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24G-Q-000046x (E)

# KOHOKU KOGYO

## Specified Chemical Substances List

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**[Definition of terms]**

Containment	: This term indicates that chemical substances (including impurities) are, whether intentionally or not, added, filled, mixed or adhered to KOHOKU KOGYO's procured parts, products and packing materials.(This term also indicates that chemical substances are unintentionally mixed or adhered to products during the production process.)
Concentration	: Content rate of chemical substances Its unit is used with [ppm] (parts per million by weight) or [wt%] (weight percent). (In terms of concentration calculation methods, please refer to the notation of each table.)
Intentional addition	: Deliberate use in the formulation of Deliverables where its presence is desired to provide a specific characteristic, appearance or quality regardless of concentration of the chemical substance
Material	: Homogeneous material which cannot be decomposed further more or composite material which can be regarded as homogeneous in order to fulfill its specific function(s), for which it is set or formed at particular position
Impurities	: This term indicates substances which are contained in natural materials and cannot be technically removed completely by refinery processes as industry materials, or substances which are generated in synthetic reaction and cannot be technically removed completely.
Preparation	: A mixture or solution composed of two or more substances (e.g. adhesives, plating solutions, coating materials)
Deliverables	: All the parts (including raw materials), sub-materials and production subsidiary materials constituting comprise KOHOKU KOGYOU's products.
Chemical product	: Chemical substance and/or mixture
Chemical Substance	: A chemical element or compound that either exists in nature or is obtained through a manufacturing process
Mixture	: A mixture intentionally comprising two or more chemical substances
Article	: An item of specific shape, appearance or design created during manufacture which substantially determines functions in final use rather than functions provided by its chemical composition
Electrical and electronic equipment	: Equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1000 volts for alternating current and 1500 volts for direct current

## 1.Banned Substances

**Table 1: Banned Substances (Refer to Note 1)**

No	Substances	Standards of ban	Remark	Reference
001	Lead/Lead Compounds (Shown in Table 1a)	<p>Electrical and electronic equipment and Packing</p> <p>[1] Ban of intentional addition.</p> <p>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p> <p>[3] Even of impurities, the content in the minimum article quality must be 1000ppm or less. In this regard, however, concentration in Material must not exceed 300 ppm in the case of cables/cords with thermoset or thermoplastic coatings.</p> <p>[4] Sum of concentration of the 4 substances (refer to Note2) in Packing materials must not exceed 100 ppm even contained as impurities.</p>	Refer to Exempted Application in Table 1w	-REACH regulation -RoHS Directive -California Proposition 65

No	Substances	Standards of ban	Remark	Reference
001	Lead/Lead Compounds (Shown in Table 1a)	[1]~[3] If those articles or accessible parts thereof may, during normal or reasonably foreseeable conditions of use, be placed in the mouth by children, the concentration of lead (expressed as metal) in those articles or accessible parts thereof must not be equal to or greater than 500ppm by weight.	It is considered that an article or accessible part of an article may be placed in the mouth by children if it is smaller than 5 cm in one dimension or has a detachable or protruding part of that size.	-REACH regulation -RoHS Directive - California Proposition 65
002	Mercury/Mercury Compounds (Shown in Table 1b)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even of impurities, it is minimum article mass quality must be the Mercury content is 1000 ppm or less. [4] Sum of concentration of the 4 substances (refer to Note2) in Packing materials must not exceed 100 ppm even contained as impurities.	-	-REACH regulation - RoHS Directive
003	Cadmium/Cadmium Compounds (Shown in Table 1c)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] The content rate in the Molding quality must be 100ppm or less. [4] Sum of concentration of the 4 substances (refer to Note 2) in packing materials must not exceed 100 ppm even contained as impurities.	Refer to Exempted Application in Table 1w	-REACH regulation - RoHS Directive
004	Chromium VI Compounds (Shown in Table 1d)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even of impurities, it is minimum article mass quality must be the chromium content is 1000 ppm or less. [4] Sum of concentration of the 4 substances (refer to Note 2) in Packing materials must not exceed 100 ppm even contained as impurities.	-	-REACH regulation - RoHS Directive
005	Hexabromocyclododecane (HBCDD) (Shown in Table 1e)	《Articles》 [1] Ban of intentional addition [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even of impurities, the content in the minimum article quality must be 0.01wt% or less. 《Chemicals》 Concentration in chemicals must not exceed 0.01% by weight.	-	- CSCL (Refer to Note 4)
006	Ozone Depleting Substances (CFCs, HCFCs, HBFCs, carbon tetrachloride, etc.) (Shown in Table 1f)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	-	- Montreal Protocol - EC No.2037/2000 - EC No.1005/2009
007	Fluorinated greenhouse gases (HFC, PFC, SF6) (Shown in Table 1g)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	Unless confined system and a recovery scheme for the substances have been established.	- EU Regulation No517/2014

No	Substances	Standards of ban	Remark	Reference
008	Asbestos (Shown in Table 1h)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	-	- REACH (Restriction)
009	Azo colorants and Azo dyes which form certain aromatic amines (Shown in Table 1i)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even of impurities, the content in the minimum article quality must be 30 ppm or less.	Among azo dyes and pigments, those in which amines in Table 1i are produced by reduction cleavage of azo groups are targeted. Applicable only when used on leather and textile products and their parts that may come into direct contact with human skin for long periods of time.	- REACH (Restriction)
010	PolychlorinatedBiphenyls (PCBs) and specific substitutes (Shown in Table 1j)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	-	- REACH (Restriction)
011	Polycyclic aromatic hydrocarbons (PAH) (Shown in Table 1k)	[1] Ban of intentional addition [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even if it is an impurity, it must not exceed the following content. 0.0001% by weight (1ppm) per rubber or plastic component	This applies to rubber or plastic component where direct and prolonged contact, or repeated in short-term contact with the human skin or the oral cavity are expected: Clothing and related accessories • Textile products, footwear	- REACH (Restriction) (EC) Annex 17 No.72 of No.1907 / 2006
012	Perfluorooctanoic acid (PFOA) its salts and PFOA-related compounds. (Shown in Table 1l)	[1] Ban of intentional addition [2] <Article•Mixture> • In minimum article mass or in mixtures Must be 25 ppb or less. • In the case of PFOA-related compounds, one or a combination thereof must be 1000 ppb or less.	In force from 4th January 2020. Related substance: Notation about table 1.	EU revision POPs treaty (EU) 2019/1021 (EU) 2020/784
013	<del>PFOS and PFOS-related substances</del> Perfluorooctane sulfonic acid and its derivatives(PFOS)	[1] Ban of intentional addition [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Concentration or amount must not exceed undermentioned numerical numbers in case of being contained as impurities. •Content in material less than 0.1wt% • Content rate in preparation (ink, toner, etc.): 0.001wt% or less In coated materials Content:less than 1µg/m <sup>2</sup>	-	- POPs treaty
014	Polychlorinated Biphenyls (PCBs) (Shown in Table 1u)	[1] Ban of intentional addition. [2] The concentration in the article mass quality must be 1000ppm or less.	-	- RoHS Directive

No	Substances	Standards of ban	Remark	Reference
015	Polybrominated Diphenylethers (PBDEs)	<p><b>【Electrical and electronic equipment】</b>            [1] Ban of intentional addition.            [2] Ban of attachment, mix, or production of the substances in the manufacturing process.            [3] Even of impurities, the content in the minimum article quality must be 1000 ppm or less.</p> <p><b>【Other than electrical and electronic equipment(Including packing material)】</b>            The total content of each substance in the Article quality amount shall be 500ppm or less.0.05% by weight (500ppm) of PBDEs in the Article product</p>	-	- RoHS Directive EU revision POPs treaty (EU) 2019/1021
016	Polychlorinated Terphenyls (PCTs)	<p>[1] Ban of intentional addition.            [2] Ban of attachment, mix, or production of the substances in the manufacturing process.            [3] Even of impurities, the content in the minimum article quality must be 50ppm or less.</p>	-	-REACH regulation
017	Shortchain Chlorinated Paraffins (C10-13) (Shown in Table 1q)	<p>[1] Ban of intentional addition.            [2] Ban of attachment, mix, or production of the substances in the manufacturing process.            [3] Even of impurities, the content in the minimum article quality must be 1000ppm or less.</p>	-	Swiss method, Austria method REACH regulation And "approval candidate substances"
018	Tri-substituted organostannic compounds ( except for TBTO)	Concentration of tin the minimum article, thereof, must not exceed 1000ppm.	-	-REACH regulation
019	Tributyl Tin Oxide (TBTO)	<p>[1] Ban of intentional addition.            [2] Concentration of tin in the article, or part thereof,must not exceed 1000ppm.</p>	-	-REACH regulation Chemical Substances Control Law
020	Dimethylfumarate (DMF)	<p>[1] The content rate in the Molding quality must be 0.1ppm or less.            [2] Ban of intentional addition.            [3] Ban of attachment, mix, or production of the substances in the manufacturing process.</p>	624-49-7	- 2009/251/EC
021	Dibutyltin compounds (DBT)	Concentration of tin the article, or part thereof, must not exceed 1000ppm.	-	REACH regulation
022	Diocetyl tin compounds (DOT)	Concentration of tin the article, or part thereof, must not exceed 1000ppm.	This applies to cases that are used for textile,leather products or their parts intended to come into contact with the skin directly, and the case that are used for two-component room temperature cetate ion moulding kits (RTV-2 moulding kits)	REACH regulation
023	Polychlorinated Naphthalenes (more than 2 chlorine atom) (Shown in Table 1p)	<p>[1] Ban of intentional addition.            [2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p>	-	- CSCL (Refer to Note 4) - POPs treaty

No	Substances	Standards of ban	Remark	Reference
024	Formaldehyde	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process. [3] Even of impurities, the content in the minimum article quality must be 75 ppm or less.	Applicable only when used for textile products and their parts • Clothing and related accessories, footwear 50-00-0	REACH regulation (EC) Annex 17 No.72 of No.1907 / 2006 Austrian method, Lithuanian method
025	Tris(2,3-dibromopropyl) phosphate (TRIS)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	This applies to cases that are used for textile products or their parts intended to come into contact with the skin directly. 126-72-7	REACH regulation
026	Tris (1-aziridinyl) phosphine oxide (TEPA)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	This applies to cases that are used for textile products or their parts intended to come into contact with the skin directly. 545-55-1	REACH regulation
027	Hexachlorobenzene	[1] Ban of intentional addition. <del>Maximum permissible concentration 10ppm.</del> [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	118-74-1	- CSCL (Refer to Note 4)
028	Aldrin	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	309-00-2	- CSCL (Refer to Note 4)
029	Dieldrin	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	60-57-1	- CSCL (Refer to Note 4)
030	Endrin	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	72-20-8	- CSCL (Refer to Note 4)
031	DDT 1,1'-(2,2,2-trichloroethylidene)bis[4-chlorobenzene]	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	50-29-3	- CSCL (Refer to Note 4)
032	Chlordanes (Shown in Table 1r)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	57-74-9 76-44-8	- CSCL (Refer to Note 4)
033	N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine and N,N'-dixylyl-p-phenylenediamine	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	-	- CSCL (Refer to Note 4)
034	2,4,6-tri-tert-butylphenol	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	-	- CSCL (Refer to Note 4)
035	Toxaphene	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	8001-35-2	- CSCL (Refer to Note 4)

No	Substances	Standards of ban	Remark	Reference
036	Mirex	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	2385-85-5	- CSCL (Refer to Note 4)
037	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-;2-benzotriazol-2-yl-4,6-di-tert-butylphenol(UV-320)	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	3846-71-7	- CSCL (Refer to Note 4)
038	Pentachlorobenzene	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	608-93-5	- CSCL (Refer to Note 4)
039	$\alpha$ -Hexachlorocyclohexane	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	319-84-6	- CSCL (Refer to Note 4)
040	$\beta$ -Hexachlorocyclohexane	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	319-85-7	- CSCL (Refer to Note 4)
041	$\gamma$ -Hexachlorocyclohexane	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	58-89-9	- CSCL (Refer to Note 4)
042	Chlordecone	[1] Ban of intentional addition. [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	143-50-0	- CSCL (Refer to Note 4)
043	Bis(2-ethylhexyl) phthalate (DEHP)	<Electrical and electronic equipment> [1] Ban of intentional addition [2] Ban of adhesion, mixture and generation during the manufacturing process	117-81-7	RoHS Directive REACH regulation
044	Butyl benzyl phthalate (BBP)	[3] The concentration in the article mass quality must be 1000ppm or less. <Other than electrical and electronic equipment (including packing materials)>	85-68-7	
045	Dibutyl phthalate (DBP)	[1] Ban of intentional addition [2] In the plasticized material, 4 substances The total content of each is less than 1000ppm.	f)Endocrine disrupting properties-environment 84-74-2	30th SVHC
046	Diisobutyl phthalate (DIBP)	By plasticized material is meant the following homogeneous material: Vinyl chloride (PVC), polyvinyl chloride (PVDC), polyvinyl acetate (PVA), polyurethane, silicone rubber and other polymers except natural latex coating (including polymer foam and rubber materials), surface coating, anti-slip coating, finish (finishes), transfer sheets (decals), printing designs, adhesives, sealants, paints and inks.	84-69-5	RoHS Directive REACH regulation
047	Nickel /Nickel Compounds (Shown in Table 1s)	[1] Ban of use as alloys containing nickel, such as stainless steels or nickel plating.	Use for as a watch that staying in contact with skin for a considerable duration of time. 7440-02-0	REACH regulation



No	Substances	Standards of ban	Remark	Reference
048	Endosulfannisann	[1] Ban of intentional addition [2] Ban of attachment, mix, or production of the substances in the manufacturing process.	959-98-8 33213-65-9 115-29-7	- CSCL (Refer to Note 4)
049	Cobalt dichloride	Silica gel or other chemicals: Concentration in silica gel or other chemicals must be less than 0.01wt%	-	REACH regulation
<del>050</del>	<del>4,4'-isopropylidenediphenol; bisphenol A</del>	<del>Thermal paper: Concentration in the thermal paper must be less than 0.02wt%</del>	<del>80-05-7</del>	<del>REACH regulation</del>
051	Phthalates [Diisodecyl phthalate(DIDP), Diisononyl phthalate(DINP), Di-n-octyl phthalate(DNOP)]	Product packing material Prohibition of inclusion	See IEC62474 26761-40-0 68515-49-1 28553-12-0 68515-48-0 117-84-0 Report target: Near the child's mouth Positioned toys or children Nursing care products	IEC62474
052	Radioactive substances	All products Ban of intentional addition	See IEC62474	IEC62474
053	White phosphorus	All products Prohibition of inclusion	12185-10-3	Industrial Safety and Health Act
054	4-nitrodiphenyl and base	All products Prohibition of inclusion	92-93-3	Industrial Safety and Health Act
055	Bis (chloromethyl) ether	All products Prohibition of inclusion	542-88-1	Industrial Safety and Health Act
056	Benzene glue (containing 5% or more banzen)	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 71-43-2	Industrial Safety and Health Act
057	Cyande	All products Prohibition of inclusion	-	Water Pollution Control Act
058	Organophosphorus compounds (limited to Parathion, Methyl parathion, Methyl demeton and EPN)	All products Prohibition of inclusion	2104-64-5 56-38-2	Water Pollution Control Ac
059	Alkyl mercury compounds	All products Prohibition of inclusion	627-44-1	Water Pollution Control Act
060	Polychlorinated dibenzofurans	All products Prohibition of inclusion	-	Act on Special Measures against Dioxins
061	Polychlorinated dibenzo-p-dioxin	All products Prohibition of inclusion	-	Act on Special Measures against Dioxins
062	Coplanar Polychlorinated Biphenyl	All products Prohibition of inclusion	-	Act on Special Measures against Dioxins
063	2,3,7,8-Tetrachlorodibenzo-p-dioxin	All products Prohibition of inclusion	1746-01-6	Act on Special Measures against Dioxins
064	Other dioxins	All products Prohibition of inclusion	-	Act on Special Measures against Dioxins
065	Benzene, 1,1'-oxybis-, tetrabromo deriv	All products Prohibition of inclusion	40088-47-9	JCSCL EU revision POPs treaty (EU) 2019/1021

No	Substances	Standards of ban	Remark	Reference
066	Benzene, 1,1'-oxybis-, pentabromo deriv	All products Prohibition of inclusion	32534-81-9	JCSCL EU revision POPs treaty (EU) 2019/1021
067	Hexabromobiphenyl ether Benzene, 1,1'-oxybis-, hexabromo deriv.	All products Prohibition of inclusion	68631-49-2 36483-60-0	JCSCL EU revision POPs treaty (EU) 2019/1021
068	Benzene, 1,1'-oxybis-, heptabromo deriv.	All products Prohibition of inclusion	446255-22-7 68928-80-3 207122-16-5	JCSCL EU revision POPs treaty (EU) 2019/1021
069	Benzenamine,N-phenyl-, reaction products with styrene and 2,4,4- trimethylpentene	All products Prohibition of inclusion	-	Canada Gazette
070	Bis(pentabromophenyl) ether (decabromodiphenyl ether;decaBDE)	All products Prohibition of inclusion	1163-19-5	REACH regulation EU revision POPs treaty (EU) 2019/1021
071	Benzene, 1,1'-oxybis-, octabromo deriv.	All products Prohibition of inclusion	32536-52-0	REACH regulation EU revision POPs treaty (EU) 2019/1021
072	Benzene, pentabromo(tetrabromopheno xy)-	All products Prohibition of inclusion	63936-56-1	REACH regulation EU revision POPs treaty (EU) 2019/1021
073	Methane, dichloro-	All products Prohibition of inclusion	75-09-2	REACH regulation
074	Ethene, trichloro-	All products Prohibition of inclusion	79-01-6	REACH regulation
075	Ethane, 1,2-dichloro-	All products Prohibition of inclusion	107-06-2	REACH regulation
076	Ethene, tetrachloro-	All products Prohibition of inclusion	127-18-4	REACH regulation
077	Ethene, 1,1-dichloro-	All products Prohibition of inclusion	75-35-4	REACH regulation
078	Ethane, 1,1,2-trichloro-	All products Prohibition of inclusion	79-00-5	REACH regulation
079	<del>Pitch, coal tar, high temp.</del> Residues (coal tar), pitch distillation	All products Prohibition of inclusion	92061-94-4 90640-86-1	REACH regulation
080	Tar, coal, high-temp.	All products Prohibition of inclusion	65996-89-6	REACH regulation
081	Tar, coal, low-temp.	All products Prohibition of inclusion	65996-90-9	REACH regulation
082	Tar, coal	All products Prohibition of inclusion	8007-45-2	REACH regulation
083	Ethene, 1,2-dichloro-, (1Z)-	All products Prohibition of inclusion	156-59-2	REACH regulation
084	Ethene, chloro-	All products Prohibition of inclusion	75-01-4	REACH regulation
085	Tripoli	All products Prohibition of inclusion	1317-95-9	Industrial Safety and Health Act
086	Tridimite	All products Prohibition of inclusion	15468-32-3	Industrial Safety and Health Act
087	Cis-1,3-Dichloropropene	All products Prohibition of inclusion	10061-01-5	Industrial Safety and Health Act

No	Substances	Standards of ban	Remark	Reference
088	1-Propene, 1,3-dichloro-, (1E)-	All products Prohibition of inclusion	10061-02-6	Industrial Safety and Health Act
089	1,3-Dichloropropene; D-D	All products Prohibition of inclusion	542-75-6	-
090	Triethyl arsenate	All products Prohibition of inclusion	15606-95-8	-
091	Bromodiphenyl ether	All products Prohibition of inclusion	101-55-3	JCSCL EU revision POPs treaty (EU) 2019/1021
092	Dibromodiphenyl ether	All products Prohibition of inclusion	2050-47-7	JCSCL EU revision POPs treaty (EU) 2019/1021
093	Tribromodiphenyl ether	All products Prohibition of inclusion	49690-94-0	JCSCL EU revision POPs treaty (EU) 2019/1021
094	$\alpha$ , $\alpha$ , $\alpha$ -4 tetrachlorotoluene; p-chlorobenzotrichloride	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 5216-25-1	CMR substances listed in REACH Regulation Annex 17
095	$\alpha$ , $\alpha$ , $\alpha$ -chlorotoluene; Benzotrichloride	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 98-07-7	CMR substances listed in REACH Regulation Annex 17
096	$\alpha$ -Chlorotoluene; Benzyl chloride	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 100-44-7	CMR substances listed in REACH Regulation Annex 17
<del>097</del>	<del>1,2-Benzenedicarboxylic acid; Side chain alkyl esters with 6 to 8 carbon atoms, mainly composed of side chain hydrocarbons with 7 carbon atoms</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 71888-89-6</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
<del>098</del>	<del>Bis-phthalate (2-methoxyethyl)</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 417-82-8</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
<del>099</del>	<del>Diicopentyl phthalate</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 605-50-5</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
<del>100</del>	<del>Di n-pentyl phthalate (DPP)</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 131-18-0</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
<del>101</del>	<del>Di n-hexyl phthalate (DnHP)</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 84-75-3</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
102	N-methylpyrrolidone; 1-Methyl-2-pyrrolidone (NMP)	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 872-50-4	CMR substances listed in REACH Regulation Annex 17
<del>103</del>	<del>N,N-Dimethylacetamide (DMAC)</del>	<del>All products Prohibition of inclusion</del>	<del>• Clothing and related accessories, textiles, footwear 127-10-5</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>

