadmium oxide	NO	215-146-2, 1306-19-0	20/06/2013	Carcinogenic (Article 57a) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/69/2013	Technical Information is not Available.
143.	Dipentyl phthalate (DPP)	NO	205-017-9, 131-18-0	20/06/2013	Toxic for reproduction (Article 57c)	ED/69/2013	Technical Information is not Available.

144.	Pentadecafluorooctanoic acid (PFOA)	NO	206-397-9, 335-67-1	20/06/2013	Toxic for reproduction (Article 57c) PBT (Article 57d)	ED/69/2013	Technical Information is not Available.
145.	Cadmium sulphide	YES <0.1% per articles	215-147-8, 1306-23-6	16/12/2013	Carcinogenic (Article 57a) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/121/2013	Technical Information is not Available.
146.	Dihexyl phthalate	NO	201-559-5, 84-75-3	16/12/2013	Toxic for reproduction (Article 57c)	ED/121/2013	Technical Information is not Available.
147.	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	NO	209-358-4, 573-58-0	16/12/2013	Carcinogenic (Article 57a);	ED/121/2013	Technical Information is not Available.
148.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	NO	217-710-3, 1937-37-7	16/12/2013	Carcinogenic (Article 57a);	ED/121/2013	Technical Information is not Available.
149.	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	NO	202-506-9, 96-45-7	16/12/2013	Toxic for reproduction (Article 57c)	ED/121/2013	Technical Information is not Available.
150.	Lead di(acetate)	NO	206-104-4, 301-04-2	16/12/2013	Toxic for reproduction (Article 57c)	ED/121/2013	Technical Information is not Available.
151.	Trixylyl phosphate	NO	246-677-8, 25155-23-1	16/12/2013	Toxic for reproduction (Article 57c)	ED/121/2013	Technical Information is not Available.
152.	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	NO	271-093-5, 68515-50-4	16/06/2014	Toxic for reproduction (Article 57c)	ED/49/2014	Technical Information is not Available.
153.	Cadmium chloride	NO	233-296-7, 10108-64-2	16/06/2014	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/49/2014	Technical Information is not Available.
154.	Sodium perborate; perboric acid, sodium salt • Sodium perborate monohydrate • Perboric acid (HBO(02)), sodium salt, tetrahydrate • Perboric acid, sodium salt, tetrahydrate • Borate(2-), tetrahydroxybis[μ-(peroxy-k01:k02)]di-, sodium (1:2) • Borate(2-), tetrahydroxybis[μ-(peroxy-k01:k02)]di-, sodium (1:2:6) • Perboric acid (H3B02(02)), monosodium salt, trihydrate • Sodium perborate • Perboric acid, sodium salt	NO	10332-339, 10486-00-7, 37244-98-7, 90568-23-3, 125022-34-6, 13517-20-9, 239-172-9, 15120-21-5, 234-390-0, 11138-47-9	16/06/2014	Toxic for reproduction (Article 57c)	ED/49/2014	Technical Information is not Available.
155.	Sodium peroxometaborate	NO	231-556-4, 7632-04-4	16/06/2014	Toxic for reproduction (Article 57c)	ED/49/2014	Technical Information is not Available.
156.	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	NO	247-384-8, 25973-55-1	17/12/2014	PBT (Article 57d) vPvB (Article 57e)	ED/108/2014	Technical Information is not Available.
157.	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	NO	223-346-6, 3846-71-7	17/12/2014	PBT (Article 57d) vPvB (Article 57e)	ED/108/2014	Technical Information is not Available.