No	Substances	Standards of ban	Remark	Reference
104	<del>N,N dimethylformamide; dimethylformamide</del>	<del>All products Prohibition of inclusion</del>	<del>Clothing and related accessories, textiles, footwear 68-12-2</del>	<del>CMR substances listed in REACH Regulation Annex 17</del>
105	1,4,5,8-Tetraaminoanthraquinone; Day sparse blue	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 2475-45-8	CMR substances listed in REACH Regulation Annex 17
106	Benzamine, 4,4'-(4- iminocyclohexa-2,5- gerinilidenemethylene) dianiline hydrochloride; Basic Red 9	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 569-61-9	CMR substances listed in REACH Regulation Annex 17
107	[4- [4,4'-bis (dimethylamino) benzhydrylidene] cyclohexan- 2,5-diene-1-iriden] dimethylammonium hydrochloride; Basic Biored 3	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 548-62-9	CMR substances listed in REACH Regulation Annex 17
108	4-Chloro-2-methylaniline hydrochloride	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 3165-93-3 6259-40-1 6259-42-3	CMR substances listed in REACH Regulation Annex 17
109	2-Naphthalene amine acetate	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 553-00-4	CMR substances listed in REACH Regulation Annex 17
110	4-Methoxy-m- phenylenediamine sulfate; 2,4-diaminoanisole sulfate	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 39156-41-7	CMR substances listed in REACH Regulation Annex 17
111	2,4,5-trimethylaniline hydrochloride	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 21436-97-5	CMR substances listed in REACH Regulation Annex 17
112	Quinoline	All products Prohibition of inclusion	• Clothing and related accessories, textiles, footwear 91-22-5	CMR substances listed in REACH Regulation Annex 17
113	Poly-vinyl-chloride (PVC) and its mixture	All products Prohibition of inclusion	9002-86-2	-
114	Vinyl-chloride vinyl-acetate copolymer	All products Prohibition of inclusion	9003-22-9	-
115	Polvinylchloride and mixture	All products Prohibition of inclusion	-	-
116	Radon	All products Prohibition of inclusion	10043-92-2	EU-D 96/29/Euratom
117	Methane, chloromethoxy-	All products Prohibition of inclusion	107-30-2	-
118	Erionite	All products Prohibition of inclusion	12510-42-8	-
119	9-Methoxyfuro[3,2- g]chromen-7-one	All products Prohibition of inclusion	298-81-7	-
120	Ethane, 1,1'-thiobis[2-chloro-	All products Prohibition of inclusion	505-60-2	-
121	Thiotepa	All products Prohibition of inclusion	52-24-4	-

No	Substances	Standards of ban	Remark	Reference
122	Oxirane	All products Prohibition of inclusion	75-21-8	-
123	Phenol,2,4,6-tris(1,1-dimethylethyl)-	All products Prohibition of inclusion	732-26-3	TSCA
124	Tris(2-chloroethyl) phosphate	All products Prohibition of inclusion	115-96-8	REACH regulation
125	2-Propanol, 1-chloro-, phosphate (3:1)	All products Prohibition of inclusion	13674-84-5	-
126	2-Propanol, 1,3-dichloro-, phosphate (3:1)	All products Prohibition of inclusion	13674-87-8	-
127	Cristobalite (SiO2)(Only when it becomes powder in the course of use)	All products Prohibition of inclusion	14464-46-1	-
128	Quartz (SiO2)(Only when it becomes powder in the course of use)	All products Prohibition of inclusion	14808-60-7	-
129	rel- (1R, 2R, 3R, 6S, 7S, 8S, 9S, 11R) -3,4,5,6,13,13-hexachloro-10-oxapentacyclo [6.3.1.1 (3,6) .0 (2,7) .0 (9,11)] Trideca-4-en	All products Prohibition of inclusion	72-20-8	-
130	Americium-241	All products Prohibition of inclusion	14596-10-2	EU-D 96/29/Euratom
131	Trium-232	All products Prohibition of inclusion	7440-29-1	EU-D 96/29/Euratom
132	Cesium-137	All products Prohibition of inclusion	10045-97-3	EU-D 96/29/Euratom
133	Strontium-90	All products Prohibition of inclusion	10098-97-2	EU-D 96/29/Euratom
134	bis(2-(2-methoxyethoxy)ethyl)ether	All products Prohibition of inclusion	Toxic for Reproduction 143-24-8	REACH regulation 24th SVHC
135	Diocetyl tin dilaurate, stannane, dioctyl-, bis (coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	All products Prohibition of inclusion	Toxic for Reproduction	REACH regulation 24th SVHC
136	Stannane, dioctyl-, bis(coco acyloxy) derivs	All products Prohibition of inclusion	91648-39-4	REACH regulation
137	Stannane, dioctylbis[(1-oxododecyl)oxy]-	All products Prohibition of inclusion	3648-18-8	REACH regulation
138	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain(C9-C14 PFCAs),their salts and C9-C14 PFCA-related substances.	[1] Prohibition of intentional addition [2] In minimum article quantities or in mixture • C9-C14 PFCA and their salts total 25 ppb Must be less than. • C9-C14 PFCA-related substances total 260ppb Must be less than.	Applicable after 2022/6/29 However, the following applies after 2023/5/31 (a) Semiconductor unit (b) Semiconductors incorporated in semi-finished and finished electronic devices (Excluded usage:Table 1w) PFCA-related substance	REACH regulation

No	Substances	Standards of ban	Remark	Reference
138	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain(C9-C14 PFCAs),their salts and C9-C14 PFCA-related substances.	[1] Prohibition of intentional addition [2] In minimum article quantities or in mixture • C9-C14 PFCA and their salts total 25 ppb Must be less than. • C9-C14 PFCA-related substances total 260ppb Must be less than.	16486-96-7/335-79-5 1765-48-6/376-04-5 18024-09-4/423-62-1 307-71-1/39239-77-5 3658-63-7/4980-53-4 3793-74-6/52956-82-8/68015-87-2/558-97-4/125328-29-2/6014-75-1/129783-45-5/60699-51-6 144031-01-6/63295-27-2/15811-52-6/63295-28-3/16083-87-7/65104-45-2 17741-60-5/65510-56-7/1895-26-7 / 68025-62-7/2043-54-1/68155-54-4/2144-54-9/68188-12-5 30046-31-2/68390-33-0/307-50-6/68412-68-0 307-60-8/68412-69-1 307-63-1/71356-38-2 3248-61-1/72968-38-8/3248-63-3/74256-14-/74256-15-8/85631-54-5 85681-64-7/865-86-1 90622-71-2/90622-99-4/91032-01-8/93062-53-4 93776-00-2/93776-12-6/93776-13-7/93776-15-9 93776-16-0/93776-17-1/94158-70-0/94159-76-9 94159-79-2/94159-80-5/94159-82-7/94159-83-8 94200-42-7/94200-43-8/94200-46-1/94200-47-2 94200-48-3/94200-50-7/94200-51-8	REACH regulation
139	Phenol,isopropylated,phosphate(3:1)(PIP(3:1))	[1] Ban of intentional addition. [2] Ban of attachment, mix, or productin of the substances in the manufacturing process.	68937-41-7	TSCA
140	Pentachlorothiophenol(PCTP)	Concentration in the article must not exceed 1% by weight.	133-49-3	TSCA
141	Hexachlorobutadiene(HCBD)	All products Prohibition of inclusion	87-68--3	TSCA
142	Perfluorohexan sulfonic acid (PFHxS) including its salts and Related substances.	[1] Ban of intentional addition. [2] In minimum article quality or in mixtures is below 25ppb for the sum of PFHxS and its salts or 1000ppb for the sum of PFHxS-related substances.	Applicable after 2022/6/29 355-46-4 82383-12-5 3871-99-6 55120-77-9 68259-08-5 68391-09-3 93572-72-6	Law of th e Switzerland POPs treaty REACH regulation TSCA

No	Substances	Standards of ban	Remark	Reference
143	2,2,2-trichloro-1-(2-chlorophenyl)-1-(4-chlorophenyl)ethanol- (Kelthane or Dicofol)	All products Prohibition of inclusion	10606-46-9	CSCL (Refer to Note 4)
144	Hexachloroethane	All products Prohibition of inclusion	67-72-1	-
145	Potassium pentachlorophenolate	All products Prohibition of inclusion	7778-73-6 27735-64-4 etc 87-86-5 131-52-2	-
146	Volatile Organic Compounds(VOC)	All products Prohibition of inclusion	-	GB standard (Chinese national standard)
147	Methyl bromoacetate	All products Prohibition of inclusion	96-32-2	CSCL (Refer to Note 4)
148	Ethyl bromoacetate	All products Prohibition of inclusion	105-36-2	CSCL (Refer to Note 4)
149	Propyl bromoacetate	All products Prohibition of inclusion	35223-80-4	CSCL (Refer to Note 4)
150	Butyl bromoacetate	All products Prohibition of inclusion	18991-98-5	CSCL (Refer to Note 4)
151	Schradan	All products Prohibition of inclusion	152-16-9	CSCL (Refer to Note 4)
152	Phosphamidon	All products Prohibition of inclusion	13171-21-6	CSCL (Refer to Note 4)
153	Demeton-methyl	All products Prohibition of inclusion	8022-00-2	CSCL (Refer to Note 4)
154	Parathion, methyl-	All products Prohibition of inclusion	298-00-0	CSCL (Refer to Note 4)
155	Tetraethyl diphosphate	All products Prohibition of inclusion	107-49-3	CSCL (Refer to Note 4)
156	Fluoroacetic acid	All products Prohibition of inclusion	144-49-0	CSCL (Refer to Note 4)
157	2-fluoroacetamide	All products Prohibition of inclusion	640-19-7	CSCL (Refer to Note 4)
158	Sodium fluoroacetate	All products Prohibition of inclusion	62-74-8	CSCL (Refer to Note 4)
159	Aluminium phosphide	All products Prohibition of inclusion	20859-73-8	CSCL (Refer to Note 4)
160	2,2,2-Trichloro-1,1-bis(4-chlorophenyl)ethanol	All products Prohibition of inclusion	115-32-2	CSCL (Refer to Note 4)
161	(4-Chlorophenyl) Cyclopropylmethanone	All products Prohibition of inclusion	94097-88-8	CSCL (Refer to Note 4)
162	Dimethylnitrosoamine	All products Prohibition of inclusion	62-75-9	CSCL (Refer to Note 4)
163	Ethane, pentachloro-	All products Prohibition of inclusion	76-01-7	REACH regulation
164	Ethane, 1,1,2,2-tetrachloro-	All products Prohibition of inclusion	79-34-5	REACH regulation
165	1,1,1,2-tetrachloroethane	All products Prohibition of inclusion	630-20-6	REACH regulation
166	2-ethyl-3-hydroxyhexanal	All products Prohibition of inclusion	496-03-7	-
167	Benzene, 1,1'-methylenebis(isocyanato-	All products Prohibition of inclusion	26447-40-5	REACH regulation
168	Ammonium nitrate	All products Prohibition of inclusion	6484-52-2	REACH regulation



No	Substances	Standards of ban	Remark	Reference
169	2-Propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethylmethacrylate, gamma-omega-perfluoro-C10-16-alkyl acrylate and stearyl methacrylate	All products Prohibition of inclusion	203743-03-7	-
170	2-Methylpropyl 2-methyl-2-propenoate polymer with butyl 2-propenoate and 2,5-furanedione, gamma-omega-perfluoro-alkyl(C=8-14) esters, tert-Bu benzenecarboperoxoate Molecular Structure: Formula:	All products Prohibition of inclusion	459415-06-6	-
171	Reaction products of 2-(chloromethyl)oxirane, 3,6-diazaoctane-1,8-diyl diamine and (1,1,1,2,2-pentafluoro-2-iodoethane / perfluoroethene / prop-2-en-1-ol copolymer)	All products Prohibition of inclusion	464178-90-3	-
172	Tetrachlorobenzene	All products Prohibition of inclusion	12408-10-5 84713-12-2 634-90-2 / 634-66-2 95-94-3	REACH regulation
173	Ammonium sulfide ((NH4)2(Sx))	All products Prohibition of inclusion	9080-17-5	REACH regulation
174	Ammonium sulfide ((NH4)2S)	All products Prohibition of inclusion	12135-76-1	REACH regulation
175	Ammonium hydrosulfide	All products Prohibition of inclusion	12124-99-1	REACH regulation
176	Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings. Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms.	<In the printing ink of packaging materials and printed matter > [1] <del>The content of mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings must be 1% or less.</del> [2] The content of mineral oil hydrocarbons (MOAH) comprising from 1 to 2 aromatic rings and hydrocarbons saturated with mineral oil (MOSH) comprising from 16 to 35 carbon atoms must be 0.1% or less. [3] The content of mineral oil aromatic hydrocarbon (MOAH) comprising from 3 ~ 7 aromatic rings must be 1 ppm or less.	*[1] applies after September 30, 2022 *[2] [3] applies after July 1, 2024 (Supplemental information) *Labels attached to packaging materials are target. *Labels attached directly to the target items are not target. *Printed matters made by paper are target.	-Franch law
177	Halogenated Flame Retardants	<Enclosure and stand of electronic displays > [1] Prohibition of intentional use [2] Concentration in material must not exceed 1000ppm.	Exempted items are Commission Regulation (EU) 2019/2021 See Article 1	EU Erp Directive
178	17-(Nonylphenoxy)-3,6,9,12,15-pentaoxaheptadecan-1-ol	All products Prohibition of inclusion	27177-01-1	REACH regulation
179	1,2,4-Trichlorobenzene	All products Prohibition of inclusion	120-82-1	REACH regulation
180	<del>1,6,7,8,9,14,15,16,17,18,18,18-Dodecachloropentacyclo-[12.2.1.16.0.02.13.05.10]octadeca-7,15-dione ("Dechlorano Plus"™) (covering any of its individual anti and syn isomers or any combination thereof)</del>	<del>[1] Prohibition of intentional use</del> <del>[2] Minimum article mass content must exceed 1000ppm.</del>	<del>43560-80-0</del> <del>435821-74-8</del> <del>435821-03-3</del>	<del>REACH regulation</del> <del>POPs treaty</del>



No	Substances	Standards of ban	Remark	Reference
181	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	[1] Prohibition of intentional use [2] <del>Minimum article mass content must Exceed 1000ppm.</del> Ban of attachment, mix, or production of the substances in the manufacturing process.	25973-55-1	REACH regulation POPs treat
182	4,4'-sulphonyldiphenol ( Bisphenol S)	<Thermal paper> The content in thermal paper is less than 0.02 wt%	Toxic for Reproduction Endocrine disrupting properties- nvironment Endocrine disrupting properties-human health 80-09-1	Swiss Law 28th SVHC
183	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	[1] Prohibition of intentional use [2] Minimum article mass content must Exceed 1000ppm	e)vPvB (substances that are extremely persistent and bioaccumulate) 3147-75-9	30th SVHC
184	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	[1] Prohibition of intentional use [2] Minimum article mass content must Exceed 1000ppm	c) Toxic for Reproduction 119344-86-4	30th SVHC
185	Bumetrizole (UV-326)	[1] Prohibition of intentional use [2] Minimum article mass content must Exceed 1000ppm	e)vPvB (substances that are extremely persistent and bioaccumulate) 3896-11-5	30th SVHC
186	Oligomerisation and alkylation reaction products of 2-nhenvlnronene and phenol (Methylstyrenated phenol)	[1] Prohibition of intentional use [2] Minimum article mass content must Exceed 1000ppm	e)vPvB (substances that are extremely persistent and bioaccumulate) 68512-30-1	30th SVHC
187	Methoxychlor	[1] Prohibition of intentional use [2] Minimum article mass content must not Exceed 10ppb.	-	-
188	Pentachlorophenol, Pentachlorophenol-saits, Pentachlorophenol-esters.	[1] Prohibition of intentional use [2] Concentration must equal to or below 5 ppm even contained in articles or mixtures.	-	-
189	Prohibit red phosphorous in inorganic phosphorous to be used in the resin. Upon the material change or the new products qualification, if KOHOKU KOGYO requires, Supplier should submit the evidence showing the resin does not contain red phosphorous in inorganic phosphorous.			

Notes regarding Table 1:

Note1) Article product shall meet all of "Standards of ban" specified in the above table.

In terms of "Banned Substances", methodology of how to calculate concentration shall follow below:

- . In this article, the denominator in the concentration calculation should be the mass of the "material" or the mass of the smallest part. You can decide which mass to choose complying with the "Standards of ban" in Table 1 in individual substances.

• In the case of complex substances or materials, the following will be the "Material".

- Chemical compounds, polymer alloys, metal alloys.
- In the case that Deliverables are raw material such as paint, adhesive, ink, paste, polymer resin, glass powder, ceramic powder, each finally formed product by means of expected normal usage.

Examples: - Dried and hardened material for paints or adhesives.  
 - Molded article for polymer resins.  
 - Hardened material for glass or ceramic powder.

- Single layer of paint, printing, or plating. Or, in the case of multi layers, each single layer shall be defined as the "Material".
  - In the case of packing material, corrugated board (base material), adhesive, tape, ink, etc.
- About control values of lead in the electroless nickel plating.  
 Only for lead in electroless nickel plating, the content prohibition standard in Table 1w is not applied. The control value must not exceed 800ppm in the plating.  
 If you intentionally added lead of 1ppm to the electroless nickel plating liquid, the content of lead of the plating film will increase. In this case, in the electroless nickel plating film will need to manage the control values of lead.
- The numerator in calculations of the concentration shall be mass of the applicable chemical substance. In the case of metal alloy, metal element in the metal alloy will be the numerator.

#### Red phosphorous in inorganic phosphorous

Red phosphorous in inorganic phosphorous has a high effect as the flame retardant only with the small quantity, therefore widely used as a flame retardant material in the electric components, the plastic, the rubber and the fiber. However, red phosphorous has a nature to react with the water in the atmosphere, and form phosphorous acid that then separate out. KOHOKU KOGYO faced with the failure such as the degradation in the insulation resistance in the electrical components and device, caused by the red phosphorous in inorganic phosphorous. Therefore, KOHOKU KOGYO prohibit red phosphorous in inorganic phosphorous.

##### - Effect of Coating

Generally, the surface of the red phosphorous in inorganic phosphorous is coated. However, the quality of the coating and film effect are not satisfactory to avoid the phosphorous acid to separate out which causes the field failure. KOHOKU KOGYO prohibit red phosphorous in inorganic phosphorous no matter coating is over the surface or not.

##### - Phosphorous in the metal

Phosphorous contained in the metal such as electrical leads or plates is alloy content. Such alloy does not react with the air in the atmosphere to form phosphorous acid. Phosphorous contained in the metal is not the subject of the prohibition herein.

#### Note2) EU 4 Substances of Packing Waste Directive:

Cadmium, Lead, Mercury and each compound and Chromium VI Compounds.

#### Note3) PFOA related substances

A PFOA-related compound is a substance that decomposes into PFOA and has a linear or branched Perfluoroheptyl group (including salts and polymers) having a portion (C7F15) C as one of its structural elements.

The following substances are excluded from this designation;

- C8F17-X, where X = F, Cl, Br,
- CF3 [CF2] n-R', R7 = fluoropolymer covered by any group, n > 16.
- Perfluoroalkyl carboxylic acids with 8 or more carbon atoms (saltsesters, halides and anhydrides, thereof) including).
- Perfluoroalkane sulfonic acids and perfluoro phosphonic acids (including their salts, esters, halides and anhydride) with  $\geq$  9 perfluorinated carbons;

Note4) When delivering the product, the material that packs the product must not contain regulated phthalates.

Table 1a : Lead/Lead Compounds

Substances	CAS No.
Lead sulfite	7446-10-8
Lead tungsten oxide (PbWO4)	7759-01-5
Lead bromide (PbBr2)	10031-22-8
Nitric acid, lead(II) salt	10099-74-8
Lead iodide (PbI2)	10101-63-0
Lead molybdenum oxide (PbMoO4)	10190-55-3
Lead metaborate monohydrate	10214-39-8

Substances	CAS No.
1-Propanesulfonic acid, 2-hydroxy-, lead(II) salt (2:1)	103427-19-6
Lead distearate	1072-35-1
1-Propanesulfonic acid, 2-hydroxy-, lead salt	114601-64-8
Plumbate (PbO <sub>4</sub> ), calcium (1:2), (T-4)-	12013-69-3
Hafnium lead trioxide	12029-23-1
Plumbate (PbO <sub>2</sub> ), disodium	12034-30-9
Dilead oxide sulfate	12036-76-9
Lead oxide (Pb <sub>2</sub> O)	12059-89-1
Lead titanate; O <sub>3</sub> PbTi	12060-00-3
Lead zirconium oxide (PbZrO <sub>3</sub> )	12060-01-4
Lead tantalum oxide (PbTa <sub>2</sub> O <sub>6</sub> )	12065-68-8
Lead selenide (PbSe)	12069-00-0
Tetralead trioxide sulfate	12202-17-4
Lead, bis(octadecanoato)dioxotri-	12578-12-0
1,3,5,7,9-Pentaoxa-2,4,6,8-tetraplumbacyclotridec-11-ene-2,4,6,8-tetraylidene,10,13-dioxo-,(11Z)-	12275-07-9
Lead titanium zirconium oxide (Pb(Ti,Zr)O <sub>3</sub> )	12626-81-2
Lead oxide (PbO <sub>2</sub> )	1309-60-0
Lead hexafluorosilicate	1310-03-8
Lead hydroxide (Pb(OH) <sub>2</sub> )	1311-11-1
Lead oxide (Pb <sub>3</sub> O <sub>4</sub> )	1314-41-6
Lead sulfide (PbS)	1314-87-0
Lead telluride (PbTe)	1314-91-6
Lead oxide (PbO)	1317-36-8
Basic lead carbonate	1319-46-6
Lead azide (Pb(N <sub>3</sub> ) <sub>2</sub> )	13424-46-9 <a href="#">73513-16-3</a> <a href="#">69985-35-9</a>
Lead hydroxide carbonate	1344-36-1
Lead(II) perchlorate trihydrate	13453-62-8
Perchloric acid, lead(II) salt	13637-76-8
Borate(1-), tetrafluoro-, lead(II) (2:1)	13814-96-5
Boric acid (HBO <sub>2</sub> ), lead(II) salt	14720-53-7
1,3-Benzenediol, 2,4,6-trinitro-, lead(II) salt (1:1)	15245-44-0 <a href="#">66778-13-0</a>
Lead(2)2,4-pentanedionate	15282-88-9
Lauric acid, lead salt	15306-30-6
Lead acetate	15347-57-6
Benzoic acid, 4-methyl-, lead(IV) salt	15516-84-4
Octanoic acid, lead salt	15696-43-2
Sulfuric acid, lead salt	15739-80-7
Lead, bis[2-(19cetate19-.kappa.O)19cetate19-.kappa.O]-, (T-4)-	15748-73-9
Lead(II) decanoate	15773-52-1
Lead dihexanoate	15773-53-2
Dodecanoic acid, lead(II) salt	15773-55-4
Lead dipalmitate	15773-56-5
Phosphoric acid, lead(II) salt (1:1)	15845-52-0
Lead benzoate	15907-04-7
Phosphonic acid, lead salt	16038-76-9
Hexanoic acid, 2-ethyl-, lead salt	16996-40-0
Methanesulfonic acid, lead(II) salt	17570-76-2
Lead palmitate	19528-55-3
Lead hydroxide (Pb(OH) <sub>2</sub> )	19783-14-3
Decanoic acid, lead salt	20403-42-3
Cyanamide, lead(II) salt (1:1)	20837-86-9
Lead 2,4-dihydroxybenzoate	20936-32-7
Hexanoic acid, 3,5,5-trimethyl-, lead salt	23621-79-6
Carbonic acid, lead(II) salt	25510-11-6
Silicate(2-), hexafluoro-, lead(II) (1:1)	25808-74-6