158.	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	NO	239-622-4, 15571-58-1	17/12/2014	Toxic for reproduction (Article 57c)	ED/108/2014	Technical Information is not Available.
159.	Cadmium fluoride	NO	232-222-0, 7790-79-6	17/12/2014	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/108/2014	Technical Information is not Available.
160.	Cadmium sulphate Sulfuric acid, cadmium salt (1:1), hydrate Sulfuric acid, cadmium salt, hydrate (3:3:8)	NO	233-331-6, 10124-36-4, 31119-53-6	17/12/2014	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c) Specific target organ toxicity after repeated exposure (Article 57(f) – human health)	ED/108/2014	Technical Information is not Available.
161.	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	NO		17/12/2015	Toxic for reproduction (Article 57c)	ED/108/2014	Technical Information is not Available.
162.	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and other diesters [with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)]	NO	271-094-0, 68515-51-5, 272-013-1, 68648-93-1	15/06/2015	Toxic for reproduction (Article 57c)	ED/39/2015	Technical Information is not Available.
163.	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	NO	-	15/06/2015	vPvB (Article 57e)	ED/39/2015	Technical Information is not Available.
164.	1,3-propanesultone	NO	214-317-9, 1120-71-4	17/12/2015	Carcinogenic (Article 57a)	ED/79/2015	Technical Information is not Available.
165.	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	NO	223-383-8, 3864-99-1	17/12/2015	vPvB (Article 57e)	ED/79/2015	Technical Information is not Available.
166.	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	NO	253-037-1, 36437-37-3	17/12/2015	vPvB (Article 57e)	ED/79/2015	Technical Information is not Available.
167.	Nitrobenzene	NO	202-716-0, 98-95-3	17/12/2015	Toxic for reproduction (Article 57c)	ED/79/2015	Technical Information is not Available.
168.	Perfluorononan-1-oic-acid and its sodium and ammonium salts • Perfluorononan-1-oic-acid • Sodium salts of perfluorononan-1-oic-acid • Ammonium salts of perfluorononan-1-oic-acid	NO	206-801-3, 375-95-1, 21049-39-8, 4149-60-4,	17/12/2015	Toxic for reproduction (Article 57c) PBT (Article 5d)	ED/79/2015	Technical Information is not Available.
169.	Benzo[def]chrysene (Benzo[a]pyrene)	NO	200-028-5, 50-32-8	20/06/2016	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c) PBT (Article 57d) vPvB (Article 57e)	ED/21/2016	Normally not manufactured intentionally but may occur as a constituent or impurity in other substances.
170.	4,4'-isopropylidenediphenol • Bisphenol A; BPA	NO	201-245-8, 80-05-7	12/01/2017	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) – environment) Endocrine disrupting properties (Article 57(f) – human health)	ED/30/2017 ED/01/2017 ED/01/2018	Technical Information is not Available.
171.	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	NO	-	12/01/2017	Endocrine disrupting properties (Article 57(f) – environment)	ED/01/2017	Technical Information is not Available.

172.	Non-adecafluorodecanoic acid (PFDA) and its sodium and ammonium salts • Non-adecafluorodecanoic acid • Sodium nonadecafluorodecanoate • Ammonium nonadecafluorodecanoate	NO	206-400-3, 335-76-2, 3830-45-3, 221-470-5, 3108-42-7,	12/01/2017	Toxic for reproduction (Article 57c) PBT (Article 57d)	ED/01/2017	Technical Information is not Available.
173.	p-(1,1-dimethylpropyl)phenol	NO	201-280-9, 80-46-6,	12/01/2017	Endocrine disrupting properties (Article 57(f) – environment)	ED/01/2017	Technical Information is not Available.
174.	Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	NO	-	07/07/2017	vPvB (Article 57e)	ED/30/2017	Technical Information is not Available.
175.	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	NO	-	15/01/2018	vPvB (Article 57e)	ED/01/2018	Technical Information is not Available.
176.	Benz[a]anthracene	NO	200-280-6, 56-55-3,	15/01/2018	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED/01/2018	Technical Information is not Available.
177.	Cadmium Carbonate	NO	208-168-9, 513-78-0,	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated after repeated exposure (Article 57(f) – human health)	ED/01/2018	Technical Information is not Available.
178.	Cadmium Hydroxide	NO	244-168-5, 21041-95-2	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated after repeated exposure (Article 57(f) – human health)	ED/01/2018	Technical Information is not Available.
179.	Cadmium Nitrate	NO	233-710-6, 10325-94-7	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated after repeated exposure (Article 57(f) – human health)	ED/01/2018	Technical Information is not Available.
180.	Chrysene	NO	205-923-4, 218-01-9	15/01/2018	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED/01/2018	Technical Information is not Available.
181.	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear (4-HPbl)]	NO	300-298-5, 93925-00-9, 1471311-26-8	15/01/2018	Endocrine disrupting properties (Article 57 (f) – environment)	ED/01/2018	Technical Information is not Available.
182.	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride • Tri mellitic anhydride (TMA)	NO	209-008-0, 552-30-7,	27/06/2018	Respiratory sensitising properties (Article 57(f) – human health)	ED 61/2018 EU/2018/594	Used in the manufacture of esters and polymers.
183.	Benzo[ghi]perylene	NO	205-883-8, 191-24-2,	27/06/2018	vPvB (Article 57d) vPvB (Article 57e)	ED 61/2018	Not registered under REACH. Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
184.	Decamethylcyclopentasiloxane (D5)	YES <0.1% per articles	208-764-9, 541-02-6,	27/06/2018	vPvB (Article 57d) vPvB (Article 57e)	ED 61/2018	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products, textile treatment products and dyes.
185.	Dicyclohexyl phthalate (DCHP)	NO	201-545-9, 84-61-7,	27/06/2018	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57 (f) – environment)	EU/2018/636 ED 61/2018	Used in plastisol, PVC, rubber and plastic articles. A further use is also as a phlegmatiser and dispersing agent for formulations of organic peroxides.
186.	Disodium octaborate	NO	234-541-0, 12008-41-2,	27/06/2018	Toxic for reproduction (Article 57c)	ED 61/2018	Used in anti-freeze products, heat transfer fluids, lubricants and greases, and washing and cleaning products.