Substances	CAS No.
Phenol, lead salt	25987-03-5
Neodecanoic acid, lead salt	27253-28-7
Isononanoic acid, lead salt	27253-41-4
Lead, bis[bis(1-methylethyl)carbamodithioato-S,S']-, (T-4)-	30051-53-7
Acetic acid, lead(II) salt	301-04-2
Hexanoic acid, 2-ethyl-, lead(II) salt	301-08-6
Lead dibromate	34018-28-5
Benzoic acid, 3-methyl-, lead(IV) salt	34295-32-4
Lead bis(3,5,5-trimethylhexanoate)	35837-70-8
Nonanoic acid, lead salt	41234-07-5
Benzoic acid, 2,4-dihydroxy-, lead(II) salt (2:1)	41453-50-3
Lead pentamethylenedithiocarbamate	41556-46-1
Benzoic acid, 2-methyl-, lead(II) salt	52337-73-2
Lead bis(isononanoate)	52847-85-5
Acetic acid, lead(IV) salt	546-67-8
Lead, bis(octadecanoato)dioxodi-	56189-09-4
Dibasic lead phthalate	57142-78-6
Benzoic acid, 4-methyl-, lead(II) salt	58274-53-6
Lead bis(12-hydroxystearate)	58405-97-3
Lead(II) cyanide	592-05-2
Thiocyanic acid, lead(II) salt	592-87-0
Carbonic acid, lead(II) salt (1:1)	598-63-0
Lead (2)acetate	6080-56-4
Naphthenic acids, lead salts	61790-14-5
Lead(II) heptadecanoate	63399-94-0
Undecanoic acid, lead(II) salt	63400-07-7
Nonanoic acid, lead(II) salt	63400-08-8
Isooctanoic acid, lead salt	64504-12-7
Lead 12-hydroxyoctadecanoate	65127-78-8
1,2-Benzenedicarboxylic acid, lead(II) salt (1:1)	6838-85-3
Lead(II) isooctadecanoate	70727-02-5
Lead, bis(dipropylcarbamodithioato-S,S')-, (T-4)-	70995-63-0
Lead(II) neodecanoate	71684-29-2
Ethanesulfonic acid, 2-hydroxy-, lead(II) salt (2:1)	72437-77-5
Lead bis(nonylphenolate)	72586-00-6
Lead(II) octanoate	7319-86-0
Octadecanoic acid, lead salt	7428-48-0
Sulfuric acid, lead(II) salt (1:1)	7446-14-2
Phosphoric acid, lead(II) salt (2:3)	7446-27-7
Plumbane, tetramethyl-	75-74-1
Benzoic acid, 2-methyl-, lead salt	76925-97-8
Lead(IV) stearate	7717-46-6
Lead chloride (PbCl <sub>2</sub> )	7758-95-4
Lead fluoride (PbF <sub>2</sub> )	7783-46-2
Ethanedioic acid, lead(II) salt (1:1)	814-93-7
Benzenesulfonic acid, 20cetate20-, lead salt	82696-30-8
Lead(II) isodecanoate	84852-34-6
Lead(II) 4-(1,1-dimethylethyl)benzoate	85292-77-9
Lead dibenzoate	873-54-1
Pentanoic acid, 2-propyl-, lead(II) salt	87835-32-3
Resin acids and Rosin acids, lead salts	9008-26-8
Benzoic acid, 2-butyl, lead(II) salt	91187-55-2
Carbamodithioic acid, ethylphenyl-, lead(II) salt	93892-65-0
Lead(II) neononanoate	93894-48-5
Lead(II) neoundecanoate	93894-49-6
Lead bis(isoundecanoate)	93965-29-8
Lead tetracosanoate	93966-38-2
Lead pentadecanoate	93966-74-6

Substances	CAS No.
Lead(II) isoocanoate	93981-67-0
Lead metanesulfonate(xPb)	95860-12-1
Lead(II) isohexadecanoate	95892-13-0
Octanoic acid, 7-methyl-, lead salt	97952-39-1
Lead acetate,basic; lead acetate	1335-32-6
Nitrous acid, lead(II) salt	13826-65-8
Tetraethyllead	78-00-2
Other lead compounds	-
Lead oxide	1335-25-7
Lead	7439-92-1
Lead antimonite	13510-89-9
Lead dipicrate	6477-64-1

Table 1b : Mercury/Mercury Compounds

Substances	CAS No.
Silver tetraiodomercurate(2) complex salt	7784-03-4
Mercuric 21cetate (Hg(NO3)2·1/2H2O)	10045-94-0
Barium tetraiodomercury solution	10048-99-4
Phenylmercuric chloride	100-56-1
Mercury chloride (Hg2Cl2)	10112-91-1
Mercury amide chloride (Hg(NH2)Cl)	10124-48-8
Nitric acid, mercury(1+) salt	10415-75-5
Ethylmercury (2)bromide	107-26-6
Ethyl mercury chloride	107-27-7
Methylmercuric chloride	115-09-3
Methylmercury (2)hydroxide	1184-57-2
Mercury telluride (HgTe)	12068-90-5
Silver mercuric iodide	12344-40-0
Mercury dibromofluorescein disodium salt	129-16-8
Mercury cyanide oxide (Hg2(CN)2O)	1335-31-5
Mercury cyanide oxide (Hg(CN)(OH))	31065-88-0
Mercury sulfide (HgS)	1344-48-5
Mercury(1+) bromate	13465-33-3
Mercurate(2-), tetraiodo-, dicopper(1+), (T-4)-	13876-85-2
Mercurous perchlorate	13932-02-0
Dimercury difluoride (Hg2F2)	13967-25-4
Methylmercuric Iodide	143-36-2
Mercury(1)nitrate dihydrate	14836-60-3
Mercury(1) iodide yellow	15385-57-6
Mercury bromide (Hg2Br2)	15385-58-7
Mercury oxide (Hg2O)	15829-53-5
Acetic acid, mercury(II) salt	1600-27-7
Mercury selenide (HgSe)	20601-83-6
Mercury oxide (HgO)	21908-53-2
(4-Methyl-N-phenylbenzenesulfonamido-N)phenylmercury	2440-34-8
Hydrogen phosphate bis(ethylmercury)	2440-45-1
Mercury bromate	26522-91-8
Mercurate(2-), tetraiodo-, copper(II) (1:1), (T-4)-	27228-67-7
Mercury fluoride	27575-47-9
Mercury(2) oxyfluoride	28953-04-0
Mercuric 21cetate21 (HgCl2)	33631-63-9
3-Cyanoguanidinomethyl mercury	502-39-6
Methylmercury (2)bromide	506-83-2
4-Methyl-N-phenyl-N-phenylmercury-benzenesulfonamide	54129-03-2
Potassium tetracyanomercurate	591-89-9
Mercury cyanide (Hg(CN)2)	592-04-1

Substances	CAS No.
Thiocyanic acid, mercury(II) salt	592-85-8
Mercury, dimethyl-	593-74-8
Sodium ethylmercurithiophenol-p-sulfonate	5964-24-9
Mercury, (22cetate-.kappa.O)phenyl-	62-38-4
Mercury, diethyl-	627-44-1
Fulminic acid, mercury(II) salt	628-86-4
Mercury (1)acetate	631-60-7
Mercury	7439-97-6
Mercury chloride (HgCl <sub>2</sub> )	7487-94-7
Mercury chloride (HgCl)	7546-30-7
Perchloric acid, mercury(II) salt	7616-83-3
Mercury iodide (HgI <sub>2</sub> )	7774-29-0
Mercury(1) nitrate 1-hydrate	7782-86-7
Mercury(1) iodide yellow	7783-30-4
Mercurate(2-), tetraiodo-, dipotassium, (T-4)-	7783-33-7
Mercury(2) nitrate monohydrate	7783-34-8
Sulfuric acid, mercury(II) salt (1:1)	7783-35-9
Mercury sulfate	7783-36-0
Mercury fluoride (HgF <sub>2</sub> )	7783-39-3
Mercury bromide (HgBr <sub>2</sub> )	7789-47-1
Mixture of 22cetate22(phenyl)mercury and (nitratokappaO) (phenyl)mercury	8003-05-2
Methylmercury	22967-92-6
Cobaltate(2-), tetrakis(thiocyanato-.kappa.N)-, mercury(II) (1:1), (T-4)-	27685-51-4
Ethyl-methyl-mercury	29138-86-1
Thiomersal	54-64-8
Dipropan-1-ylmercury	628-85-3
Dibutylmercury	629-35-6
Other mercury compounds	-
Diphenylmercury	587-85-9

Table 1c : Cadmium/Cadmium Compounds

Substances	CAS No.
Octanoic acid, cadmium salt	2191-10-8
Benzoic acid, 4-(1,1-dimethylethyl)-, cadmium salt	4167-05-9
Cadmium acetate(dihydrate)	5743-04-4
Cadmium nitrate(4-hydrate)	10022-68-1
Cadmium chloride (CdCl <sub>2</sub> )	10108-64-2
Sulfuric acid, cadmium salt (1:1)	10124-36-4 31119-53-6 7790-84-3 15244-35-6
Tetradecanoic acid, cadmium salt	10196-67-5
Nitric acid, cadmium salt	10325-94-7
Cadmium perchlorate 6-hydrate	10326-28-0
Cadmium arsenide (Cd <sub>3</sub> As <sub>2</sub> )	12006-15-4
Cadmium phosphide (Cd <sub>3</sub> P <sub>2</sub> )	12014-28-7
Cadmium zirconium oxide (CdZrO <sub>3</sub> )	12139-23-0
Cadmium niobium oxide (Cd <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub> )	12187-14-3
Cadmium selenide sulfide (Cd <sub>2</sub> SeS)	12214-12-9
Cadmium oxide (CdO)	1306-19-0 12139-21-8
Cadmium sulfide (CdS)	1306-23-6
Cadmium selenide (CdSe)	1306-24-7
Cadmium telluride (CdTe)	1306-25-8
Cadmium bromide tetrahydrate, tetrahydrate	13464-92-1
Cadmium sulfate	13477-21-9

Substances	CAS No.
Cadmium molybdenum oxide (CdMoO <sub>4</sub> )	13972-68-4
Cadmium, bis(diethylcarbamodithioato- $\kappa$ .S, $\kappa$ .S')-, (T-	14239-68-0
Cadmium bromate	14518-94-6
Cadmium 2,4-pentanedionate; Cadmium acetylacetonate	14689-45-3
Cadmium pentamethylenedithiocarbamate	14949-59-8
Cadmium sulfate	15244-35-6
Cadmium fluosilicate	17010-21-8
Cadmium hydroxide (Cd(OH) <sub>2</sub> )	21041-95-2
Octadecanoic acid, cadmium salt	2223-93-0
Cadmium chlorate	22750-54-5
Dodecanoic acid, cadmium salt	2605-44-9
Benzoic acid, methyl-, cadmium salt	27476-27-3
Decanoic acid, cadmium salt	2847-16-7
Benzoic acid, cadmium salt	3026-22-0
Cadmium dodecylbenzenesulphonate	31017-44-4
Cadmium chloride 1-hydrated	35658-65-2
Ethylenediaminetetraacetic acid disodium cadmium salt	35803-35-1
Cadmium formate	4464-23-7
Dimethylcadmium	506-82-1
Nonanoic acid, cadmium salt	5112-16-3
Carbonic acid, cadmium salt (1:1)	513-78-0
Benzoic acid, 2-methyl-, cadmium salt	52337-78-7
Cadmium cyanide (Cd(CN) <sub>2</sub> )	542-83-6
Acetic acid, cadmium salt	543-90-8
Cyclohexanebutanoic acid, cadmium salt	55700-14-6
Cadmium, diethyl-	592-02-9
Naphthenic acids, cadmium salts	61789-34-2
Neodecanoic acid, cadmium salt	61951-96-0
Hexadecanoic acid, cadmium salt	6427-86-7
Benzoic acid, 3-methyl-, cadmium salt	68092-45-5
Octadecanoic acid, 12-hydroxy-, cadmium salt (2:1)	69121-20-6
Cadmium	7440-43-9
Cadmium bromide (CdBr <sub>2</sub> )	7789-42-6
Cadmium chloride 2.5 hydrate	7790-78-5
Cadmium fluoride (CdF <sub>2</sub> )	7790-79-6
Cadmium iodide (CdI <sub>2</sub> )	7790-80-9
Cadmium dinitrite	7790-83-2
Cadmium sulfate	7790-84-3
Cadmium tungsten oxide (CdWO <sub>4</sub> )	7790-85-4
Phenol, 4-nonyl-, cadmium salt	93894-08-7
Other cadmium compounds	-
Cadmium salt of sulfuric acid (1:1)	31119-53-6

**Table1d : Hexavalent chromium compound**

Substances	CAS No.
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), disodium salt	7775-11-3
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), disilver(1+) salt	7784-01-2
Silver(1) dichromate	7784-02-3
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), strontium salt (1:1)	7789-06-2
Copper chromate dihydrate	7789-07-3
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), diammonium salt	7789-09-5
Mercuric dichromate	7789-10-8
Lithium dichromate	10022-48-7
Calcium chromate, 2-hydrate	10060-08-9

Substances	CAS No.
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), barium salt (1:1)	10294-40-3
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), disodium salt	10588-01-9
Copper chromite	12053-18-8
Chromium oxide (CrO <sub>3</sub> )	1333-82-0
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), magnesium salt (1:1)	13423-61-5
Pigment Yellow 34 (Lead compounds)	1344-37-2
Basic lead chromate; C.I. Pigment Orange 21 (Lead compounds)	1344-38-3
Mercury(II) chromate	13444-75-2
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), dirubidium salt	13446-72-5
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), dicesium salt	13454-78-9
Dithallium chromate	13473-75-1
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), zinc salt (1:1)	13530-65-9
Cesium dichromate	13530-67-1
Acids generated from chromium trioxide and their oligomers. Group containing: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), copper(II) salt (1:1)	13548-42-0
Copper dichromate	13675-47-3
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), calcium salt (1:1)	13765-19-0
Lithium dichromate	13843-81-7
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), zinc salt (1:1)	14018-95-2
Magnesium dichromate	14104-85-9
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), calcium salt (1:1)	14307-33-6
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), dilithium salt	14307-35-8
Chromic acid, ammonium salt (Cr <sub>2</sub> H <sub>2</sub> O <sub>7</sub> .xH <sub>3</sub> N)	14445-91-1
Ferrous chromate	14507-18-7
Chromate(1-), chlorotrioxo-, potassium, (T-4)-	16037-50-6
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), lanthanum(III) salt (3:2)	16565-94-9
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), lanthanum(III) salt (3:2), heptahydrate	16569-86-1
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), compd. With pyridine (1:2)	20039-37-6
C.I. 77600 ; Chromium yellow	53795-87-2
Bis(tetrabutyl)ammonium dichromate	56660-19-6
Lead chromate silicate (Pb <sub>3</sub> (CrO <sub>4</sub> )(SiO <sub>4</sub> ))	69011-07-0
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), lead(II) salt (1:1)	7758-97-6
Chromic acid (H <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ), dipotassium salt	7778-50-9
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), diammonium salt	7788-98-9
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), dipotassium salt	7789-00-6
Sodium dichromate	7789-12-0
Other hexavalent chromium compounds	-
Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), disodium salt, decahydrate	13517-17-4
Chromyl dichloride; chromic oxychloride	14977-61-8
Dichromium tris(chromate); chromium III chromate; chromic chromate	24613-89-6
Lead chromate molybdate sulphate red (C.I.Pigment Red 104)	12656-85-8
Pentazinc chromate octahydroxide	49663-84-5
Potassium hydroxyoctaoxidizincatedi-chromate	11103-86-9
Chromium (VI) compounds	18540-29-9



**Table 1e: Hexabromocyclododecane (HBCDD)/ Bromine**

Substances	CAS No.
Hexabromocyclododecane	25637-99-4
	4736-49-6
	65701-47-5
	138257-17-7
	138257-18-8
	138257-19-9
	169102-57-2
	678970-15-5
	678970-16-6
678970-17-7	
1,2,5,6,9,10-hexabromocyclododecane	3194-55-6
$\alpha$ -hexabromocyclododecane	134237-50-6
$\beta$ -hexabromocyclododecane	134237-51-7
$\gamma$ -hexabromocyclododecane	134237-52-8

**Table 1f: Ozone Depleting Substances**

Substances	CAS No.	Remark	
CFCs Chlorofluorocarbons	CFC-11	75-69-4	-
	CFC-12	75-71-8	-
	CFC-13	75-72-9	-
	CFC-111 Ethane, pentachlorofluoro-	354-56-3	-
	CFC-112 CFC-112a	76-12-0 76-11-9 28605-74-5	-
	CFC-113 CFC-113a	76-13-1 354-58-5 26523-64-8	-
	CFC-114	76-14-2 1320-37-2 374-07-2	-
	CFC-115	76-15-3	-
	CFC-211 CFC-211ba	422-78-6 422-81-1 135401-87-5	-
	CFC-212	3182-26-1 134452-44-1 1645-71-2 661-96-1 76564-99-3	-
	CFC-213	134237-31-3 2354-06-5 2354-05-4 1599-43-5 1652-74-0 1652-89-7 60285-54-3	-
	CFC-214 CFC-214cb CFC-214aa	29255-31-0 2268-46-4 677-68-9	-
	CFC-215 CFC-215ba CFC-215cb	1599-41-3 76-17-5 4259-43-2 1652-81-9 812-30-6 28109-69-5	-

Substances		CAS No.	Remark	
CFCs Chlorofluorocarbons	CFC-216	661-97-2 1652-80-8 2729-28-4 42560-98-5 662-01-1	-	
	CFC-217	422-86-6 76-18-6	-	
Halons	Halon-1011 (Bromochloromethane)	74-97-5	-	
	Halon-1202 (Methane, dibromodifluoro-)	75-61-6	Refer to Note 1	
	Halon-1211 (Methane, bromochlorodifluoro-)	353-59-3	-	
	Halon-1301 (Methane, bromotrifluoro)	75-63-8	-	
	Halon-2402(Ethane, 1,2-dibromo-1,1,2,2-tetrafluoro-)	124-73-2	-	
	Dibromotetrafluoroethane Dibromotetrafluoroethane, compressed	25497-30-7 27336-23-8	-	
Tetrachloromethane (Methane, tetrachloro-)		56-23-5	-	
1,1,1-Trichloroethane (Methylchloroform)		71-55-6	-	
Chloroform		67-66-3	-	
Bromomethane (Methyl bromide)		74-83-9	-	
Bromoethane (Ethyl bromide)		74-96-4	Refer to Note 1	
1-Bromopropane (n-propyl bromide)		106-94-5	Refer to Note 1	
Trifluoroiodomethane (Trifluoromethyl iodide)		2314-97-8	Refer to Note 1	
Chloromethane (Methyl chloride)		74-87-3	Refer to Note 1	
HBFCs Hydrobromofluorocarbons	Dibromofluoromethane (HBFC-21 B2)	1868-53-7	-	
	Methane, bromodifluoro- (HBFC-22 B1)	1511-62-2	-	
	Bromofluoromethane (HBFC-31 B1)	373-52-4	-	
	1-Bromo-1,1-difluoroethane	420-43-9	-	
	1,1,2,2-tetrabromo-1-fluoroethane (HBFC-121 B4)	C2HFBr4	306-80-9	-
		C2HF2Br3	353-97-9 677-34-9	-
	Tribromodifluoroethane (HBFC-122 B3)	7304-53-2	-	
	Tribromofluoroethane; C2H2FBr3	-	-	
	Other bromodifluoroethane; C2H3F2Br	-	-	
	Hexabromofluoropropane; C3HFBBr6	-	-	
	Tribromotetrafluoropropane; C3HF4Br3	-	-	
	Tribromotrifluoropropane; C3H2F3Br3	-	-	
	Pentabromodifluoropropane; C3HF2Br5	-	-	
	Pentabromofluoropropane; C3H2FBr5	-	-	
	Tetrabromodifluoropropane; C3H2F2Br4	-	-	
	Dibromotetrafluoropropane; C3H2F4Br2	-	-	
	Tetrabromofluoropropane; C3H3FBr4	-	-	
	Bromodifluoropropane; C3H5F2Br	-	-	
	Tetrabromotrifluoropropane; C3HF3Br4	-	-	
	Ethane, 1,2-dibromo-1,1,2-trifluoro- (HBFC-123 B2)	354-04-1	-	
	1-bromo-1,1,2,2-tetrafluoroethane	354-07-4	-	
	2-bromo-1,1,1,2-tetrafluoroethane (HBFC-124 B1)	124-72-1	-	
	Tribromofluoroethane (HBFC-131 B3)	172912-75-3	-	
420-88-2		-		
598-67-4		-		