187.	Dodecamethylcyclohexasiloxane (D6)	YES <0.1% per articles	208-762-8, 540-97-6,	27/06/2018	vPvB (Article 57d) vPvB (Article 57e)	ED 61/2018	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products.
188.	Ethylenediamine (EDA)	NO	203-468-6, 107-15-3,	27/06/2018	Respiratory sensitising properties (Article 57(f) – Human Health)	ED 61/2018	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, pH regulators and water treatment products.
189.	Lead	YES >0.1% per articles	231-100-4, 7439-92-1,	27/06/2018	Toxic for reproduction (Article 57c)	ED 61/2018	Used in metals, welding and soldering products, metal surface treatment products, and polymers.
190.	Octamethylcyclotetrasiloxane (D4)	YES >0.1% per articles	209-136-7, 556-67-2,	27/06/2018	vPvB (Article 57d) vPvB (Article 57e)	ED 61/2018	Used in washing and cleaning products, polishes and waxes and cosmetics and personal care products.
191.	Terphenyl hydrogenated	YES >0.1% per articles	262-967-7, 61788-32-7,	27/06/2018	vPvB (Article 57e)	ED 61/2018	Used as a plastic additive, solvent, in coatings/inks, in adhesives and sealants, and heat transfer fluids.
192.	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one • 3-benzylidene camphor; 3-BC	NO	239-139-9, 15087-24-8	15/01/2019	Endocrine disrupting properties (Article 57(f) - environment)	ED/88/2018 EU/2018/2013	Technical Information is not Available.
193.	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	NO	401-720-1, 6807-17-6	15/01/2019	Toxic for reproduction (Article 57c)	ED/88/2018	Technical Information is not Available.
194.	Benzo[k]fluoranthene	NO	205-916-6, 207-08-9	15/01/2019	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED/88/2018	Technical Information is not Available.
195.	Fluoranthene	NO	205-912-4, 206-44-0	15/01/2019	PBT (Article 57d) vPvB (Article 57e)	ED/88/2018	Technical Information is not Available.
196.	Phenanthrene	NO	201-581-5, 85-01-8	15/01/2019	vPvB (Article 57e)	ED/88/2018	Technical Information is not Available.
197.	Pyrene	NO	204-927-3, 129-00-0	15/01/2019	PBT (Article 57d) vPvB (Article 57e)	ED/88/2018	Technical Information is not Available.
198.	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides [covering any of their individual isomers and combinations thereof] • 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid • 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionyl fluoride • Ammonium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate • potassium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionate • Propanoic acid, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) -, (+)	NO	236-236-8, 13252-13-6, 218-173-8, 2062-98-8, 62307-80-3, 266-578-3, 67118-55-2, 75579-39-4, 75579-40-7	16/07/2019	Equivalent level of concern having probable serios effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serios effects to the environment (Article 57(f) - environment)	ED/71/2019	Equivalent level of concern having probable serious effects to human health Equivalent level of concern having probable serious effects to the environment
199.	2-methoxyethyl acetate	NO	203-772-9, 110-49-6	16/07/2019	Toxic for reproduction (Article 57c)	ED/71/2019	Technical Information is not Available.
200.	4-tert-butylphenol	NO	202-679-0, 98-54-4	16/07/2019	Endocrine disrupting properties (Article 57(f) - environment)	ED/71/2019 EU/2019/1194	Endocrine disrupting properties
201.	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) Phenol, 4-nonyl-, phosphite (3:1) • Tris(nonylphenyl) phosphite • Phenol, p-isononyl-, phosphite • Phenol, p-sec-nonyl-, phosphite	NO	3050-88-2, 247-759-6, 26523-78-4, 31631-13-7, 106599-06-8,	16/07/2019	Endocrine disrupting properties (Article 57(f) - environment)	D(2024)7663-DC ED/71/2019	Endocrine disrupting properties

	• Tris(4-nonylphenyl, branched) phosphite						
202.	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone *CG 25-369; IRGACURE 369; TK 11-319*	NO	404-360-3, 119313-12-1,	16/01/2020	Toxic for reproduction (Article 57c)	ECHA_01_2020	Technical Information is not Available.
203.	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one *ACETOCURE 97; GENOCURE*PMP; IGM 4817; TRGACURE 907; SPEEDCURE 97*	NO	400-600-6, 71868-10-5,	16/01/2020	Toxic for reproduction (Article 57c)	ECHA_01_2020	Technical Information is not Available.
204.	Diisohexyl phthalate	NO	276-090-2, 71850-09-4,	16/01/2020	Toxic for reproduction (Article 57c)	ECHA_01_2020	Technical Information is not Available.
205.	Perfluorobutane sulfonic acid (PFBS) and its salts	NO	-	16/01/2020	Equivalent level of concern having probable serios effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serios effects to the environment (Article 57(f) - environment)	ECHA_01_2020	Equivalent level of concern having probable serious effects to human health. Equivalent level of concern having probable serious effects to the environment.
206.	1-vinylimidazole	NO	214-012-0, 1072-63-5	25/06/2020	Toxic for reproduction (Article 57c)	D(2020)4578-DC	Technical Information is not Available.
207.	2-methylimidazole	NO	211-765-7, 693-98-1	25/06/2020	Toxic for reproduction (Article 57c)	D(2020)4578-DC	Technical Information is not Available.
208.	Butyl 4-hydroxybenzoate	NO	202-318-7, 94-26-8	25/06/2020	Endocrine disrupting properties (Article 57(f) – human health)	D(2020)4578-DC	Endocrine disrupting properties - human health)
209.	Dibutylbis(pentane-2,4-dionato-O,O')tin	NO	245-152-0, 22673-19-4	25/06/2020	Toxic for reproduction (Article 57c)	D(2020)4578-DC	Technical Information is not Available.
210.	Bis(2-(2-methoxyethoxy)ethyl) ether	NO	205-594-7, 143-24-8	19/01/2021	Toxic for reproduction (Article 57c)	D(2020)9139-DC	Technical Information is not Available.
211.	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	NO	222-883-3, 3648-18-8, 293-901-5, 91648-39-4	19/01/2021	Toxic for reproduction (Article 57c)	D(2020)9139-DC	Technical Information is not Available.
212.	1,4-dioxane	NO	204-661-8, 123-91-1,	08/07/2021	Carcinogenic (Article 57a) Equivalent level of concern having probable serious effects to human health (Article 57(f) –human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)	D(2021)4569-DC	Solvent
213.	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	NO	1522-92-5, 221-967-7, 3296-90-0, 202-480-9, 96-13-9, 253-057-0, 36483-57-5	08/07/2021	Carcinogenic (Article 57a)	D(2021)4569-DC	BMP: manufacture of polymer resins and in one component foam (OCPF) application. TBNPA: polymer production manufacture of plastics products, including compounding and conversion and as an intermediate. DBPA: registered as an intermediate Toxic for reproduction