	Substances	CAS No.	Remark
HBFCs Hydrobromofluorocarbons	1,2-Dibromo-1,1-difluoroethane	75-82-1	-
	Dibromodifluoroethane (HBFC-132 B2)	359-19-3	-
	2-Bromo-1,1,1-trifluoroethane (HBFC-133 B1)	421-06-7	-
	1,2-dibromo-1-fluoroethane (HBFC-141 B2)	358-97-4	-
	Bromodifluoroethane (HBFC-142 B1)	420-47-3	-
	2-bromo-1,1-difluoroethane	359-07-9	-
	Bromofluoroethane (HBFC-151 B1)	762-49-2	-
	Hexabromofluoropropane (HBFC-221 B6)	-	-
	Pentabromodifluoropropane (HBFC-222 B5)	-	-
	Tetrabromotrifluoropropane (HBFC-223 B4)	-	-
	C3HF4Br3 (HBFC-224 B3)	666-48-8	-
	1,2-dibromo-1,1,3,3,3-pentafluoropropane (HBFC-225 B2)	431-78-7	-
	1-Bromo-1,1,2,3,3,3-hexafluoropropane (HBFC-226 B1)	2252-78-0	-
	2-bromo-1,1,1,3,3,3-hexafluoropropane	2252-79-1	-
	Bromotetrafluoroethane	30283-90-0	-
	Pentabromofluoropropane (HBFC-231 B5)	-	-
	C3H2F2Br4 (HBFC-232 B4)	148875-98-3	-
	Tribromotrifluoropropane (HBFC-233 B3)	421-90-9 431-48-1	-
	1,3-Dibromo-1,1,3,3-tetrafluoropropane (HBFC-234 B2)	460-86-6	-
	1,1-bromo-2,2-difluoroethane	430-85-3	-
	1-bromo-1,1,3,3,3-pentafluoroethane	460-88-8	-
	Bromopentafluoropropane (HBFC-235 B1)	22692-16-6	-
	3-bromo-1,1,1,2,2-pentafluoropropane	26391-11-7	-
		422-01-5	-
		53692-43-6	-
		53692-44-7	-
		677-52-1	-
	1-bromo-1,2,2,3,3-pentafluoroethane	677-53-2	-
		679-94-7	-
	C3H3FBr4 (HBFC-241 B4)	148875-95-0	-
	Tribromodifluoropropane; C3H3F2Br3	70192-80-2	-
	1,2,3-Tribromo-3,3-difluoropropane (HBFC-242 B3)	666-25-1	-
	2,3-dibromo-1,1,1-trifluoropropane	431-21-0	-
Dibromotrifluoropropane (HBFC-243 B2)	460-60-6	-	
1,3-dibromo-1,1,2,2,3-pentafluoropropane	661-80-3	-	
3-bromo-1,1,2,2-tetrafluoropropane	679-84-5	-	
Bromotetrafluoropropane	19041-01-1	-	
	29151-25-5	-	
C3H3F4Br	460-67-3	-	
1-bromo-1,2,2,3-tetrafluoroethane	70192-71-1	-	
1-bromo-1,1,2,2-tetrafluoropropane (HBFC-244 B1)	70192-84-6	-	
Tribromofluoropropane C3H4FBr3 (HBFC-251 B3)	75372-14-4	-	
1,3-dibromo-1,1-difluoropropane	460-25-3	-	
Dibromodifluoropropane (HBFC-252 B2)	51584-25-9	-	
2-Bromo-1,1,1-trifluoropropane	421-46-5	-	
3-bromo-1,1,1-trifluoropropane (HBFC-253 B1)	460-32-2	-	

Substances		CAS No.	Remark
HBFCs Hydrobromofluorocarbons	1,3-dibromo-1-fluoropropane	51584-26-0	-
	C3H5FBr2	1786-38-5 453-00-9 62135-10-8 62135-11-9	-
	(HBFC-261 B2)		
	1,3-dibromo-1,1,2-trifluoropropane	110003-27-5	-
	1-bromo-2,3-difluoropropane	111483-20-6	-
	1-bromo-2,2-difluoropropane	420-98-4	-
	C3H5F2Br	461-49-4	-
	(HBFC-262 B1)	2195-05-3 420-89-3 430-87-5	-
	FLUOROBROMOPROPANE (HBFC-271 B1)	1871-72-3	-
	1-Bromo-3-fluoropropane	352-91-0	-
	1-bromo-1,2-difluoroethane	1800-81-3	-
	1,1-dibromo-1,2,2,3,3-pentafluoropropane	70192-61-9	-
	1,3-dibromo-1,2,2-trifluoropropane	70192-73-3	-
	1-bromo-2,2,3-trifluoropropane	70192-75-5	-
	1,1-dibromo-1,2,2-trifluoropropane	70192-83-5	-
	1-bromo-1,2,2-trifluoropropane	70192-85-7	-
	Bromopentafluoropropane	-	-
	Bromotrifluoroethane	-	-
	Dibromofluoroethane	-	-
	Dibromopentafluoropropane	-	-
Dibromotrifluoroethane	-	-	
Bromotrifluoropropane	-	-	
Bromofluoropropane	-	-	
HCFCs Hydrochlorofluorocarbons	HCFC-21	75-43-4	Refer to Note 1
	HCFC-22	75-45-6	Refer to Note 1
	HCFC-31	593-70-4	Refer to Note 1
	HCFC-121	134237-32-4	Refer to Note 1
	HCFC-121a	354-11-0 354-14-3	
	HCFC-122	41834-16-6	Refer to Note 1
	HCFC-122a	354-21-2	
	HCFC-122b	354-15-4 354-12-1	
	HCFC-123	34077-87-7	Refer to Note 1
	HCFC-123a	90454-18-5	
	HCFC-123b	306-83-2 354-23-4	
	HCFC-124	812-04-4	
	HCFC-124	63938-10-3	Refer to Note 1
HCFC-124a	2837-89-0 354-25-6		
HCFC-131	27154-33-2	Refer to Note 1	
HCFC-131a	134237-34-6		
HCFC-131b	359-28-4 811-95-0		
	2366-36-1		

Substances		CAS No.	Remark
HCFCs Hydrochlorofluorocarbons	HCFC-132	25915-78-0	Refer to Note 1
	HCFC-132b	1649-08-7	
	HCFC-132c	1842-05-3	
	HCFC-132a	471-43-2	
		431-06-1	
	HCFC-133	1330-45-6	Refer to Note 1
	HCFC-133a	431-07-2	
	HCFC-133b	75-88-7	
	HCFC-141	25167-88-8	Refer to Note 1
	HCFC-141b	1717-00-6	
	HCFC-141a	430-57-9	
	HCFC-142	25497-29-4	Refer to Note 1
	HCFC-142b	338-65-8	
	HCFC-142a	75-68-3	
		338-64-7	
		55949-44-5	
	HCFC-151	110587-14-9	Refer to Note 1
	HCFC-151a	762-50-5	
		1615-75-4	
	HCFC-221	134237-35-7	Refer to Note 1
HCFC-221ab	29470-94-8		
	422-26-4		
HCFC-222	134237-36-8	Refer to Note 1	
HCFC-222ca	422-49-1		
HCFC-222aa	422-30-0		
	116867-32-4		
HCFC-223	134237-37-9	Refer to Note 1	
HCFC-223ca	422-52-6		
HCFC-223cb	422-50-4		
HCFC-224	134237-38-0	Refer to Note 1	
HCFC-224ca	422-54-8		
HCFC-224cb	422-53-7		
HCFC-224cc	422-51-7		
HCFC-225	127564-92-5		
HCFC-225aa	128903-21-9		
HCFC-225ba	422-48-0		
HCFC-225bb	422-44-6		
HCFC-225ca	422-56-0	Refer to Note 1	
HCFC-225cb	507-55-1		
HCFC-225cc	13474-88-9		
HCFC-225da	431-86-7		
HCFC-225ea	136013-79-1		
HCFC-225eb	111512-56-2		
	2713-09-9		
HCFC-226	134308-72-8	Refer to Note 1	
HCFC-226da	431-87-8		
	28987-04-4		
HCFC-231	134190-48-0	Refer to Note 1	
HCFC-231bb	421-94-3		
HCFC-232	134237-39-1	Refer to Note 1	
HCFC-232fc	460-89-9		
HCFC-233	134237-40-4	Refer to Note 1	
HCFC-233fb	7125-83-9		

Substances		CAS No.	Remark
HCFCs Hydrochlorofluorocarbons	HCFC-234	127564-83-4	Refer to Note 1
	HCFC-234db	425-94-5	
	HCFC-235	134237-41-5	Refer to Note 1
	HCFC-235fa	460-92-4	
		108662-83-5	
	HCFC-241	134190-49-1	Refer to Note 1
	HCFC-241db	666-27-3	
	HCFC-242	134237-42-6	Refer to Note 1
	HCFC-242fa	460-63-9	
	HCFC-243	134237-43-7	Refer to Note 1
	HCFC-243cc	7125-99-7	
	HCFC-243db	338-75-0	
	HCFC-243fa	460-69-5	
	116890-51-8		
HCFC-244	134190-50-4	Refer to Note 1	
HCFC-244ca	679-85-6		
HCFC-244cc	421-75-0		
HCFC-251	134190-51-5	Refer to Note 1	
HCFC-251fb	818-99-5		
HCFC-251dc	421-41-0		
HCFC-252	134190-52-6	Refer to Note 1	
HCFC-252fb	819-00-1		
HCFC-253	134237-44-8	Refer to Note 1	
HCFC-253fb	460-35-5		
	26588-23-8		
HCFC-261	134237-45-9	Refer to Note 1	
HCFC-261fc	7799-56-6		
HCFC-261ba	420-97-3		
	127404-11-9		
HCFC-262	134190-53-7	Refer to Note 1	
HCFC-262ca	420-99-5		
HCFC-262da	102738-79-4		
HCFC-262fc	421-02-3		
HCFC-271	134190-54-8	Refer to Note 1	
HCFC-271ba	420-44-0		
HCFC-271fb	430-55-7		

Note regarding Table 1f:

- 1) The substances are exempted from the Prohibited Substances in manufacturing process specified in Table 1w.

**Table 1g: Fluorinated Greenhouse Gases (HFC, PFC and SF6)**

Substances		CAS No.
PFCs (Perfluorocarbons)	Carbon tetrafluoride (Perfluoromethane)	75-73-0
	Perfluoroethane (Hexafluoroethane)	76-16-4
	Perfluoropropane (Octafluoropropane)	76-19-7
	Perfluorobutane (Decafluorobutane)	355-25-9
	Perfluoropentane (Dodecafluoropentane)	678-26-2
	Perfluorohexane (Tetradecafluorohexane)	355-42-0
	Perfluorocyclobutane	115-25-3
	Octane, octadecafluoro-	307-34-6
	Heptane, hexadecafluoro-	335-57-9
	Hexafluorocyclopropane	931-91-9

Substances	CAS No.	
PFCs (Perfluorocarbons)	1,1,1,2,2,3,3,4,4,5,5,5-undecafluoro-4-(trifluoromethyl)pentane	355-04-4
	Perflunafene	306-94-5
SF6	Sulfur Hexafluoride	2551-62-4
HFCs	Fluoroethane	353-36-6
	Butane, 1,1,1,4,4,4-hexafluoro-	407-59-0
	R-404A (Mixture of HFCs)	-
	R-407A (Mixture of HFCs)	-
	R-407C (Mixture of HFCs)	-
	R-410A (Mixture of HFCs)	-
	R-410B (Mixture of HFCs)	-
	R-507A (Mixture of HFCs)	-
	R-508A (Mixture of HFCs)	-
	R-508B (Mixture of HFCs)	-
	Trifluoromethane (HFC-23)	75-46-7
	Difluoromethane (HFC-32)	75-10-5
	Methyl fluoride (HFC-41)	593-53-3
	2H,3H-Decafluoropentane (HFC-43-10mee)	138495-42-8
	Pentafluoroethane (HFC-125)	354-33-6
	1,1,2,2-Tetrafluoroethane (HFC-134)	359-35-3
	1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2
	Difluoroethane	25497-28-3
	1,1-Difluoroethane (HFC-152a)	75-37-6
	1,2- Difluoroethane	624-72-6
	Trifluoroethane	27987-06-0
	1,1,2-Trifluoroethane (HFC-143)	430-66-0
	1,1,1-Trifluoroethane (HFC-143a)	420-46-2
	2H-Heptafluoropropane (HFC-227ea)	431-89-0
	1,1,1,2,2,3,3- Heptafluoropropane	2252-84-8
	1,1,1,2,2,3,3-Hexafluoro-propane (HFC-236cb)	677-56-5
	1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)	431-63-0
	Hexafluoropropane	27070-61-7
	1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)	690-39-1
	1,1,2,2,3-Pentafluoropropane (HFC-245ca)	679-86-7
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	460-73-1	
1,1,1,2,2- Pentafluoropropane	1814-88-6	
1,1,1,3,3-Pentafluorobutane (HFC-365mfc)	406-58-6	

Table1h : Asbestos

Substances	CAS No.
Crocidolite	12001-28-4
	132207-33-1
Chrysotile	12001-29-5
Amosite	12172-73-5
Chrysotile	12426-98-1
Asbestos	1332-21-4
Chrysotile	61076-97-9
Actinolite	77536-66-4

Substances	CAS No.
Anthophyllite	77536-67-5
Tremolite	77536-68-6
Chrysotile Asbestos	132207-32-0
Actinolite	12172-67-7
Actinolite	13768-00-8
Tremolite	14567-73-8
Anthophyllite	17068-78-9

**Table 1i: Aromatic Amines formed from azo colorants and azo dyes**

Substances	CAS No.
Biphenyl-4-ylamine	92-67-1
4-Aminobiphenylxylamine salt	-
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4,4'-methylenedianiline	101-77-9
4,4'-Methylenedi-o-toluidine	838-88-0
3,3'-dichlorobenzidine	91-94-1 612-83-9
3,3'-dimethoxybenzidine	119-90-4 20325-40-0
3,3'-dimethylbenzidine	119-93-7 612-82-8
6-Methoxy-m-toluidine(p-cresidine)	120-71-8
4,4'-methylene-bis(2-chloroaniline)	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
2,4-Diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine	90-04-0
4-Aminoazobenzene	60-09-3
[1,1'-Biphenyl]-4,4'-diamine, dihydrochloride	531-85-1
Benzidine sulphate	531-86-2 21136-70-9
Derivatives containing benzidine salts	-
Benzidine acetate	36341-27-2
1,4-Benzenediamine, N,N'-bis(2-methylphenyl)-	15017-02-4
1,4-Benzenediamine, N,N'-bis(methylphenyl)-	27417-40-9
N,N'-dixyl-4-phenylenediamine	28726-30-9
N,N'-di(4-tolyl)-4-phenylenediamine	620-91-7
N-(3-methylphenyl)-N'-(4-methylphenyl)-1,4-phenylenediamine	63302-30-7
N-(2-methylphenyl)-N'-(3-methylphenyl)-1,4-phenylenediamine	63302-32-9
N-(2-methylphenyl)-N'-(4-methylphenyl)-1,4-phenylenediamine	63302-33-0
N,N'-bis(3-methylphenyl)-1,4-phenylenediamine	63302-48-7
N,N'-bis(2,5-dimethylphenyl)-1,4-phenylenediamine	67265-98-9
1,4-Benzenediamine, N,N'-mixed tolyl and xylyl derivs.	68478-45-5
N-tolyl-N'-xylyl-1,4-phenylenediamine	70290-05-0
N,N'-bis(2,4-dimethylphenyl)-1,4-phenylenediamine	76154-76-2
[1,1'-Biphenyl]-4-amine salt	-
2-Naphthylamine salts	-



Substances	CAS No.
CI Direct Brown 95	16071-86-6
CI Direct Blue 6	2602-46-2
Triethanolamine	102-71-6
N-2-naphthylaniline	135-88-6
3,4-Xylidine	95-64-7
3-aminophenol	591-27-5
N-Methylaniline	100-61-8
Aniline	62-53-3
meta-Phenylenediamine	108-45-2
p-Phenylenediamine	106-50-3
o-Phenylenediamine	95-54-5
N,N'-Bis(dimethylphenyl)-1,4-phenylenediamine	28726-30-9
N,N'-Di-4-tolyl-1,4-phenylenediamine	620-91-7
	15017-02-4
	27417-40-9
1,1-Dimethylhydrazine	57-14-7
2,2'-(Nitrosoimino)diethanol	1116-54-7
N-Nitrosodipropylamine	621-64-7
Hydrazobenzene	122-66-7
	530-47-2
	530-50-7
p-Toluidine	106-49-0
Atrazine	1912-24-9
Azacyclopropane	151-56-4
Carbaryl	63-25-2
Carbofuran	1563-66-2
2-sec-butylphenyl methylcarbamate	3766-81-2
2-methylaziridine	75-55-8
The azo compounds that may produce amines specified in reference table when they are decomposed on the specific	-

**Table 1j: Polychlorinated Biphenyls (PCBs) and specific substitutes example**

Substances	CAS No.
Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3 etc.
Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6
Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	81161-70-8
Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8
Aroclors1260	11096-82-5
Aroclors1254	11097-69-1
Aroclors1221	11104-28-2
Aroclors1232	11141-16-5
Aroclors1248	12672-29-6
Aroclors1016	12674-11-2
Aroclors1242	53469-21-9
Terphenyl, chlorinated (Generic name)	61788-33-8
2,2',3,4,4',5(or2,2',3,4,4',5')-hexachlorobiphenyl	108145-39-7
(R)-2,2',3,3',4,4',6,6'-octachlorobiphenyl	109328-45-2
(S)-2,2',3,3',4,4',6,6'-octachlorobiphenyl	109328-46-3
2,2',3,6,6',?-hexachlorobiphenyl	111276-74-5
2,4,4',?,?-pentachlorobiphenyl	111276-75-6
2,2',6',?,?-pentachlorobiphenyl	111276-76-7
2,2',5,6',?,?-hexachlorobiphenyl	111276-77-8
2,?,?-trichlorobiphenyl	111276-78-9
4,4',?,?,?-hexachlorobiphenyl	111276-79-0
2,2',5,6',?,?-heptachlorobiphenyl	111276-80-3
4,4',?,?,?-pentachlorobiphenyl	111276-81-4

Substances	CAS No.
2,3,3',4,4',5,5',?-octachlorobiphenyl	111276-82-5
2,2',5,6',?,?,?-octachlorobiphenyl	111276-83-6
Aroclor	12767-79-2
2,2'-dichlorobiphenyl	13029-08-8
(+)-2,2',3,6-tetrachlorobiphenyl	151262-31-6
(-)-2,2',3,6-tetrachlorobiphenyl	151262-32-7
(+)-2,2',3,5',6-pentachlorobiphenyl	151262-34-9
(-)-2,2',3,5',6-pentachlorobiphenyl	151262-35-0
(S)-2,2',3,3',6-pentachlorobiphenyl	153153-43-6
(R)-2,2',3,3',6-pentachlorobiphenyl	153153-44-7
(S)-2,2',3,4',6-pentachlorobiphenyl	153153-45-8
(R)-2,2',3,4',6-pentachlorobiphenyl	153153-46-9
(S)-2,2',3,3',4,6'-hexachlorobiphenyl	153153-47-0
(R)-2,2',3,3',4,6'-hexachlorobiphenyl	153153-48-1
(S)-2,2',3,3',6,6'-hexachlorobiphenyl	153153-49-2
(R)-2,2',3,3',6,6'-hexachlorobiphenyl	153153-50-5
2,4,5-trichlorobiphenyl	15862-07-4
(R)-2,2',3,4',5',6-hexachlorobiphenyl	159000-96-1
(S)-2,2',3,4',5',6-hexachlorobiphenyl	159000-97-2
2,2',6,6'-tetrachlorobiphenyl	15968-05-5
2,3-dichlorobiphenyl	16605-91-7
2,4',5-trichlorobiphenyl;	16606-02-3
(R)-2,2',3,3',4,4',6-heptachlorobiphenyl	176914-46-8
(R)-2,2',3,4,4',5',6-heptachlorobiphenyl	176914-47-9
(S)-2,2',3,3',4,4',6-heptachlorobiphenyl	176914-48-0
(S)-2,2',3,4,4',5',6-heptachlorobiphenyl	176914-49-1
(R)-2,2',3,3',4,4',5,6'-octachlorobiphenyl	177020-15-4
(S)-2,2',3,3',4,4',5,6'-octachlorobiphenyl	177020-16-5
(R)-2,2',3,3',4,6-hexachlorobiphenyl	179678-26-3
(S)-2,2',3,3',4,6-hexachlorobiphenyl	179678-27-4
(R)-2,2',3,3',4,5,6'-heptachlorobiphenyl	179678-28-5
(S)-2,2',3,3',4,5,6'-heptachlorobiphenyl	179678-29-6
(R)-2,2',3,3',4,5',6-heptachlorobiphenyl	179678-30-9
(S)-2,2',3,3',4,5',6-heptachlorobiphenyl	179678-31-0
(R)-2,2',3,3',4,6,6'-heptachlorobiphenyl	179678-32-1
(S)-2,2',3,3',4,6,6'-heptachlorobiphenyl	179678-33-2
2,3,4,5,6-pentachlorobiphenyl	18259-05-7
3,3'-dichlorobiphenyl	2050-67-1
4,4'-dichlorobiphenyl	2050-68-2
2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	2051-24-3
2-chlorobiphenyl	2051-60-7
3-chlorobiphenyl	2051-61-8
4-chlorobiphenyl	2051-62-9
(R)-2,2',3,3',5,6'-hexachlorobiphenyl	205991-67-9
(S)-2,2',3,3',5,6'-hexachlorobiphenyl	205991-68-0
(R)-2,2',3,4,5',6-hexachlorobiphenyl	205991-69-1
(S)-2,2',3,4,5',6-hexachlorobiphenyl	205991-70-4
(+)-2,2',3,3',6-pentachlorobiphenyl	207004-27-1
(+)-2,2',3,3',4,6'-hexachlorobiphenyl	207004-28-2
(-)-2,2',3,3',5,6'-hexachlorobiphenyl	207004-29-3
(+)-2,2',3,3',6,6'-hexachlorobiphenyl	207004-30-6
(-)-2,2',3,3',4,5,6'-heptachlorobiphenyl	207004-31-7
(+)-2,2',3,3',4,6,6'-heptachlorobiphenyl	207004-32-8
(+)-2,2',3,3',4,6-hexachlorobiphenyl	207004-33-9
(+)-2,2',3,3',4,5',6-heptachlorobiphenyl	207004-34-0
(+)-2,2',3,3',4,4',5,6'-octachlorobiphenyl	207004-35-1
(+)-2,2',3,4',5',6-hexachlorobiphenyl	207004-36-2
2,2',3,3',5,5',6,6'-octachlorobiphenyl	2136-99-4