214.	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	NO	201-289-8, 80-54-6, 75166-30-2, 75166-31-3,	08/07/2021	Toxic for reproduction (Article 57c)	D(2021)4569-DC	Cleaning agents, cosmetics, in scented articles, polishes and wax blends. Toxic for reproduction
215.	4,4'-(1-methylpropylidene)bisphenol	NO	201-025-1, 77-40-7,	08/07/2021	Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)	D(2021)4569-DC	Not registered under REACH. May be used in manufacture of phenolic and polycarbonate resin.
216.	Glutaral	NO	203-856-5, 111-30-8,	08/07/2021	Respiratory sensitising properties (Article 57(f) – Human Health)	D(2021)4569-DC	Biocides, leather tanning, x-ray film processing, cosmetics.
217.	Medium-chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)	YES <0.1% per articles	287-477-0, 85535-85-9, 198840-65-2, 1372804-76-6,	08/07/2021	PBT (Article 57d) vPvB (Article 57e)	D(2021)4569-DC	Flame retardants, plasticising additives in plastics, sealants, rubber and textiles.
218.	Orthoboric acid, sodium salt	NO	215-604-1, 1333-73-9, 237-560-2, 13840-56-7, 25747-83-5, 14890-53-0, 22454-04-2, 238-253-6, 14312-40-4,	08/07/2021	Toxic for reproduction (Article 57c)	D(2021)4569-DC	Not registered under REACH. May be used as solvent and corrosion inhibitor.
219.	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	NO	210555-94-5, 310-154-3, 121158-58-5, 57427-55-1, 27147-75-7, 27459-10-5, 74499-35-7	08/07/2021	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)	D(2021)4569-DC	Preparation of lubricant additive materials and of fuel system cleaners.
220.	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	NO	253-242-6, 36861-47-9, 1782069-81-1, 95342-41-9, 852541-30-1, 852541-21-0, 741687-98-9, 852541-25-4	17/01/2022	Endocrine disrupting properties (Article 57 f - human health)	D(2021)10043-DC	Cosmetics
221.	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	YES >0.1% per articles	204-327-1, 119-47-1,	17/01/2022	Toxic for reproduction (Article 57c)	D(2021)10043-DC	Rubbers, lubricants, adhesives, inks, fuels
222.	S-(tricyclo(5.2.1.02,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	NO	401-850-9, 255881-94-8,	17/01/2022	PBT (Article 57d)	D(2021)10043-DC	Lubricants, greases
223.	tris(2-methoxyethoxy)vinylsilane	NO	213-934-0, 1067-53-4,	17/01/2022	Toxic for reproduction (Article 57c)	D(2021)10043-DC	Rubbers, plastics, sealants
224.	N-(hydroxymethyl)acrylamide	NO	213-103-2, 924-42-5,	10/06/2022	Carcinogenic (Article 57a) Mutagenic (Article 57b)	D(2022)4187-DC	Technical information not available.
225.	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]	NO	253-692-3, 37853-59-1	17/01/2023	vPvB (Article 57e)	D(2022)9120-DC	Used as a fungicide and preparation of flame retardants.
226.	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	NO	201-236-9, 79-94-7	17/01/2023	Carcinogenic (Article 57a)	D(2022)9120-DC	Used as a reactive and additive flame retardant.