Substances	CAS No.
(+)-2,2',3,4,5',6-hexachlorobiphenyl	228420-06-2
(+)-2,2',3,4,4',5',6-heptachlorobiphenyl	228420-07-3
2,2',4,4'-tetrachlorobiphenyl	2437-79-8
Trichlorobiphenyl	25323-68-6
Pentachlorobiphenyl; pentachloro[1,1'-biphenyl]	25429-29-2
Dichlorobiphenyl	25512-42-9
2,3'-dichlorobiphenyl	25569-80-6
Hexachlorobiphenyl	26601-64-9
Tetrachlorobiphenyl	26914-33-0
Chlorobiphenyl	27323-18-8
Heptachlorobiphenyl; Heptachloro-1,1'-bipheny	28655-71-2
3,4'-dichlorobiphenyl	2974-90-5
3,4-dichlorobiphenyl	2974-92-7
Ar,ar,ar-trichlorobipheny	30605-61-9
Octachlorobiphenyl; Tetrachloro(tetrachlorophenyl)benzene	31472-83-0
2,3',4,4',5-pentachlorobiphenyl	31508-00-6
2,3',4,4'-tetrachlorobiphenyl	32598-10-0
2,3',4',5-tetrachlorobiphenyl	32598-11-1
2,4,4',6-tetrachlorobiphenyl	32598-12-2
3,3',4,4'-tetrachlorobiphenyl	32598-13-3
2,3,3',4,4'-pentachlorobiphenyl	32598-14-4
2,4,4',5-tetrachlorobiphenyl	32690-93-0
3,3',4,4',5,5'-hexachlorobiphenyl	32774-16-6
2,3,4,4'-tetrachlorobiphenyl	33025-41-1
Ar,ar'-dichlorobiphenyl	33039-81-5
2,2',3,3',4,4',6,6'-octachlorobiphenyl	33091-17-7
2,6-dichlorobiphenyl	33146-45-1
2,4-dichlorobiphenyl	33284-50-3
3,3',5,5'-tetrachlorobiphenyl	33284-52-5
2,3,4,5-tetrachlorobiphenyl	33284-53-6
2,3,5,6-tetrachlorobiphenyl	33284-54-7
2,2',4,4',6,6'-hexachlorobiphenyl	33979-03-2
2,5-dichlorobiphenyl	34883-39-1
3,5-dichlorobiphenyl	34883-41-5
2,4'-dichlorobiphenyl	34883-43-7
2,2',4,4',5,5'-hexachlorobiphenyl	35065-27-1
2,2',3,4,4',5'-hexachlorobiphenyl	35065-28-2
2,2',3,4,4',5,5'-heptachlorobiphenyl	35065-29-3
2,2',3,3',4,4',5-heptachlorobiphenyl	35065-30-6
2,4,6-trichlorobiphenyl	35693-92-6
2,2',5,5'-tetrachlorobiphenyl	35693-99-3
2,2',3,3',5,5'-hexachlorobiphenyl	35694-04-3
2,2',3,4,4',5-hexachlorobiphenyl	35694-06-5
2,2',3,3',4,4',5,5'-octachlorobiphenyl	35694-08-7
2,2',3,4'-tetrachlorobiphenyl	36559-22-5
2,2',5-trichlorobiphenyl	37680-65-2
2,2',4-trichlorobiphenyl	37680-66-3
2,3',5'-trichlorobiphenyl	37680-68-5
3,3',4-trichlorobiphenyl	37680-69-6
2,2',4,5,5'-pentachlorobiphenyl	37680-73-2
2,2',3,5',6-pentachlorobiphenyl	38379-99-6
2,2',4,4',5-pentachlorobiphenyl	38380-01-7
2,2',3,4,5'-pentachlorobiphenyl	38380-02-8
2,3,3',4',6-pentachlorobiphenyl	38380-03-9
2,2',3,4',5',6-hexachlorobiphenyl	38380-04-0
2,2',3,3',4,6'-hexachlorobiphenyl	38380-05-1
2,2',3,3',4,4'-hexachlorobiphenyl	38380-07-3
2,3,3',4,4',5-hexachlorobiphenyl	38380-08-4

Substances	CAS No.
2,2',3,3',6,6'-hexachlorobiphenyl	38411-22-2
2,2',3,3',4,5,6'-heptachlorobiphenyl	38411-25-5
2,2',6-trichlorobiphenyl	38444-73-4
2,3',6-trichlorobiphenyl	38444-76-7
2,4',6-trichlorobiphenyl	38444-77-8
2,2',3-trichlorobiphenyl	38444-78-9
2,3',5-trichlorobiphenyl	38444-81-4
2,3,3'-trichlorobiphenyl	38444-84-7
2,3,4'-trichlorobiphenyl	38444-85-8
2',3,4-trichlorobiphenyl	38444-86-9
3,3',5-trichlorobiphenyl	38444-87-0
3,4',5-trichlorobiphenyl	38444-88-1
3,4,4'-trichlorobiphenyl	38444-90-5
2,2',3,3'-tetrachlorobiphenyl	38444-93-8
2,2',4,4',6-pentachlorobiphenyl	39485-83-1
2,3,3',4,4',5,5'-heptachlorobiphenyl	39635-31-9
2,3,3',5,5'-pentachlorobiphenyl	39635-32-0
3,3',4,5,5'-pentachlorobiphenyl	39635-33-1
2,3,3',4',5,5'-hexachlorobiphenyl	39635-34-2
2,3,3',4,5,5'-hexachlorobiphenyl	39635-35-3
2,2',3,3',4,5',6-heptachlorobiphenyl	40186-70-7
2,2',3,3',4,5',6,6'-octachlorobiphenyl	40186-71-8
2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	40186-72-9
2,2',3,4,5,6-hexachlorobiphenyl	41411-61-4
2,3,3',4,5,6-hexachlorobiphenyl	41411-62-5
2,3,4,4',5,6-hexachlorobiphenyl	41411-63-6
2,3,3',4,4',5,6-heptachlorobiphenyl	41411-64-7
2,2',3,5'-tetrachlorobiphenyl	41464-39-5
2,2',4,5'-tetrachlorobiphenyl	41464-40-8
2,2',5,6'-tetrachlorobiphenyl	41464-41-9
2,3',5,5'-tetrachlorobiphenyl	41464-42-0
2,3,3',4'-tetrachlorobiphenyl	41464-43-1
2,3',4',6-tetrachlorobiphenyl	41464-46-4
2,2',3,6'-tetrachlorobiphenyl	41464-47-5
3,3',4,5'-tetrachlorobiphenyl	41464-48-6
2,3,3',5'-tetrachlorobiphenyl	41464-49-7
2,2',3,4',5'-pentachlorobiphenyl	41464-51-1
2,2',3,3',4,4',5,6'-octachlorobiphenyl	42740-50-1
2,2',3,4',5,5'-hexachlorobiphenyl	51908-16-8
2,3,4',6-tetrachlorobiphenyl	52663-58-8
2,2',3,4-tetrachlorobiphenyl	52663-59-9
2,2',3,3',6-pentachlorobiphenyl	52663-60-2
2,2',3,5,5'-pentachlorobiphenyl	52663-61-3
2,2',3,3',4-pentachlorobiphenyl	52663-62-4
2,2',3,5,5',6-hexachlorobiphenyl	52663-63-5
2,2',3,3',5,6,6'-heptachlorobiphenyl	52663-64-6
2,2',3,3',4,6,6'-heptachlorobiphenyl	52663-65-7
2,2',3,3',4,5'-hexachlorobiphenyl	52663-66-8
2,2',3,3',5,5',6-heptachlorobiphenyl	52663-67-9
2,2',3,4',5,5',6-heptachlorobiphenyl	52663-68-0
2,2',3,4,4',5',6-heptachlorobiphenyl	52663-69-1
2,2',3,3',4,5',6'-heptachlorobiphenyl	52663-70-4
2,2',3,3',4,4',6-heptachlorobiphenyl	52663-71-5
2,3',4,4',5,5'-hexachlorobiphenyl	52663-72-6
2,2',3,3',4,5,6,6'-octachlorobiphenyl	52663-73-7
2,2',3,3',4,5,5'-heptachlorobiphenyl	52663-74-8
2,2',3,3',4,5,5',6'-octachlorobiphenyl	52663-75-9
2,2',3,4,4',5,5',6-octachlorobiphenyl	52663-76-0

Substances	CAS No.
2,2',3,3',4,5,5',6,6'-nonachlorobiphenyl	52663-77-1
2,2',3,3',4,4',5,6-octachlorobiphenyl	52663-78-2
2,2',3,3',4,4',5,6,6'-nonachlorobiphenyl	52663-79-3
2,2',3,3',5,6-hexachlorobiphenyl	52704-70-8
2,2',3,4,5,5'-hexachlorobiphenyl	52712-04-6
2,2',3,4,5,5',6-heptachlorobiphenyl	52712-05-7
2,2',3,3',5,6'-hexachlorobiphenyl	52744-13-5
3,4,5-trichlorobiphenyl	53555-66-1
Nonachlorobiphenyl; Nonachloro-1,1'-bipheny	53742-07-7
2,3,4,6-tetrachlorobiphenyl	54230-22-7
(+/-)-2,2',3,4,6-pentachlorobiphenyl	55215-17-3
2,2',3,3',4,5-hexachlorobiphenyl	55215-18-4
2,2',3,4,5-pentachlorobiphenyl	55312-69-1
2,3,6-trichlorobiphenyl	55702-45-9
2,3,4-trichlorobiphenyl	55702-46-0
2,3',4-trichlorobiphenyl	55712-37-3
2,3,5-trichlorobiphenyl	55720-44-0
Octachlorobiphenyl	55722-26-4
(+/-)-2,2',3,4,4',6-hexachlorobiphenyl	56030-56-9
2,2',4,6,6'-pentachlorobiphenyl	56558-16-8
2,3',4,4',6-pentachlorobiphenyl	56558-17-9
2,3',4,5',6-pentachlorobiphenyl	56558-18-0
3,3',4,4',5-pentachlorobiphenyl	57465-28-8
2,2',3,4,4',6'-hexachlorobiphenyl	59291-64-4
2,3',4,4',5',6-hexachlorobiphenyl	59291-65-5
2,2',3,3',5-pentachlorobiphenyl	60145-20-2
2,2',4,5',6-pentachlorobiphenyl	60145-21-3
2,2',4,4',5,6'-hexachlorobiphenyl	60145-22-4
2,2',3,4,4',5,6'-heptachlorobiphenyl	60145-23-5
2,3',4,6-tetrachlorobiphenyl	60233-24-1
2,2',3,4',6'-pentachlorobiphenyl	60233-25-2
2,2',3,3',4,6-hexachlorobiphenyl	61798-70-7
2,4,4'(or3,4,4')-trichlorobiphenyl	62461-62-5
2,2',4,6-tetrachlorobiphenyl	62796-65-0
2,3',4,4',5'-pentachlorobiphenyl	65510-44-3
2,2',3,4,4'-pentachlorobiphenyl	65510-45-4
2,2',4,6'-tetrachlorobiphenyl	68194-04-7
2,2',3,4',6-pentachlorobiphenyl	68194-05-8
2,2',4,5,6'-pentachlorobiphenyl	68194-06-9
2,2',3,4',5-pentachlorobiphenyl	68194-07-0
2,2',3,4',6,6'-hexachlorobiphenyl	68194-08-1
2,2',3,5,6,6'-hexachlorobiphenyl	68194-09-2
2,3,3',5',6-pentachlorobiphenyl	68194-10-5
2,3,4',5,6-pentachlorobiphenyl	68194-11-6
2,3',4,5,5'-pentachlorobiphenyl	68194-12-7
2,2',3,4',5,6-hexachlorobiphenyl	68194-13-8
2,2',3,4,5',6-hexachlorobiphenyl	68194-14-9
2,2',3,4,5,6'-hexachlorobiphenyl	68194-15-0
2,2',3,3',4,5,6-heptachlorobiphenyl	68194-16-1
2,2',3,3',4,5,5',6-octachlorobiphenyl	68194-17-2
2,3,3',4,4',5'-hexachlorobiphenyl	69782-90-7
2,3,3',4',5,5',6-heptachlorobiphenyl	69782-91-8
2,4,4'-trichlorobiphenyl	7012-37-5
2,3,3',4,5'-pentachlorobiphenyl	70362-41-3
2,2',3,6-tetrachlorobiphenyl	70362-45-7
2,2',3,5-tetrachlorobiphenyl	70362-46-8
2,2',4,5-tetrachlorobiphenyl	70362-47-9
2,3',4',5'-tetrachlorobiphenyl	70362-48-0

Substances	CAS No.
3,3',4,5-tetrachlorobiphenyl	70362-49-1
3,4,4',5-tetrachlorobiphenyl	70362-50-4
2,3,3',5-tetrachlorobiphenyl	70424-67-8
2,3,3',4',5-pentachlorobiphenyl	70424-68-9
2,3,3',4,5-pentachlorobiphenyl	70424-69-0
2,3',4',5,5'-pentachlorobiphenyl	70424-70-3
2,3',4,5'-tetrachlorobiphenyl	73575-52-7
2,3',4,5-tetrachlorobiphenyl	73575-53-8
2,2',3,6,6'-pentachlorobiphenyl	73575-54-9
2,2',3,5,6'-pentachlorobiphenyl	73575-55-0
2,2',3,5,6-pentachlorobiphenyl	73575-56-1
2,2',3,4,6'-pentachlorobiphenyl	73575-57-2
2,3',5',6-tetrachlorobiphenyl	74338-23-1
2,3,3',4-tetrachlorobiphenyl	74338-24-2
2,3,3',6-tetrachlorobiphenyl	74472-33-6
2,3,4',5-tetrachlorobiphenyl	74472-34-7
2,3,3',4,6-pentachlorobiphenyl	74472-35-8
2,3,3',5,6-pentachlorobiphenyl	74472-36-9
2,3,4,4',5-pentachlorobiphenyl	74472-37-0
2,3,4,4',6-pentachlorobiphenyl	74472-38-1
2,3',4',5',6-pentachlorobiphenyl	74472-39-2
2,2',3,4,6,6'-hexachlorobiphenyl	74472-40-5
2,2',3,4',5,6'-hexachlorobiphenyl	74472-41-6
2,3,3',4,4',6-hexachlorobiphenyl	74472-42-7
2,3,3',4,5',6-hexachlorobiphenyl	74472-43-8
2,3,3',4',5,6-hexachlorobiphenyl	74472-44-9
2,3,3',4',5',6-hexachlorobiphenyl	74472-45-0
2,3,3',5,5',6-hexachlorobiphenyl	74472-46-1
2,2',3,4,4',5,6-heptachlorobiphenyl	74472-47-2
2,2',3,4,4',6,6'-heptachlorobiphenyl	74472-48-3
2,2',3,4,5,6,6'-heptachlorobiphenyl	74472-49-4
2,3,3',4,4',5',6-heptachlorobiphenyl	74472-50-7
2,3,3',4,5,5',6-heptachlorobiphenyl	74472-51-8
2,2',3,4,4',5,6,6'-octachlorobiphenyl	74472-52-9
2,3,3',4,4',5,5',6-octachlorobiphenyl	74472-53-0
2,2',3,4',5,6,6'-heptachlorobiphenyl	74487-85-7
2,3,3',4',5'-pentachlorobiphenyl	76842-07-4
2,4',?-trichlorobiphenyl	94487-00-0
2,3,?(or3,4,?)-trichlorobiphenyl	97122-18-4
2,4,?(2,6,?'or3,5,?)-trichlorobiphenyl	97122-20-8
(+/-)-2,2',3,4,6-pentachlorobiphenyl	99554-08-2
(+/-)-2,2',3,4,4',6-hexachlorobiphenyl	99554-09-3
(+)-2,2',3,4,6-pentachlorobiphenyl	99554-10-6
(-)-2,2',3,4,6-pentachlorobiphenyl	99554-11-7
(+)-2,2',3,4,4',6-hexachlorobiphenyl	99554-12-8
(-)-2,2',3,4,4',6-hexachlorobiphenyl	99554-13-9
Terphenyls	26140-60-3
Aroclor 5460 (pct)	11126-42-4
Aroclor 5442 (pct)	12642-23-8
Kanechlor 300	37353-63-2
Mixture of PCB 1248 and PCB 1254	89000-29-3

**Table 1k: Polycyclic aromatic hydrocarbons (PAH)**

Substances	CAS No.
<del>Benzo[a]pyrene (BaP)</del>	<del>50-32-8</del>
Benzo[e]pyrene (BeP)	192-97-2
Benzo[a]anthracene (BaA)	<del>56-55-3</del> / 1718-53-2
Benzo[b]fluoranthene (BbFA)	205-99-2
Chrysen (CHR)	<del>218-01-9</del> / 1719-03-5
Benzo[j]fluoranthene (BjFA)	205-82-3
Benzo[k]fluoranthene (BkFA)	207-08-9
Dibenzo[a,h]anthracene(DBAhA)	53-70-3
Anthracene	120-12-7
Toluene	108-88-3

[Main laws or industrial standards] Annex 17 No.72 of REACH Regulation (EC) No.1907/2002

**Table: 1I PFOA, PFOA-salts, PFOA-esters example-PFOS**

Substances	CAS No.
2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- Pentadecafluorooctanoic acid	335-67-1
Ammonium pentadecafluorooctanoate(APFO)	3825-26-1
Perfluorooctanoic acid sodium salt; Sodium salt of PFOA	335-95-5
Potassium salt of PFOA	2395-00-8
Silver salt of PFOA	335-93-3
Pentadecafluorooctyl fluoride	335-66-0
Pentadecafluoro-octanoicacimethylester	376-27-2
Pentadecafluoro-octanoicaciethylester	3108-24-5
1-Octanesulphonamide,N-butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(2-hydroxyethyl)-	2263-09-4
2-Propenoic acid, 2-methyl-, polymers with Bu methacrylate, lauryl methacrylate and 2-[methyl]((perfluoro-C4-8alkyl)sulphonyl)amino]ethyl methacrylate	127133-66-8
Sulphonamides, C4-8-alkane, perfluoro, N-methyl-N(oxiranylmethyl)	129813-71-4
1-Octanesulphonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	13417-01-1
2-Propenoic acid, 2-methyl-, 2-[[heptadecafluorooctyl]sulphonyl]methylamino]ethyl este	14650-24-9
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-, ethy	1869-77-8
Fatty acids, C18-unsatd., trimers, 2-[[heptadecafluorooctyl]sulphonyl]methylamino]ethyl esters	148240-78-2
Sulphonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-Nmethyl, reaction products with 1,6-diisocyanatohexane homopolymer and ethylene glyco	148684-79-1
Sulphonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 2-ethyl-1-hexanol and polymethylenepolyphenylene isocyanate	160901-25-7
1-Propanaminium, 3-[[heptadecafluorooctyl]sulphonyl]amino]- N,N,N-trimethyl-, iodide	1652-63-7
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(2-hydroxyethyl)-	1691-99-2
1-Octanesulphonamide, N-[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,potassium salt	178094-69-4
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-	1763-23-1
Sulphonamides, C4-8-alkane, perfluoro, N-ethyl-N(hydroxyethyl)-, polymers with 1,1'-methylenebis[4isocyanatobenzene] and polymethylenepolyphenylene isocyanate, 2-ethylhexyl esters, Me Et ketone oxime-blocked	178535-22-3
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-methyl-, reaction products with benzenechlorine-sulphur chloride (S2Cl2) reaction products chlorides	182700-90-9
Sulphonamides, C4-8-alkane, perfluoro, N-[3- (dimethylamino)propyl], reaction products with acrylic acid	192662-29-6

Substances	CAS No.
1-Octanesulphonamide, N,N',N''- [phosphinylidynetris(oxy-2,1ethanediyl)]tris[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-	2250-98-8
1-ctanesulphonamide, , 1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(2-hydroxyethyl)-N-methyl-	24448-09-7
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-2-propenyl-	24924-36-5
1-Decanaminiium, N-decyl-N,N-dimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1octanesulphonic acid (1:1)	251099-16-8
2-Propenoic acid, 2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl este	25268-77-3
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-, potassium salt	2795-39-3
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-, ammonium salt	29081-56-9
Poly(oxy-1,2-ethanediyl), alpha. - [2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl]-.omega.-	29117-08-6
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-, lithium salt	29457-72-5
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-	2991-50-6
Glycine potassium, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-	2991-51-7
1-Octanesulphonamide, N-[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	30295-51-3
1-Octanesulphonamide, N,N'-[phosphinicobis(oxy-2,1ethanediyl)]bis[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-, ammonium salt	30381-98-7
Fatty acids, linseed-oil, dimers, 2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl esters	306973-46-6
Heptadecafluorooctane-1-sulfonic acid fluoride	307-35-7
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-methyl-	31506-32-8
Sulphonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-Nmethyl, reaction products with 12-hydroxystearic acid and 2,4TDI, ammonium salts	306973-47-7
Sulphonamides, C4-8-alkane, perfluoro, N-methyl-N-[(3octadecyl-2-oxo-5-oxazolidinyl)methyl]	306974-19-6
Siloxanes and Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2propenyl)oxy]propylgroup] -terminated, polymers with 2[methyl[(perfluoro-C4-8-alkyl)sulphonyl]amino]ethyl acrylate and stearyl methacrylate	306974-28-7
Sulphonic acids, C6-8-alkane, perfluoro, compounds with polyethylene-polypropylene glycol bis(2-aminopropyl) ethe	306974-45-8
Fatty acids, C18-unsatd., dimers, 2-[methyl[(perfluoro-C4-8alkyl)sulphonyl]amino]ethyl esters	306974-63-0
2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2[methyl[(perfluoro-C4-8-alkyl)sulphonyl]amino]ethyl acrylate and vinylidene chloride	306975-62-2
Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpolymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and N,N',2-tris(6-isocyanatohexyl)imidodicarbonic diamide, reaction products with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-1-octanesulfonamide and N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2hydroxyethyl)-1-heptanesulfonamide, compds. With triethylamine	306975-56-4
2-Propenoic acid, butyl ester, polymers with acrylamide, 2[methyl[(perfluoro-C4-8-alkyl)sulphonyl]amino]ethyl acrylate and vinylidene chloride	306978-04-1
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-hydroxy-, polymer with 1,6-diisocyanatohexane, N-(hydroxyethyl)-Nmethyl perfluoro C4-8-alkane sulphonamides-	306975-84-8
3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 1,1-F-methylenebis (4-isocyanathbenzene) and "1,2,3-propantriol, N-ethyl-N-(2-hydroxyethyl) perfluorooctansulfonamide and " N-ethyl-N-(2-hydroxyethyl) a compound between perfluoroheptansulfonamide and morphorin"	306975-57-5
Hexane, 1,6-diisocyanato-, homopolymer, N-(hydroxyethyl)-Nmethyl perfluoro-C4-8-alkane sulphonamides- and stearyl alc.- blocked	306978-65-4