227.	4,4'-sulphonyldiphenol	NO	201-250-5, 80-09-1	17/01/2023	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)	D(2022)9120-DC	Used in curing fast drying epoxy resin adhesives.
228.	Barium diboron tetraoxide	NO	237-222-4 13701-59-2	17/01/2023	Toxic for reproduction (Article 57c)	D(2022)9120-DCU	Used for coating products and polymers
229.	bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	NO	247-426-5 26040-51-7	17/01/2023	vPvB (Article 57e)	D(2022)9120-DC	Used for flame retardant in polyurethane.
230.	Isobutyl 4-hydroxybenzoate	NO	224-208-8 4247-02-3	17/01/2023	Endocrine disrupting properties (Article 57(f) - human health)	D(2022)9120-DC	Used for coating products, fillers, putties, plasters, modelling clay and inks & toners.
231.	Melamine	NO	203-615-4 108-78-1	17/01/2023	Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)	D(2022)9120-DC	Used within manufacturing and construction. Used in furniture, shelving, kitchens, service counters, flooring and whiteboards.
232.	Perfluoroheptanoic acid and its salts • Sodium perfluoroheptanoate • Ammonium perfluoroheptanoate • Perfluoroheptanoic acid • Potassium perfluoroheptanoate	NO	243-518-4, 20109-59-5, 228-098-2, 6130-43-4, 206-798-9, 375-85-9, 21049-36-5	17/01/2023	Toxic for reproduction (Article 57c) PBT (Article 57d) vPvB (Article 57e) Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)	D(2022)9120-DC	Used as industrial surfactant in chemical processes.
233.	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	NO	473-390-7	17/0/2023	vPvB (Article 57e)	D(2022)9120-DC	Substance is used in articles, by professional workers, in formulation or re-packing at industrial sites and in manufacturing.
234.	bis(4-chlorophenyl) sulphone	NO	201-247-9, 80-07-9	14/06/2023	vPvB (Article 57e)	D(2023)3788-DC	Used in articles in formulation or re-packing and at industrial sites.
235.	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	NO	278-355-8, 75980-60-8	14/06/2023	Toxic for reproduction (Article 57c)	D(2023)3788-DC	Used in inks and toners
236.	2,4,6-tri-tert-butylphenol	NO	211-989-5, 732-26-3	23/01/2024	Toxic for reproduction (Article 57c) PBT (Article 57d)	D(2023)8585-DC	This article is used in fuels.
237.	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	NO	221-573-5, 3147-75-9	23/01/2024	vPvB (Article 57e)	D(2023)8585-DC	This article is used in air care products, adhesives, sealants, lubricants and greases, polishes, waxes and washing & cleaning products.
238.	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	NO	438-340-0, 119344-86-4	23/01/2024	Toxic for reproduction (Article 57c)	D(2023)8585-DC	This article is used in inks and toners.
239.	Bumetrizole (UV-326)	NO	223-445-4, 3896-11-5	23/01/2024	vPvB (Article 57e)	D(2023)8585-DC	This article is used in coating products, adhesives, sealants, washing and cleaning products.
240.	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	NO	700-960-7	23/01/2024	vPvB (Article 57e)	D(2023)8585-DC	This article is used in adhesives, sealants, coating products, filters, putties, plasters, modelling clay, inks and polymers.

241.	Bis(α,α-dimethylbenzyl) peroxide	NO	201-279-3, 80-43-3	27/06/2024	Toxic for reproduction (Article 57c)	D(2024)4144-DC	Used for repacking of products.
242.	Triphenyl phosphate	YES	204-11-2, 115-86-6	07/11/2024	Endocrine disrupting properties (Article 57(f) environment)	D(2024)6225-DC	This article is used in adhesives, sealants, coating products, cosmetics and personal care products.
243.	6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid	NO	701-118-1, 2156592-54-8	21/01/2025	Toxic for reproduction (Article 57c)	D(2024)7663-DC	ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.
244.	O,O,O-triphenyl phosphorothioate	NO	209-909-9, 597-82-0	21/01/2025	PBT (Article 57d)	D(2024)7663-DC	This substance is used in the following products: lubricants and greases.
245.	Octamethyltrisiloxane	NO	203-497-4, 107-51-7	21/01/2025	vPvB (Article 57e)	D(2024)7663-DC	This substance is used in the following products: cosmetics and personal care products and washing & cleaning products.
246.	Perfluamine	NO	206-420-2, 338-83-0	21/01/2025	vPvB (Article 57e)	D(2024)7663-DC	ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.
247.	Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	NO	421-820-9, 192268-65-8	21/01/2025	PBT (Article 57d)	D(2024)7663-DC	ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.
248.	1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxy]trisiloxane		241-867-7 14-62-8	25/06/2025	vPvB (Article 57e)	D(2025)4165-DC	
249.	decamethyltetrasiloxane		205-491-7 141-62-8	25/06/2025	vPvB (Article 57e)	D(2025)4165-DC	
250.	tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-{[4-chloro-6-({2-[(4-fluoro-6-{[4-(vinylsulfonyl)phenyl]amino}-1,3,5-triazine-2-yl)amino]propyl}amino)-1,3,5-triazine-2-yl]amino}-5-sulfonato-1-naphthyl)diazenyl]-5-methoxyphenyl}diazenyl]-1,3,6-naphthalenetrisulfonate (Reactive Brown 51)		466-490-7	25/06/2025	Toxic for reproduction (Article 57c)	D(2025)4165-DC	

Key:

In Product more 0.1%	In Product less 0.1%	Plating - No Residuals	Cleaning – No Residuals	Testing Purposes only - No Residuals

Health & Safety Department

REACh, SVHC's & Articles
Cadmium Plating Evaluation

Sample	Part No.	Bin ref	Trace No.	Weight before plating	Weight after Electroless nickel	Weight of Electroless nickel %	Weight after Cadmium plating	Weight of Cadmium %
1	G79502-08	BH492	1416269	4.0133 g	4.0791g	1.6	4.2039g	3.0
2	G79502-14	BH399	1890378	8.1389 g	8.2783g	1.7	8.5201g	2.8
3	G79502-18	BH406	1389232	10.9914 g	11.1806g	1.7	11.4342g	2.2
4	G79502-22	BH428	1107117	14.6128 g	14.8356g	1.5	15.2035g	2.4
5	G79502-61	BH402	646287	15.6952 g	15.9557g	1.6	16.3067g	2.2

The samples taken will have an element of electroless nickel applied.

Summary

Under REACh and in particular SVHC's the maximum permissible amount of Cadmium (by weight) is 0.1% is acceptable

The samples used are a reasonable assumption of the weight effects of cadmium on Glenair componentry.

We do not need to stop using Cadmium, but we do need to make customers who wish to have Cadmium plated parts aware of the fact that the use of this substance is beyond the permissible level of 0.1%.

The risk assessment and advice on the next page provides safe user information.

Health and Safety Guidance for Components with Suspected Cadmium Corrosion

Cadmium has long been used for its unmatched ability to help reduce corrosion on both metal and plastic components whilst improving electrical continuity. However, the use of cadmium is gradually reducing driven by various streams of regulation and restriction, RoHS & REACH is typical today. The cadmium-plated surface on components does not represent a risk to health. Cadmium works by corroding preferentially to the component it is protecting. When it corrodes it forms a white cadmium salt, which can represent a risk to health if not handled correctly. It is essential that these corrosion products are not inhaled or ingested and that good hygiene measures are used.

Identification of Cadmium corrosion

Cadmium plated components that have been passivated are a golden colour. When they begin to corrode a white bloom spreads on the surface, a white crystalline solid then becomes evident (as if salt water has dried on the surface), followed by pitting of the surface, which may be darker in colour.

Routes of entry into the body

Generally the white crystalline deposits are unlikely to become airborne and so cannot be inhaled. However, occasionally there are cases of gross corrosion where the corrosion flakes off the component. In these cases small quantities of dust may become airborne, e.g. when being removed from any packaging.

In all circumstances, dry mechanical abrasion must be avoided, as this will generate respirable dust. The most likely route of entry is therefore ingestion from touching the corrosion on the component or corrosion that has dropped off the component which could then be ingested through eating, drinking or smoking. Again, good hygiene practice should follow.

If you see these signs then you should take precautionary personal protection measures by using:

- Disposable gloves.
- Wear a disposable dust mask, Filtering Face mask
- Open any packaging carefully and identify the levels of corrosion.

If corrosion is evident, seek advice from Occupational Health.

- Remove the disposable gloves by grasping at the wrist, turning inside out and dispose of in the hazardous waste stream with the mask.
- Wash hands well with soap and warm water.
- If the component needs to be removed from its packaging, place in a clear plastic bag and seal it to prevent debris loss.
- Dispose of contaminated products as if it is hazardous waste.

Cadmium Health effects

The most serious acute effect of cadmium is confined to the lungs and is typically associated with metal fume from welding plated metals.
Chronic effects target lungs, respiratory system, kidneys, prostate and blood (from inhalation and ingestion).
The most serious consequence of chronic cadmium poisoning is cancer (lung and prostate). Chronic effects generally result in kidney damage. Cadmium also is believed to cause pulmonary emphysema and bone disease (osteomalcia and osteoporosis).

The effects of cadmium are serious and long lasting as it is difficult for the body to excrete once inside (it has a very long biological half-life of 25 years).