Substances	CAS No.
2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with N(hydroxymethyl)-2-propenamide, 2-[methyl[(perfluoro-C4-8alkyl)sulphonyl]amino]ethyl methacrylate, stearyl methacrylate and vinylidene chloride	306975-85-9
1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2propenyl)oxy]ethyl]-, bromide, polymers with Bu acrylate, Bu methacrylate and 2-[methyl[(perfluoro-C4-8alkyl)sulphonyl]amino]ethyl acrylate	306976-25-0
N,N'-(Hexane-1,6-diylbis[(2-oxooxazolidine-3,5-diyl)methylene])bis(N-methylperfluoroalkane(C=4-8)sulfonamide)	306980-27-8
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2,4-diisocyanato-1-methylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2-propenoic acid, N-ethyl-N-(hydroxyethyl)perfluoro-C4-8-alkanesulphonamides-blocked	306976-55-6
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester polymers with acrylic acid, 2-[methyl[(perfluoro-C4-8alkyl)sulphonyl]amino]ethyl acrylate and propylene glycol monoacrylate, hydrolysed, compounds with 2,2'-(methylimino)bis[ethanol]	306977-58-2
Poly(oxy-1,2-ethanediyl), .alpha.-[2-(methylamino)ethyl].omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-, N-[(perfluoro-C48-alkyl)sulphonyl]	306979-40-8
Methacrylic acid 2-[ethyl[(heptadecafluorooctyl) sulphonil] amino] ethyl	376-14-7
1-Propanaminium, 3-[(heptadecafluorooctyl)sulphonyl] amino]-N,N,N"-trimethyl-, chloride	38006-74-5
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-[2-(phosphonoxy)ethyl]-	3820-83-5
2-Propenoic acid, 2- [butyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl este	383-07-3
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-, sodium	3871-50-9
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-	4151-50-2
2-[N-Ethyl- (Heptadecafluorooctylsulfonyl) amino] ethyl acrylate	423-82-5
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-2-propenyl-	423-86-9
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(phenylmethyl)-	50598-29-3
Poly(oxy-1,2-ethanediyl), a-[2- [(heptadecafluorooctyl)sulphonyl]propylamino]ethyl]-ω-	52550-45-5
Ethanaminium, N,N',N"-triethyl-, salt with , 1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1octanesulphonic acid (1:1)	56773-42-3
Benzoic acid, 2,3,4,5-tetrachloro-6-[[[3-[(heptadecafluorooctyl)sulphonyl]oxy]phenyl]amino]carbonyl]-, monopotassium salt	57589-85-2
4-[(Heptadecafluorooctyl) sulfonyl] methylamino] butyl acrylate	58920-31-3
4-[(Heptadecafluorooctyl) sulfonyl] methylamino] butyl methacrylate	61577-14-8
1-Octanesulphonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,	67939-88-2
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-	61660-12-6
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-[3-(trichlorosilyl)propyl]-	67939-42-8
1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-[2-(phosphonoxy)ethyl]-, diammonium salt	67969-69-1
Carbamic acid, (4-methyl-1,3-phenylene)bis-, bis[2-[ethyl[(perfluoro-C4-8-alkyl)sulphonyl]amino]ethyl] este	68081-83-4
Monoester compound of perfluorooctane sulfonic acid and 2,2-iminodiethanol	70225-14-8
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(4-hydroxybutyl)-N-methyl-	68239-73-6
1-Propanaminium, 3-[(heptadecafluorooctyl)sulphonyl](3sulphopropyl)amino]-N-(2-hydroxyethyl)-N,N-dimethyl-, hydroxide, inner salt	68298-11-3
1-Propanaminium, 3-[(heptadecafluorooctyl)sulphonyl] amino]-N,N,N"-trimethyl-, iodide, ammonium salt	68310-75-8
Compound of tridecafluorohexane-1-sulfonic acid and 2,2'-iminodiethanol (1:1)	70225-16-0
Phosphonic acid, [3- [ethyl[(heptadecafluorooctyl)sulphonyl]amino]propyl]-	71463-78-0
2-[Ethyl [(perfluorooctyl) sulfonyl] amino] ethyl acrylate and polyme of octadecyl acrylate and acrylic acid	68541-80-0

Substances	CAS No.
2-Propenoic acid, eicosyl ester, polymer with 2[[heptadecafluorooctyl]sulphonyl] methylamino ethyl 2propenoate, hexadecyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulphonyl] amino] ethyl 2-propenoate, 2[methyl[(pentadecafluoroheptyl)sulphonyl] amino] ethyl 2propenoate, 2-[methyl[(tridecafluorohexyl)sulphonyl] amino] ethyl 2-propinoate, 2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-propenoate	68329-56-6
2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulphonyl] amino] ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulphonyl] amino] ethyl 2methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulphonyl] amino] ethyl 2-methyl2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulphonyl] amino] ethyl 2-methyl-2-propenoate, 2-[ethyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-methyl-2-	68555-91-9
Polymers with [ethyl [(perfluorohexyl) sulfonyl] amino] ethyl, 2- [ethyl [(perfluoropentyl) sulfonyl] amino] ethyl methacrylate and 2-methyl-1,3-butadiene	-
Chromium, diaquatetrachloro [.mu.-[N-ethyl-N- [(heptadecafluorooctyl)sulphonyl] glycinato-.kappa.O:.kappa.O']] .mu.-hydroxybis(2-methylpropanol)di-	68891-96-3
1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-N-(2-hydroxyethyl)-, reaction products with Nethyl-1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-1butanesulfonamide,N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7pentadecafluoro -N-(2-hydroxyethyl)-1-heptanesulfonamide, Nethyl-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-1-hexanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,5undecafluoro-N-(2-hydroxyethyl)-1-pentanesulfonamidepolymethylenepolyphenylene isocyanate and	68649-26-3
Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2propenyl)oxy]-, chloride, polymer with 2-ethoxyethyl 2propenoate, 2-[[heptadecafluorooctyl]sulphonyl]methylamino]ethyl 2-	92265-81-1
2-Propenoic acid, 2-methyl-, 2-[[heptadecafluorooctyl]sulfonyl] methylamino ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl] amino] ethyl 2methyl-2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl] amino] ethyl 2-methyl2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl] amino] ethy 2-methyl-2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-	68555-92-0
2-Propenoic acid, 2- [[heptadecafluorooctyl]sulfonyl] methylamino ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl] amino] ethyl 2propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl] amino] ethyl 2propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl] amino] ethyl 2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate	68867-60-7
2-Propenoic acid, 2-methyl-, 2- [ethyl[(heptadecafluorooctyl)sulphonyl] amino] ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulphonyl] amino] ethyl 2methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulphonyl] amino] ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluoro- hexyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2[ethyl[(undecafluoro-pentyl)sulphonyl]amino]ethyl 2-methyl-2-	68877-32-7
Poly(oxy-1,2-ethanediyl), alpha. -[2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl]-.omega.methoxy-	68958-61-2
Sulphonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-Nmethyl, reaction products with epichlorohydrin, adipates (esters	91081-99-1
Sulfonyl] amino ethyl-2-propinoate, N- (hydroxymethyl) -2-propinamide, 2 [[heptadecafluorooctyl] sulfonyl] methylamino ethyl-2-propinoate, 1,1-dichloro	-
2-Propenoic acid, eicosyl ester, polymers with branched octy acrylate, 2- [[heptadecafluorooctyl]sulfonyl]methylamino]ethyl acrylate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl acrylate, polyethylene glycol acrylate Me ether and steary	68909-15-9
Phosphonic acid, [3- [ethyl[(heptadecafluorooctyl)sulphonyl]amino]propyl]-, diethy	71463-80-4
Sulphonamides, C7-8-alkane, perfluoro, N-methyl-N-[2-[(1oxo-2-propenyl)oxy]ethyl], polymers with 2-ethoxyethyl acrylate, glycidyl methacrylate and N,N,Ntrimethyl-2-[(2methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride	98999-57-6

Substances	CAS No.
2-Propenoic acid, 2-methyl-, methylester, polymer with ethenylbenzene, 2-[[[(heptadecafluorooctyl)sulfonyl] methylamino] ethyl 2propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl] amino] ethyl 2propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl	71487-20-2
Sodium 3-{N-[3-(N,N-dimethylamino)propan-1-yl]perfluorooctane-1-sulfonamido}-2-hydroxypropane-1-sulfonate	94133-90-1
Carbamic acid, [5[[[2[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethoxy]carbonyl] amino]-2-methylphenyl]-, 9-octadecenyl ester, (Z)-	94313-84-5
2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 1,1dichloroethene, 2-[[[(heptadecafluorooctyl)sulfonyl] methylamino] ethyl 2propenoate, N-(hydroxymethyl)-2-propenamido, 2-[methyl[(nonafluorobutyl)sulfonyl] amino] ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl	70776-36-2
1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8heptadecafluoro-	754-91-6
Polymethylenepolyphenylene isocyanate and bis(4-NCOphenyl)methane reaction products with 2-ethyl-1-hexanol, 2butanone, oxime, N-ethyl-N-(2-hydroxyethyl)-1-C4-C8 perfluoroalkanesulphonamide	-
Other perfluorooctane sulfonate and its salts	71463-74-6 91036-71-4
2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2[ethyl[(heptadecafluorooctyl)sulphonyl] amino] ethyl 2-methyl-2propenoate, 2-[ethyl[(nonafluorobutyl)sulphonyl] amino] ethyl 2methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulphonyl] amino] ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulphonyl] amino] ethyl 2-methyl-2-propenoate and 2-propenoic acid	-
Tris (perfluorooctanoic acid) chromium (III.)	68141-02-6
Salts with ethaneaminium, N, N, N-triethyl,perfluorooctanoic acid (1:1)	98241-25-9
2,3,3,4,4,5,5,6,6,6-decafluoro-2-(1,1,2,2,2-pentafluoroethyl)Ammonium hexanate salt (1:1)	13058-06-5
Trietoxy-1H,1H,2H,2H-Heptadecafluorodecylsilin	101947-16-4
1,3-Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C4-10-alkyl)thio]methyl] derivs., phosphates, ammonium salts	148240-85-1
1H, 1H, 2H-Heptadecafluoro-1-decene	21652-58-4
1,3-Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C6-12-alkyl)thio]methyl] derivs., phosphates, ammonium salts	148240-87-3
2-Propenoic acid, C16-18-alkyl esters, polymers with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl acrylate.	160336-09-4
2- (Perfluorooctanoic) ethyl = methacryl	1996-88-9
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-Heptadecafluoro-10-iododecane	2043-53-0
3,4-bis (2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctylamino) benzenesulfonyl chloride	24216-05-5
2- (4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-Heptadecafluorodecyl) -2,4,6,8-Tetra Silicon-[3- (oxylanylmethoxy) propyl] derivative of methyl-cyclotetrasiloxane	206886-57-9
2H, 2H-perfluorodecanoic acid	27854-31-5
Acrylic acid 1H, 1H, 2H, 2H-Heptadecafluorodecyl	27905-45-9
1H, 1H, 2H, 2H-perfluorodecylmethylchlorosilane	3102-79-2
Tris [4- (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) phenyl] phosphine	325459-92-5
Bis [Tris (4- (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) phenyl) phosphine] Palladium (ii) dichloride	326475-46-1
Bis (pentadecafluorooctanoic acid) anhydride	33496-48-9

Substances	CAS No.
Perfluorooctylphosphonic acid; C8-PFPA	40143-78-0
N- (carboxyratethyl) -NN-bis (2-hydroxyethyl) -3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8, 8-Pentadecafluoro-1-oxooctyl) amino] -1-propaneaminium	39186-68-0
Bis (perfluorooctyl) phosphinic acid; C8 / C8-PFPIA	40143-79-1
N- [3- [bis (2-hydroxyethyl) amino] propyl] -2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadeca Fluoro-octane amide	41358-63-8
Heptadecafluorooctyl iodide	507-63-1
N- [3- (Perfluorooctanoylamide) Purpil] N, N, N-trimethylammonium chloride	53517-98-9
2-Propenoic acid,2-methyl-,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester,polymer with2-propenoic acid	53515-73-4
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-Heptadecafluorodecyl = dihydrogen = phosphate	57678-03-2
Bis (perfluorooctyl) phosphinic acid; C6 / C8-PFPIA	610800-34-5
Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-[[2-(trimethylammonio)ethyl]thio]ethyl]-,methyl sulfate	65530-57-6
Poly(difluoromethylene),.alpha.-fluoro.omega.-2-(phosphonooxy)ethyl-	65530-61-2
Poly(difluoromethylene),.alpha.,.alpha.-phosphinicobis(oxy-2,1-ethanediyl) bis.omega.-fluoro-	65530-62-3
1H, 1H, 2H, 2H-Heptadecafluoro-1-decanol	678-39-7
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-Heneicosafuorododecan-1-ol	865-86-1
Bisphosphate [2- (Heptadecafluorooctyl) ethyl]	678-41-1
Perfluorofatty acid (C7-13)	68333-92-6
Compound of perfluorofatty acid (C7-13) and ethylamine	69278-80-4
2-Decenoic acid,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-hexadecafluoro-	70887-84-2
Compound of 4,4-bis [( $\gamma$ -perfluoroalkyl (C = 8 ~ 20)) thio] pentanoic acid and 2,2'-iminodiethanol	71608-61-2
Perfluorofatty acid (C6-18) ammonium salt	72623-77-9
Perfluorocarboxylic acid (C7-13) ammonium salt	72968-38-8
Perfluorodecyldimethylchlorosilane	74612-30-9
Trichloro (1H, 1H, 2H, 2H-heptadecafluorodecyl) silane	78560-44-8
$\alpha$ -Fluoro- $\omega$ - (2-sulfoethyl) -poly (difluoromethylene)	80010-37-3
Trimethoxy (1H, 1H, 2H, 2H-heptadecafluorodecyl) silane	83048-65-1
Heptadecafluoro-1-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl) oxy] nonene	84029-60-7
N- (3-Aminopropyl) -2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-Pentadecafluorooctaneamide	85938-56-3
3- [Ethyl (2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl) amino] -1-propane Sodium sulfonic acid salt	89685-61-0
Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4
Octanoic acid,pentadecafluoro-,mixed esters with 2,2'-[1,4-butanediylbis(oxyethylene)]bis[oxirane] and 2,2'-[1,6-hexanediylbis(oxyethylene)]bis[oxirane]	90480-57-2
C7-19, $\alpha$ - $\omega$ -perfluoro-N, N-bis (hydroxyethyl) amide	90622-99-4
Perfluorofatty acid (C7-19)	91032-01-8
Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]ethyl]-.omega.-hydroxy-	93480-00-3
Diammonium Phosphate 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-Heptadecafluorodecyl	93857-44-4
Diammonium Phosphate 2-Hydroxy-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-Heptadecafluoroundecyl	94200-45-0
Henicosafuoroundecanoic acid	2058-94-8

Substances	CAS No.
[2- (Sulfothio) ethyl]-, C- (γ-w-perfluoro-C6-9-alkyl) ester carbamic acid sodium salt	95370-51-7
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2
Nonadecafluorodecanoic acid	3108-42-7
Ammonium nonadecafluorodecanoate	3830-45-3
Decanoic acid, nonadecafluoro-, sodium salt	
Tricosafuorododecanoic acid	307-55-1
Pentacosafuorotridecanoic acid	72629-94-8
Heptacosafuorotetradecanoic acid	376-06-7
Perfluoro-1-dodecanol	865—86-1
1,1,2,2-Tetrahydroperfluorododecyl iodide	2043-54-1
Perfluorodecylethyl acrylate	17741-60-5
Sodium;2-methylpropane-1-sulfonate	68187-47-3
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12- Pentacosafuoro-14-iodotetradecane	30046-31-2
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14- Pentacosafuorotetradecan-1-ol	39239-77-5
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16- Nonacosafuorohexadecan-1-ol	60699-51-6
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14- Nonacosafuoro-16-iodohexadecane	65510-55-6
1,1,2,2-Tetrahydroperfluoroalkyl(C8-C14)alcohol	68391-08-2
Thiols,C8-20,gamma-omega-perfluoro,telomers with a acrylamide	70969-47-0
Silicic acid(H4SiO4),sodium salt(1:2),reaction products with chlorotrimethylsiane and 3,3,4,4, 5,5,6,6,7,7,8,8,9,9,10,10- heptadecafluoro-1-decanol	125476-71-3
Thiols,C4-20,gamma-omega-perfluoro,telomers with acrylamide and acrylic acid,sodium salts,	1078712-88-5
1-Propanaminium,3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-(2-((gamma-omega- perfluoro-C4-20-alkyl)thio)acetyl)derivs.,inner salts	1078715-61-3
Polyfluoroalkyl betaine (generic)	-
Modified fluoroalkyl urethane (generic)	-
Perfluorinated polyamine (generic)	-
C.I. Pigment Violet 29(PV29)	81-33-4
2,2,3,4,5,5,6,6,6-Nonafluoro-3,4-bis (Trifluoromethylcaproic acid)	1882109-81-0
Sodium perfluoro(octane-1-sulfonate)	4021-47-0
Heptadecafluorooctane-1-sulfonate	45298-90-6
Lithium pentadecafluorooctanoate	17125-58-5
Potassium pentadecafluorooctanoate dihydrate	98065-31-7

[Main laws or industrial standards] EU revised POPs treaty (EU) 2019/1021 and (EU) 2020/784

Table 1m : Arsenic and its inorganic compounds

Substances	CAS No.
Arsonic acid, phenyl-	98-05-5
Triethoxyarsine	3141-12-6
Silver arsenite	7784-08-9
Arsenates (Lead compound)	10031-13-7
Disodium hydrogen arsenate heptahydrate	10048-95-0
Iron arsenate (Mixtures)	10102-49-5

Substances	CAS No.
Iron arsenate (Mixtures)	10102-50-8
Arsenic acid(HAsO <sub>3</sub> )	10102-53-1
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), magnesium salt	10103-50-1
Arsenic acid, copper salt	10103-61-4
Arsenic acid, calcium salt	10103-62-5 15195-00-3
Potassium arsenite	10124-50-2
Copper orthoarsenite	10290-12-7
Zinc metharsenite	10326-24-6
4-Aminophenylarsine oxide	1122-90-3
Boron arsenide (Bas)	12005-69-5
Boron arsenide (B <sub>6</sub> As)	12005-70-8
Copper arsenide (Cu <sub>3</sub> As)	12005-75-3
Silver hexafluoroarsenate	12005-82-2
Sodium hexafluoroarsenate	12005-86-6
Iron arsenide (Fe <sub>2</sub> As)	12005-88-8
Manganese arsenide (MnAs)	12005-95-7
Iron, diarsoranylidyne-	12006-21-2
Iron arsenide (FeAs)	12044-16-5
Gallium arsenide phosphide (Ga <sub>2</sub> AsP)	12044-20-1
Tin arsenide (SnAs)	12044-32-5
Magnesium arsenide (Mg <sub>3</sub> As <sub>2</sub> )	12044-49-4
Arsonic acid, (4-hydroxy-3-nitrophenyl)-	121-19-7
Barium arsenide (Ba <sub>3</sub> As <sub>2</sub> )	12255-50-4
Arsenic sulfide (As <sub>2</sub> S <sub>4</sub> )	12344-68-2
Methylarsonic acid	124-58-3
Arsinic acid, dimethyl-, sodium salt	124-65-2
p-Arsanilic acid monosodium salt	127-85-5
Gallium arsenide (GaAs)	1303-00-0
Indium arsenide (InAs)	1303-11-3
Arsenic pentoxide	1303-28-2
Arsenic sulfide (As <sub>2</sub> S <sub>3</sub> )	1303-33-9
ARSEN(V)-SULFID	1303-34-0
Arsenic selenide (As <sub>2</sub> Se <sub>3</sub> )	1303-36-2
Zinc arsenate	1303-39-5
2,7-Naphthalenedisulfonic acid, 4-[(2-arsonophenyl)azo]-3-	132-33-2
Arsenic oxide (As <sub>2</sub> O <sub>3</sub> )	1327-53-3
Triphenyl phosphate	115-86-6
Diarsenic acid	13453-15-1
Arsenenous acid, potassium salt	13464-35-2
Trisodium arsenite	13464-37-4
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), trisodium salt	13464-38-5
Diarsenic acid tetrasodium salt	13464-42-1
Zinc arsenate	13464-44-3
Arsenazo 3 sodium salt	138608-19-2
Arsonium, methyltriphenyl-, iodide	1499-33-8
Calcium arsenite	15194-98-6
Arsenazo3	1668-00-4
Arsenate(1-), hexafluoro-, potassium	17029-22-0
o-Arsanilic acid	2045-00-3

Substances	CAS No.
Pentachloroarsorane	22441-45-8
Aluminum arsenide (AlAs)	22831-42-1
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), cobalt(II) salt (2:3)	24719-19-5
Cobalt arsenide (CoAs)	27016-73-5
Tricalcium diarsenite	27152-57-4
Arsenate(1-), hexafluoro-, lithium	29935-35-1
2-Chlorovinyl dichloroarsine oxide	333-25-5
Iron methanearsonate	33972-75-7
Carboxyarsenazo	3772-44-9
Lead arsenate (Lead compounds)	3687-31-8 10102-48-4 7645-25-2
Ethylenebis(diphenylarsine)	4431-24-7
Tetraphenylarsonium chloride	507-28-8
Arsenazo1	520-10-5
Arsonic acid, (2-nitrophenyl)-	5410-29-7
Diphenylaminechloroarsine	578-94-9
Sulfonium, triphenyl-, hexafluoroarsenate(1-)	57900-42-2
10,10'-Oxybis-10H-phenoxarsine	58-36-6
Calcium methanearsonate	5902-95-4
Trimethylarsenic	593-88-4
Arsonous dichloride, methyl-	593-89-5
Arsonous dichloride, ethyl-	598-14-1
Arsine, triphenyl-	603-32-7
Strontium arsenide (SrAs <sub>3</sub> )	61462-16-6
Triethylarsenic	617-75-4
N-(Carbamoylmethyl)arsanilic acid	618-25-7
Iron(3)-o-arsenite pentahydrate	63989-69-5
Iron metaarsenate	6585-53-1
Arsonous dichloride, phenyl-	696-28-6
Diphenyl chloroarsine	712-48-1
Arsonium, tetraphenyl-, chloride, compd. With hydrochloric acid	73003-83-5
4-Dimethylaminophenylazobenzene-4-arsonic acid,	73688-85-4
Arsenic	7440-38-2
Arsinic acid, dimethyl-	75-60-5
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), sodium salt	7631-89-2
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> )	7778-39-4
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), copper(II) salt (2:3)	7778-41-8
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), disodium salt	7778-43-0
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), calcium salt (2:3)	7778-44-1
Arsenous tribromide	7784-33-0
Arsenous trichloride	7784-34-1
Arsenous trifluoride	7784-35-2
Arsorane, pentafluoro-	7784-36-3
Mercuric arsenate	7784-37-4
Acid manganese arsenate	7784-38-5
Arsenic acid (H <sub>3</sub> AsO <sub>4</sub> ), lead(II) salt (1:1) (Lead compounds)	7784-40-9
Arsine	7784-42-1
Ammonium arsenate	7784-44-3
Arsenous triiodide	7784-45-4

Substances	CAS No.
Sodium dioxoarsenate	7784-46-5
Strontium arsenite	91724-16-2
Acetophenarsine	97-44-9
Arsonic acid, (4-aminophenyl)-	98-50-0
Other arsenic compounds (tert-butylarsine)	4262-43-5
Arsine oxide, triphenyl-	1153-05-5
Potassium dihydrogenarsenate	7784-41-0
Chromated tricopper diarsenate	37337-13-6
(4-[[4-(Dimethylamino)phenyl]diazenyl]phenyl)arsenic acid monohydrochloride	-

Table 1n. Soluble uranium compounds.

Substances	CAS No.
Uranium, dioxo[sulfato(2-)-.kappa.O]-	1314-64-3
Uranyl nitrate hexahydrate	13520-83-7
Uranium, bis(48cetate-.kappa.O)dioxo-, (T-4)-	16984-59-1
Uranium, bis(48cetate-.kappa.O)dioxo-, (T-4)-	541-09-3
Uranyl diacetate dihydrate	6159-44-0
Uranium-238	7440-61-1

Table 1o. Beryllium and its compounds

Substances	CAS No.
Bis(pentane-2,4-dionato-O,O')beryllium	10210-64-7
Beryl (Al <sub>2</sub> Be <sub>3</sub> (SiO <sub>3</sub> ) <sub>6</sub> )	1302-52-9
Beryllium nitride (Be <sub>3</sub> N <sub>2</sub> )	1304-54-7
Beryllium oxide (BeO)	1304-56-9
Carbonic acid, beryllium salt (1:1)	13106-47-3
Beryllium hydroxide (Be(OH) <sub>2</sub> )	13327-32-7
Nitric acid, beryllium salt, tetrahydrate	13510-48-0
Sulfuric acid, beryllium salt (1:1)	13510-49-1
Nitric acid, beryllium salt	13597-99-4
Beryllium hydrogenphosphate	13598-15-7
Beryllium sulfide (BeS)	13598-22-6
Disodium tetrafluoroberyllate	13871-27-7
Beryllate(2-), tetrafluoro-, diammonium, (T-4)-	14874-86-3
Beryllium silicate	15191-85-2
Hexakis[μ-(48cetate-O:O')]-μ <sub>4</sub> -oxotetraberyllium (C <sub>12</sub> H <sub>18</sub> Be <sub>4</sub> O <sub>13</sub> )	19049-40-2
Beryllium phosphate	35089-00-0
Beryllium carbide (Be <sub>2</sub> C)	506-66-1
Diethylberyllium	542-63-2
Beryllium diacetate (C <sub>2</sub> H <sub>4</sub> O <sub>2</sub> .1/2Be)	543-81-7
Beryllium phosphide (BeP <sub>2</sub> )	57620-29-8
Beryllium phosphide (Be <sub>3</sub> P <sub>2</sub> )	58127-61-0
Beryllium oxyfluoride	63990-88-5
Beryllium	7440-41-7
Beryllium bromide (BeBr <sub>2</sub> )	7787-46-4
Beryllium chloride (BeCl <sub>2</sub> )	7787-47-5
Beryllium fluoride (BeF <sub>2</sub> )	7787-49-7
Beryllium iodide (BeI <sub>2</sub> )	7787-53-3



Substances	CAS No.
Beryllium sulfate	7787-56-6
Other beryllium compounds	-

Table 1p. Polychlorinated naphthalene (substance with a chlorine count of 2 or more)

Substances	CAS No.
Naphthalene, pentachloro-	1321-64-8
Naphthalene, trichloro-	1321-65-9
Naphthalene, tetrachloro-	1335-88-2
Naphthalene, chloro derivs.	70776-03-3
Naphthalene, octachloro-	2234-13-1
Monochloronaphthalene	25586-43-0
Dichloronaphthalene	28699-88-9
Hexachloronaphthalene	1335-87-1
Heptachloronaphthalene	32241-08-0

Table 1q. Short chain chlorinated paraffin(C10~C13)

Substances	CAS No.
Alkanes, C10-13, chloro-	85535-84-8
1-chlorododecane	112-52-7
Undecane, 1,1,1,3,5,7,9,11,11-nonachloro-	18993-26-5
Undecane, heptachloro-	219697-10-6
Undecane, nonachloro-	219697-11-7
1,2,10,11,?,?,?-Octachloroundecane Chlorinated paraffin (C11,chlorine number 7-12)	221174-07-8
1-chloroundecane	2473-03-2
Undecane, decachloro-	276673-33-7
Undecane, octachloro-	36312-81-9
Chlorowax	51990-12-6
Undecane, 1,1,1,3,6,7,10,11-octachloro-	601523-20-0
Undecane, 1,1,1,3,9,11,11,11-octachloro-	601523-25-5
Paraffin waxes and Hydrocarbon waxes, chloro; Paraffin waxes	63449-39-8
Alkene, C12-24-, Chloro-	68527-02-6
Chlorinated n-paraffins (C6-18)	68920-70-7
Alkanes, C12-13, chloro	71011-12-6
1-chlorotridecane	822-13-9
Alkanes, C10-21, chloro	84082-38-2
Alkanes, C10-12, chloro	108171-26-2
Alkane, C12-14-, Chloro-	85536-22-7 85681-73-8
1,1,1,2-Tetrachloroundecane	63981-28-2

Table 1r. Chlordanes

Substances	CAS No.
Chlordane, technical	12789-03-6
1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene; Chlordane	57-74-9
4,5,6,7,8,8-hexachloro-3a,4,7,7a-tetrahydro-4,7-Methano-1H-indene ; Chlordene	3734-48-3
$\alpha$ -Chlordane	5103-71-9
$\beta$ -Chlordane	5103-74-2
$\gamma$ -Chlordane	5566-34-7
Heptachlor	76-44-8

Table 1s. Nickel compound

Substances	CAS No.	Note
Nickel oxide (NiO <sub>2</sub> )	12035-36-8	-
Nickel sulfide (Ni <sub>3</sub> S <sub>2</sub> )	12035-72-2	-
Nickel sulfide (NiS)	16812-54-7	-
Nickel oxide (NiO)	1313-99-1	-
Dinickeltrioxide	1314-06-3	-
Nickel / Nickel compounds	7440-02-0	Note 1
Nickel diarsenide	12068-61-0	-
Nickel arsenide (NiAs)	27016-75-7	-
Nickel(II) sulfate hexahydrate	10101-97-0	-
Nickel oxide	11099-02-8	-
Nickel dihydroxide	12054-48-7	-

[Note regarding Table 1s]: 1) Products (or parts) that do not have a requirement in the drawings or purchase specifications, etc., such as "used in applications that come into contact with the skin for extended periods of time," are not eligible.

Table 1t: Specific organotin compounds

Substances	CAS No.	
Tri-substitutedtin	Bis(tributyltin) oxide; Tributyltin oxide; TBTO	56-35-9
	Tributyltin fluoride	1983-10-4
	Tributyltin methoxide	1067-52-3
	Trimethyltin azide	1118-03-2
	Trimethyltin acetate	1118-14-5
	Tributyltin methanesulphonate	13302-06-2
	Tributyltin Acrylate	13331-52-7
	Tributyltin bromide	1461-23-0
	Triethyltin phenoxide	1529-30-2
	Tributyltin dimethyldithiocarbamate	20369-63-5
	Tributyltin cyanide	2179-92-2
	Tributyltin linoleate	24124-25-2
	Butanedioic acid, 2-methylene-, 1,4-bis(tributylstannyl) ester; Bis(tributyltin)itaconate	25711-26-6
	Tripropyltin bromide	2767-61-5
	Triethyltin iodide	2943-86-4

	Substances	CAS No.
Tri-substitutedtin	Tripropyltin acetate	3267-78-5
	Tributyltin gamma-chlorobutyrate	33550-22-0
	4-nitrophenoxytributyltin; P-Nitrophenoxytributyltin	3644-32-4
	(2-biphenyloxy)tributyltin	3644-37-9
	Tributyltin naphthenate	36631-23-9
	Tributyltin nonanoate	4027-14-9
	Tributyltin cyanate	4027-17-2
	2-Butenoic acid,4-oxo-4-[(tributylstannyl)oxy]but-2-enoic acid	4027-18-3
	Tripropyltin methacrylate	4154-35-2
	Tri-n-butyl tin salicylate	4342-30-7
	Tributyltin benzoate	4342-36-3
	Trimethyltin thiocyanate	4638-25-9
	Tributyltin 2-ethylhexanoate	5035-67-6
	Tributyltin isopropylsuccinate	53404-82-3
	Tributyltin monopropylene glycol maleate	53466-85-6
	Trimethyltin hydroxide	56-24-6
	Tributyltin	56573-85-4
	Tripropyltin laurate	57808-37-4
	Tributyltin chloroacetate	5847-52-9
	Trimethyltin sulphate	63869-87-4
	Triphenyltin and compounds - as TPT	668-34-8
	Tributyltin isothiocyanate	681-99-2
	Tributyltin (and salts and esters)	688-73-3
	Tributyltin undecylenate	69226-47-7
	Tripropyltin iodide	7342-45-2
	Tributyltin iodide	7342-47-4
	Tributyltin iodoacetate	73927-91-0
	Tripropyltin iodoacetate	73927-92-1
	Tributyltin o-iodobenzoate	73927-93-2
	Tributyltin beta-iodopropionate	73927-95-4
	Tributyltin p-iodobenzoate	73927-97-6
	Tributyltin alpha-(2,4,5-trichlorophenoxy) propionate	73940-88-2
	1,3,5-tris(tributyltin)-S-triazine-2,4,6-trione	73940-89-3
	1,3,5-tris(tributyltin)-S-triazine-2,4,6-trione	752-58-9
	Trimethyltin iodide	811-73-4
	Triphenyltin hydride	892-20-6
	Triphenyltin iodide	894-09-7
	Triethyltin chloride	994-31-0
	Triethyltin hydroxide	994-32-1
	Tributyltin ethoxide	682-00-8
	Tributyltin hydroxide	1067-97-6
1-(Tricyclohexylstannyl)-1H-1,2,4-triazole	41083-11-8	
Bromotrimethylstannane	1066-44-0	
Trimethyltin chloride	1066-45-1	
Organo-tin compounds,liquid	1262-21-1	
Cyhexatin	13121-70-5	

	Substances	CAS No.
Tri-substitutedtin	Bis(tricyclohexyltin)sulfide	13121-76-1
	Distannoxane, hexakis(2-methyl-2-phenylpropyl)-	13356-08-6
	[(aminosulfonyl)oxy]triphenyl-stannane	13362-00-0
	5,5,9,9-Tetrabutyl-7-[(tributylstannyl)oxy]-6,8-dioxa-7phospha-5,9-distannatridecane 7-oxide	13435-05-7
	Tetrabutylammonium difluorotriphenylstannate	139353-88-1
	Bis (Tributyltin) Maleart	14275-57-1
	Stannane, tributylchloro-	1461-22-9 7342-38-3
	Tribenzyltin hydroxide	15082-85-6
	Triphenyltin = N, N'-dimethyldithiocarpamate	1803-12-9
	Triphenyl[(2,2,4,4-tetramethyl-oxopentyl)oxy]-stannane	18380-71-7
	Triethyltin acetate	1907-13-7
	Stannane, [1,2-phenylenebis(carbonyloxy)]bis[triphenyl-	1954-36-5
	Tripropyltin chloride	2279-76-7
	Triptyrus tin = methacrylate	2155-70-6
	Triphenyltin fatty acid salt (C = 9-11)	18380-71-7 18380-72-8 94850-90-5 47672-31-1
	5,5,12,12-Tetrabutyl-7,10-dioxo-6,11-dioxa-5,12distannahexadec-8-ene	24291-45-0
	[1R-(1 $\alpha$ ,4 $\alpha$ $\beta$ ,4 $\beta$ $\alpha$ ,10 $\alpha$ $\alpha$ )]-ributyl[[[1,2,3,4,4a,4b,5,6,10,10adecahydro-7-isopropyl-1,4a-dimethyl-1phenanthryl]carbonyl]oxy]stannane	26239-64-5
	Tributyltin cinnamate	27147-18-8
	Tributyltin oleate	3090-35-5
	Tributyltin = laurate	3090-36-6
	Stannane, chlorotricyclohexyl-	3091-32-5
	Bis (tryptyltin) = 2,3-dibromosuccinate	31732-71-5
	Triptyl tin chloride	3342-67-4
	Tributylphenoxystannane	3587-18-6
	Stannane, [(1-oxododecyl)oxy]triphenyl-	3644-29-9
	Tributyltin pentachlorophenolate	3644-38-0
	Triphenyltin chloride = fluoride	379-52-2
	Tributyltin terephthalate	4756-53-0
	Bis (triptyl tin) = phthalate	4782-29-0
	8,9-dibromo-5,5,12,12-tetrabutyl-7,10-dioxo-6,11-dioxa-5,12distannahexadecane	56323-17-2
	4,5-dibromo-3,6-dioxo-1,1,1,8,8,8-hexaphenyl-2,7-dioxa-1,8distannaoctane	56323-19-4
	Tributyltin = acetate	56-36-0
	Tri-n-butyl tin formate	5847-51-8
Tributyl[(diethylthiocarbamoyl)thio]stannane	5847-53-0	
Triphenyltin chloride = chloride	639-58-7	
Bis(tributyltin)=fumalate	6454-35-9	
Tributyltin =sulfamate	6517-25-5	
Tributyl[(dimethylthiocarbamoyl)thio]stannane	67057-32-3	
Copolymers of alkyl = acrylate, methyl = methacrylate, and tryptyltin = methacrylate (alkyl.C = 8)	67772-01-4	

Substances		CAS No.
Tri-substitutedtin	Triphenyltin chloride = chloroacetate	7094-94-2
	2-[[[(triphenylstannyl)oxy]carbonyl]-benzoic acid	7224-27-3
	Stannane, fluorotris(2-methylpropyl)-	7304-48-5
	Triisobutyltin chloride	7342-38-3
	Tributyl(D-gluconoyloxy)-stannane	75113-35-8
	2,7-Dioxa-1,8-distannaocta-4-ene,3,6-dioxo-1,1,1,8,8,8hexaphenyl-, (E)-	7552-19-4
	Triphenyltin=hydroxydo	76-87-9
	Bromo(triphenyl)stannan	962-89-0
	Stannane, tributyl-, mono(naphthenoyloxy) derivs	85409-17-2
	Triphenyltin chloride = acetate	900-95-8
	Triphenyltin benzoate	910-06-5
	[(1-oxoundecyl)oxy]triphenyl-[(1-oxoundecyl)oxy]triphenylstannane	94850-90-5
	Stannane, [1,4-phenylenebis(carbonyloxy)]bis[triphenyl-	97922-83-3
	Triethyltin bromide	2767-54-6
	Tricyclohexylfluoro-stannane	379-51-1
	Tributhyltin cyclopentane carboxylate and its derivative	-
	Copolymer of alkyl(C8) acrylate, methyl methacrylate and tributyltin methacrylate	-
	Tributhyltin=1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-2-phenanthrene carboxylate and its derivatives	-
	Other tributyltin or triphenyltin derivatives (TBTs, TPTs)	-
	Dibutyltin	Dibutyltin hydrogen borate
Dibutyltin diacetate		1067-33-0
1,3,2-Dioxastannepin-4,7-dione, 2,2-dibutyl-		78-04-6
2,2-Dibutylidihydro-6H-1,3,2-oxathiasannin-6-one		78-06-8
Dibutyl tin		1002-53-5
Dibutyltin di(nonylmaleate)		10584-97-1
Dibutyltin dioleate		13323-62-1
Dibutyltin thiomalate (or alkyl ester)		13497-25-1
Dibutyltin disalicylate		14214-24-5
Dibutyltin di(2-ethylhexyl maleate)		15546-12-0
Tin, dibutyl(1,2-ethanediamine-N,N')bis(monoisooctyl 2butenedioato-O')-		163206-28-8
Bis (acetato) dibutyltin		17523-06-7
Dibutyltin dihexanoate		19704-60-0
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-		22673-19-4
Diisooctyl 4,4'-((dibutylstannylene)bis(oxy))bis(4oxoisocrotonate)		25168-21-2
Dibutyltin di [aliphatic monocarboxylate (C2-31)]; Dibutylbis[(1oxoneodecyl)oxy]stannane		25168-22-3
Dibutylbis(myristoyloxy)stannane		28660-67-5
Acetate, S,S'-bisooctylmercapto-, dibutyltin		32011-18-0
Dibutyltin sulfide; Dibutylthioxostannane		4253-22-9
Dibutylbis(ethyl 3-oxobutyrate-O1',O3)tin		54581-65-6
Dibutyltin bis(imidazole)salt		56149-55-4
Dibutyltin distearate		5847-55-2
Dibutylbis[(1-oxoisooctadecyl)oxy]stannane		59963-28-9
Dibutyltin diricinoleate		65540-76-3
Tin, dibutylbis(N,N-diethylethanamine)difluoro-		67924-24-7

	Substances	CAS No.
Dibutyltin	Tin, dibutyl[N-(carboxymethyl)-N-(2-hydroxyethyl)glycinato(2)]-	68239-46-3
	Dibutyltin methoxide [monoalkyl (or monoalkenyl) maleate] salt	6995-92-2
	Dibutyltin lauratemaleat	73246-84-1
	Dibutyltin (mono-2, 3-dibromopropyl maleate)	75113-33-6
	Dibutyltin bis (3-chloropropionate)	7580-74-7
	Acetoxy[2-[(2-aminoethyl)amino]propoxy]dibutyltin	84051-94-5
	Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane;Dibutyltin linoleate	85391-79-3
	Dibutyltin bis [monoalkoxy (C1-4) alkyl (C1-4) maleate]	85665-63-0
	Silicic acid (H4SiO4), tetraethyl ester, reaction products with bis(acetyloxy)dibutylstannane	93925-42-9
	Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane; Dibutyltin linolenate	95873-60-2
	Dibutyltin dibutyrate; Bis(butanoyloxy)dibutylstannane	28660-63-1
	Stannane, dibutylbis(dodecylthio)-	1185-81-5
	Octyl 4,4-dibutyl-7-oxo-8-oxa-3,5-dithia-4stannahexadecanoate	2781-09-1
	Stannane, dibutylbis[(2-ethyl-1-oxohexyl)oxy]-	2781-10-4
	1,1,3,3-Tetrabutyl-1,3-bis[(1-oxododecyl)oxy]distannoxane	3669-02-1
	Distannoxane, 1,3-bis(acetyloxy)-1,1,3,3-tetrabutyl-	5967-09-9
	2-Butenoic acid, 4,4'-[(dibutylstannylene)bis(oxy)]bis[4-oxo(Z,Z)-	10192-92-4
	2-Ethylhexyl 4,4-dibutyl-10-ethyl-7-oxo-8-oxa-3,5-dithia-4stannatetradecanoate	10584-98-2
	Stannane, dibutyldimethoxy-	1067-55-6
	Bis(benzoyloxy)bis(1,1-dimethylethyl)-stannane	109054-07-1
	Ethyl (Z,Z)-9,9-dibutyl-4,7,11-trioxa-3,8,10-trioxa-9stannatetradeca-5,12-dien-14-oate	13173-04-1
	Dibutylbis(palmitoyloxy)stannane	13323-63-2
	Dibutylthioxo-stannane, trimer	15220-82-3
	Methyl (Z,Z)-8,8-dibutyl-3,6,10-trioxa-2,7,9-trioxa-8stannatrideca-4,11-dien-13-oate	15546-11-9
	Butyl (Z,Z)-6,6-dibutyl-4,8,11-trioxa-5,7,12-trioxa-6stannahexadeca-2,9-dienoate	15546-16-4
	(Z,Z)-Dibutylbis[(3-propoxycarbonylacryloyl)oxy]stannane	15853-77-7
	Dodecyl 4,4-dibutyl-7-oxo-8-oxa-3,5-dithia-4stannaicosanoate	20004-12-0
	Octyl (Z,Z)-6,6-dibutyl-4,8,11-trioxa-5,7,12-trioxa-6stannaicosa-2,9-dienoate	17036-31-6
	Hexadecyl (Z,Z)-6,6-dibutyl-4,8,11-trioxa-5,7,12-trioxa-6stannahexacosa-2,9-dienoate	19706-58-2
	3,8,10-Trioxo-9-stannatetradeca-5,12-dien-14-oic acid, 9,9dibutyl-4,7,11-trioxa-2-phenyl-, 1-phenylethyl ester	20258-69-9
	Dibutylbis[(p-tert-butylbenzoyl)oxy]stannane	20556-89-2
	Isopropyl (Z,Z)-9,9-dibutyl-2-methyl-4,7,11-trioxa-3,8,10trioxa-9-stannatetradeca-5,12-dien-14-oate	22535-42-8
	1,1,3,3-Tetrabutyl-1,3-bis(dodecyloxy)distannoxane	25150-98-5
Acetic acid, 2,2'-[(dibutylstannylene)bis(thio)]bis-, diisooctyl ester	25168-24-5	
Propanoic acid, 3,3'-[(dibutylstannylene)bis(thio)]bis-, diisooctylester	26761-46-6	
Dibutyldiiodo-stannane	2865-19-2	
3-Methoxybutyl 11,11-dibutyl-3-methyl-7-oxo-2,6-dioxa-10,12-dithia-11-stannapentadecan-15-oate	29492-49-7	
(Z)-Octadec-9-enyl (all-Z)-6,6-dibutyl-4,8,11-trioxa-5,7,12trioxa-6-stannatriaconta-2,9,21-trienoate	29881-72-9	

	Substances	CAS No.
Dibutyltin	5,7,9-Trioxa-6,8-distannatrideca-2,11-dienoic acid, 6,6,8,8tetrabutyl-5,10-dioxo-, didodecyl ester, (Z,Z)-	31710-35-7
	10,13-Dioxa-4,6-dithia-5-stannaheptadecanoic acid, 5,5dibutyl-9-oxo-, 2-butoxyethyl ester	31781-13-2
	Tin, dibutylbis[methyl 3-(mercapto-.kappa.S)propanoato.kappa.O]-	32011-19-1
	2,5-Dioxa-8,10-dithia-9-stannadodecan-12-oic acid, 9,9dibutyl-6-oxo-, 2-methoxyethyl ester	32509-49-2
	Stannane, dibutoxydibutyl-	3349-36-8
	5,7,9-Trioxa-6,8-distannatrideca-2,11-dienoic acid, 6,6,8,8tetrabutyl-5,10-dioxo-, didodecyl ester, (Z,Z)-	33397-45-4
	Dodecyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6stannatetracos-2,9-dienoate	33466-31-8
	Dibutylbis(octyloxy)stannane	3349-38-0
	2,2'-[(dibutylstannylene)bis(thio)]bis-acetic acid,	4401-37-0
	2-Methoxyethyl (Z,Z)-11,11-dibutyl-6,9,13-trioxo-2,5,10,12tetraoxa-11-stannahexadeca-7,14-dien-16-oate	34349-21-8
	Dibutylbis(octanoyloxy)stannane	4731-77-5
	Dodecyl 5,5-dibutyl-9-oxo-10-oxa-4,6-dithia-5stannadocosanoate	51287-83-3
	Dibutyl (2-phenylphenoxy)stannane	52722-81-3
	2-Ethylhexyl 5,5-dibutyl-12-ethyl-9-oxo-10-oxa-4,6-dithia-5stannahexadecanoate	53202-61-2
	(Z,Z)-Dibutylbis[[4-(cyclohexyloxy)-1,4-dioxoallyl]oxy]stannane	5587-52-0
	3,3'-[(1,1,3,3-tetrabutyl-1,3-distannoxanedyl)bis(thio)]bispropanoic acid diisooctyl ester	55348-64-6
	2,2'-[(dibutylstannylene)bis(oxycarbonyl)]bisbenzoic acid didodecyl ester	55568-37-1
	2,2'-[(dibutylstannylidene)bis(oxycarbonyl)]bis-benzoic acid dioctyl ester	56808-12-9
	Dibenzoyloxydibutyltin	5847-54-1
	Isobutyl (Z,Z)-10,10-dibutyl-2-methyl-5,8,12-trioxo-4,9,11trioxa-10-stannapentadeca-6,13-dien-15-oate	59571-08-3
	Octadecyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6stannatriaconta-2,9-dienoate	61813-52-3
	Diisobutyltin oxide	61947-30-6
	Dibenzyl (Z,Z,Z)-6,6,13,13-tetrabutyl-4,8,11,15-tetraoxo-5,7,12,14-tetraoxa-6,13-distannooctadeca-2,9,16-trienedioate	68109-87-5
	Dibutyltin dichloride	683-18-1
	Dibenzyl (,,Z)-6,6,13,13-tetrabutyl-4,8,11,15-tetraoxo-5,7,12,14tetraoxa-6,13-distannooctadeca-2,9,16-trienedioate	68460-06-0
	Dibutyltin bis(monobenzylmaleate)	7324-74-5
	10,13-Dioxa-4,6-dithia-5-stannaheptadecanoic acid, 5,5dibutyl-9-oxo-, 2-butoxyethyl ester	75113-44-9
	[R-[R*,R*-(Z,Z)]-1,1,3,3-Tetrabutyl-1,3-bis[(12-hydroxy-1oxooctadec-9-enyl)oxy]distannoxane	75149-37-0
	Stannane, dibutylbis[(1-oxododecyl)oxy]-	77-58-7
	2,2-Dibutyl-1,3,2-oxathiastannolan-5-one	78-20-6
	Dibromobis(2-methylpropyl)-stannane	79494-57-8
	Stannane, dibutyloxo-	818-08-6
	Tetradecyl 4,4-dibutyl-7-oxo-8-oxa-3,5-dithia-4stannadocosanoate	83833-21-0
	Hexadecyl 6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6stannaocacos-2,9-dienoate	84787-79-1

	Substances	CAS No.
Dibutyltin	Dipropyl (Z,Z,Z)-6,6,13,13-tetrabutyl-4,8,11,15-tetraoxo-5,7,12,14-tetraoxa-6,13-distannooctadeca-2,9,16-trienedioate	85391-80-6
	Dibutylbis[(1-oxoisooctyl)oxy]stannane	85702-74-5
	1,1,3,3-Tetrabutyl-1,3-bis[(1-oxoisodecyl)oxy]distannoxane	85702-76-7
	8,11-Dioxa-3,5-dithia-4-stannatridecanoic acid, 4,4-dibutyl-7oxo-, 2-ethoxyethyl ester	90264-80-5
	Bis(2-ethylhexyl) o,o'-[(dibutylstannylene)bis(oxycarbonyl)]dibenzoate	94023-65-1
	Dibromodibutylstannane	996-08-7
	2,2-Dibutyl- 1,3-dioxa-7,8-dithia-2-stannacycloundecane-4,11-dione, 1,3-Dioxa-7,8-dithia-2-stannacycloundecane-4,11-	113289-90-0
	2,7,9,11-Tetraoxa-8,10-distannapentadeca-4,13-dien-15-oic acid, 8,8,10,10-tetrabutyl-3,6,12-trioxo, methyl ester, (Z,Z)-	15785-44-1
	1,3-Dioxa-2-thia-4-stannacyclobutane, 4,4-dibutyl-, 2-oxide	22709-77-9
	Decyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6stannadocosa-2,9-dienoate	24660-23-9
	[(Dibutyl)distannoxandiylidene] tetrathio] Tetraisoctyl tetraacetate	29859-88-9
	2,2-dibutyl-1,3,7,2-dioxathiastannecane-4,10-dione	4981-24-2
	2,2,7,7-tetrabutyl-1,6,3,8,2,7-Dioxadithiadistannecane-5,10dione	6931-76-6
	Diisoctyl 2,2'-[(1,1,3,3-tetrabutyl-1,3distannathianediyl)bis(thio)]diacetate	52628-34-9
	(Z,Z)-8,8-dibutyl-1-[(1-methylethyl)phenyl]-3,6,10-trioxo2,7,9-trioxa-8-stannatrideca-4,11-dien-13-oic acid, [(1methylethyl)phenyl]methyl ester	62044-47-7
	(Z,Z)- 4,4'-[(1,1,3,3-tetrabutyl-1,3-distannoxanediyl)]bis(oxy)bis[4-oxo-,2-butenoic acid diisoctyl	67708-87-6
	2,2-Dibutyl-6-oxo-1,3,2-oxathiastanninane-4-carboxylic acid	67859-55-6
	6,12-Dioxa-4,8-dithia-5,7-distannaoctadecanoic acid, 5,5,7,7tetrabutyl-14-ethyl-11-oxo-, 2-ethylhexyl ester	71510-19-5
	Decyl 5,5-dibutyl-9-oxo-10-oxa-4,6-dithia-5-stannaicosanoate	83833-25-4
	Diocetyl tin bis (monoalkyl (C6-24) maleate)	116430-10-5
5,7,12,14-Tetraoxa-6,13-distannaoctadeca-2,9,16-trienedioic acid, 6,6,13,13-tetraoctyl-4,8,11,15-tetraoxo-, didodecyl ester	117732-68-0	
5,7,9,14-Tetraoxa-6,8-distannadocosa-2,11-dienoic acid, 6,6,8,8-tetrabutyl-4,10,13-trioxo-, octyl ester, (Z,Z)-	78917-85-8	
(9Z,12Z)-1,1,3,3-Tetrabutyl-1,3-bis(octadeca-9,12dienoyloxy)distannoxane	94349-26-5	
3,8,10,12-Tetraoxa-9,11-distanna-5,14-dien-16-oic acid, 9,9,11,11-tetrabutyl-4,7,13-trioxo-, ethyl ester, (Z,Z)-	96407-98-6	
3,8,10,12-Tetraoxa-9,11-distannaohexadeca-5,14-dien-16-oic acid, 9,9,11,11-tetrabutyl-2-methyl-4,7,13-trioxo-, 1methylethyl ester	96407-99-7	
Diocetyl tin	Diocetyl tin bis(2-ethylhexylmaleate)	10039-33-5
	<del>Diocetyl tin bis(2-ethylhexyl thioglycolate)</del>	<del>15571-58-4</del>
	Diocetyl tin bis(isobutylmaleate)	15571-59-2
	Diocetyl tin acetate	17586-94-6
	Diocetyl tin-S,S'-bis(butyl mercaptoacetate)	27107-88-6
	Diocetyl tin dibutylmaleate	29575-02-8
	Diocetyl tin bis(isooctyl maleate)	33568-99-9
	Diocetyl bis(pentane-2,4-dionato-O,O')tin	54068-28-9
	Diocetyl tin-S,S'-(ethyleneglycol-bis-mercaptoacetate)	56875-68-4
	Diocetyl indineodecanoate	68299-15-0
	Diocetyl tin di(1,2-propyleneglycolmaleate)	69226-45-5



Substances		CAS No.
Diocetyl tin	Diocetyl tin-S,S'-(1,4-butanediol-bis-mercaptoacetate)	69226-46-6
	Diocetyl tin-S,S'-bis(laurylmercaptoacetate)	73246-85-2
	Diocetyl tin oxide	870-08-6
	2,2-Diocetyl-1,3,2-oxathiastannolan-5-one	15535-79-2
	Silicic acid (H <sub>4</sub> SiO <sub>4</sub> ), tetraethyl ester, reaction products with bis(acetyloxy)diocetyl stannane	93925-43-0
	Diocetyl tin maleate	16091-18-2
	Diocetyl bis(stearoyloxy)stannane	22205-26-1
	Stannane, bis(dodecylthio)diocetyl-	22205-30-7
	Acetic acid, 2,2'-[(diocetyl stannylene)bis(thio)]bis-, diisooctyl ester	26401-97-8
	(Z,Z,Z)-6,6,13,13-tetraoctyl-4,8,11,15-tetraoxo-5,7,12,14-tetraoxa-6,13-distanna octadeca-2,9,16-trienedioic acid, diocetyl ester	24396-70-1
	Bis(hydrogen maleato)diocetyl-tin, diester with 1,2-propanediol	27194-44-1
	Dihydro-2,2-diocetyl-6H-1,3,2-oxathiastannin-6-one	3033-29-2
	Stannane, dichlorodiocetyl-	3542-36-7
	Bis(benzoyloxy)diocetyl-stannane	23519-66-6
	Octadecyl (Z,Z)-6,6-diocetyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatriaconta-2,9-dienoate	62480-03-9
	2,2-Diocetyl-1,3-dioxa-7,8-dithia-2-stannacycloundecane-4,11-dione	113289-87-5
	(Z)-Octadec-9-enyl (,,Z)-6,6-diocetyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatriaconta-2,9,21-trienoate	68538-86-3
	2,7,12,14-Tetraoxa-13-stanna octadeca-9,16-dien-18-oic acid, 13,13-diocetyl-8,11,15-trioxo-4-methoxybutyl ester, (Z,Z)-	75113-34-7
	Tetradecyl (Z,Z)-6,6-diocetyl-4,8,11-trioxo-5,7,12-trioxa-6-stannahexacos-2,9-dienoate	84029-77-6
	4,4'-[(Diocetyl stannylene)bis(oxy)]bis[4-oxoisocrotonic]acid	15571-60-5
	1,3,2,4-Dioxaphosphastannetane, 4,4-diocetyl-, 2-oxide	19269-42-2
	Diocetyl bis(1-oxopropoxy)stannane	21619-67-0
	Bis[(2-ethyl-1-oxohexyl)oxy]diocetyl stannane	24577-34-2
	2,2-diocetyl-1,3,7,2-dioxathiastannecane-4,10-dione,	3594-15-8
	Bis[[4-(1,1-dimethylethyl)benzoyl]oxy]diocetyl]-stannane	51541-60-7
	2-Ethylhexyl 12-ethyl-5,5-diocetyl-9-oxo-10-oxa-4,6-dithia-5-stannahexadecanoate	59185-95-4
	(Z,Z)-4,4'-[(diocetyl stannylene)bis(oxy)]bis[4-oxo-2-butenoic acid dicyclohexyl ester	59849-87-5
	Ethyl 9,9-diocetyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate	68109-88-6
	Dodecyl (Z,Z)-6,6-diocetyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatetracos-2,9-dienoate	7324-77-8
	Tributyl(D-gluconoyloxy)-stannane	75113-38-1
	1,3,2,4-Dioxaphosphastannane, 2-hydroxy-4,4-diocetyl-, 2-oxide	75113-40-5
	3-Oxa-7,9-dithia-8-stannadodecan-12-oic acid, 1-hydroxy-8,8-diocetyl-4-oxo-, 2-hydroxyethyl ester	75113-43-8
Tetradecyl 4,4-diocetyl-7-oxo-8-oxa-3,5-dithia-4-stannadocosanoate	79330-84-0	
Bis(isooctanoyloxy)diocetyl stannane	85702-78-9	
Diocetyl bis(palmitoyloxy)stannane	85938-42-7	
4-Hydroxy-2,2-diocetyl-1,3,2,4-dioxastannaboretane	102667-32-3	
N-Butyltin trichloride	1118-46-3	
2,4,6,8,9-Pentaoxa-3,7-distanna-1,5-diborabicyclo[3.3.1]nonane, 3,3,7,7-tetra butyl-	112309-68-9	
2-Butyl-1,3-dioxa-7,8-dithia-2-stannacycloundecane-4,11-dione	113289-91-1	
2,4,6,8,9-Pentaoxa-3,7-distanna-1,5-diborabicyclo[3.3.1]nonane, 3,3,7,7-tetrakis(1,1,-dimethylethyl)-	119192-22-2	

Substances	CAS No.
Dimethyltin diformate	13241-48-0
Stannane, dimethylthio-	13269-74-4
Dimethyltin diacetate	13293-57-7
Stannane, hydroxyoctyloxo-	13356-20-2
6,12-Dioxa-4,8-dithia-5,7-distannaecosanoic acid, 5,5,7,7-tetrabutyl-11-oxo-octyl ester	136482-55-8
2-Butenoic acid, 4,4',4"-[(octylstannylidene)tris(oxy)]tris[4-oxotricyclohexyl ester, (Z,Z,Z)-	137297-08-6
Stannane, tetrabutyl-	1461-25-2
Stannane, tris(acetyloxy)butyl	14764-54-6
Tribromobutyl-stannane	1528-07-0
Di-tert-Butyldichlorostannane	19429-30-2
Bis(lauroyloxy)dimethylstannane	2179-99-9
Butyltriiodo-stannane,	21941-99-1
2,2-dimethyl-1,3,2-dioxastannepin-4,7-dione	22535-43-9
Stannane, butylhydroxyoxo-	2273-43-0
Triiodooctyl-stannane	23072-08-4
Butyltris[(2-ethyl-1-oxohexyl)oxy]stannane	23850-94-4
Butyltris[(1-oxododecyl)oxy]stannane	25151-00-2
Tetrabutylbis[μ-(hydrogenmaleato)]-μ-oxodi-tin, diisooctyl	25168-23-4
Tetrabutylbis[μ-(hydrogen maleato)]-μ-oxodi-tin, dipropyl	25248-71-9
Acetic acid, 2,2',2"-[(butylstannylidene)tris(thio)]tris-, triisooctyl ester	25852-70-4
Dodecyl 4-butyl-4-[[2-(dodecyloxy)-2-oxoethyl]thio]-7-oxo-8-oxa-3,5-dithia-4-stannaecosanoate	26292-98-8
Butylmercaptooxostannane	26410-42-4
Acetic acid, 2,2'-[(dimethylstannylene)bis(thio)]bis-, diisooctyl	26636-01-1
Acetic acid, [(butylthioxostannyl)thio]-, oxydi-2,1-ethanediy	26872-61-7
2-Ethylhexyl 4-butyl-10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	26864-37-9
Stannane, hydroxydimethyl[(1-oxo-9-octadecenyl)oxy]-, (Z)-	29910-14-3
Tribromooctyl-stannane,	3091-27-8
Dihydro-2,2-dimethyl-6H-1,3,2-oxathia-stannin-6-one	32673-05-5
Tetraisooctyl 2,2',2",2"- [thiobis[(butylstannylidene)bis(thio)]]tetraacetate	34871-84-6
Stannane, tetrakis(2-methylpropyl)-	3531-43-9
Tetrahexyl tin	3590-83-8
Stannane, tetraoctyl-	3590-84-9
Triisooctyl 3,3',3"-[(butylstannylidene)tris(thio)]tripropionate	36118-60-2
Diocylthiodistannathiane	36432-42-5
2,8,14,18-Hexaoxa-6,10,22,26-tetrathia-7,9,23,25-tetrastannaspiro[15.15]hentriacontan-3,13,19,29-tetrone, 7,7,9,9,23,23,25,25-octadodecyl-	38732-53-5
2,2-Dimethyl-1,3,2-oxathia-stannolan-5-one	4117-92-4
Bis(dodecylthio)dimethylstannane	51287-84-4
Butyloxostannane	51590-67-1
4,7-bis[[2-(isooctyloxy)-2-oxoethyl]thio]-4,7-dimethyl,3,5,6,8-tetrathia-4,7-distannadecanedioic acid diisooctyl este	55230-73-4
4,8-bis[[3-(isooctyloxy)-3-oxopropyl]thio]-4,8-dimethyl-4,6,7,9-tetrathia-5,8-distannadodecanedioic acid diisooctyl este	55230-77-8
2-Ethylhexyl 12-ethyl-5-[[3-[(2-ethylhexyl)oxy]-3-oxopropyl]thio]-5-octyl-9-oxo-10-oxa-4,6-dithia-5-stannahexadecanoate (C <sub>41</sub> H <sub>80</sub> O <sub>6</sub> S <sub>3</sub> Sn)	59157-52-7
Stannane, tetramethyl-	594-27-4
Stannane, tetraphenyl-	595-90-4
5,7,12-Trioxa-6-stannaecosanoic acid, 6,6-dimethyl-4,8,11-trioxo-, octyl ester	60388-47-8
Dodecyl 5-[[3-(dodecyloxy)-3-oxopropyl]thio]-5-octyl-9-oxo-10-oxa-4,6-dithia-5-stannadocosanoate	60494-17-9

Substances	CAS No.
Triisooctyl 3,3',3"-[(octylstannylidyne)tris(thio)]trispropionate	60585-20-8
Dimethylbis(1-oxopropoxy)-stannane	61133-55-9
2-ethylhexyl 5-butyl-12-ethyl-5-[[3-[(2-ethylhexyl)oxy]-3oxopropyl]thio]-9-oxo-10-oxa-4,6-dithia-5stannahehexadecanoate	61241-05-2
(Z)-9,9,16,16-tetraoctyl-11,14-dioxo-10,15-Dioxa-9,16disatnnetetracos-12-ene	75113-32-5
(Z,Z)-6,6,8,8-tetraoctyl-4,10,13-trioxo-5,7,9,14-tetraoxa-6,8distannaoctadeca-2,11-dienoic acid butyl ester	67704-30-7
(Z, Z, Z) -1,8-dioctyl-2,7,9,14,15,20-hexaoxa -1,8-Distan Navicyclo [6.6.6] Eikosa-4,11,17-Trien- 3,6,10,13,16,19-Hexon	68420-14-4
(Z, Z) -6,6,8,8-tetraoctyl-4,10,13-trioxo-5,7,9,14-tetraoxa-6,8-distanna octadeca-2,11-butyl dienoate	71599-08-1
2,2',2"-[(methylstannylidyne)tris(thio)]tris-acetic acid	75319-87-8
Dimethyltin dichloride	753-73-1
1,1,3,3-Tetraoctyl-1,3-bis[(1-oxohexadecyl)oxy]distannoxane	85938-47-2
2-Butenoic acid, 4,4'-[(dimethylstannylene)bis(oxy)]bis[4-oxo-, (Z,Z)-	81489-56-7
Dodecyl 5-butyl-5-[[3-(dodecyloxy)-3-oxopropyl]thio]-9-oxo-10-oxa-4,6-dithia-5-stannadocosanoate	83898-52-6
8,8,14,14,20,20-Hexabutyl-5,23-diethyl-10,18-dioxo-7,9,19,21tetraoxa-13,15-dithia-8,14,20-tristannaheptacosane	84787-80-4
Butyltris[(1-oxoneodecyl)oxy]stannane	93918-30-0
5,7,12-Trioxa-6-stannatriaconta-2,9-dienoic acid, 6,6-dimethyl-4,8,11-trioxo-, octadecyl ester, (Z,Z)-	89930-84-7
Butyltris[(1-oxoisooctadecyl)oxy]stannane	93981-44-3
1,1,3,3-Tetraoctyl-1,3-bis[(1-oxoisooctadecyl)oxy]distannoxane	94279-11-5
Trichloromethylstannane	993-16-8
Tri-n-butyltin trifluoromethanesulfonic acid	68725-14-4

**Table 1u: Polybrominated biphenyls (PBBs)**

Substances	CAS No.
Polybrominated biphenyls	59536-65-1
Dibromobiphenyl	92-86-4
2-Bromobiphenyl	2052-07-5
3-Bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
Tribromobiphenyl	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
Hexabromobiphenyl	59080-40-9
Hexabromo-1,1'-biphenyl	36355-01-8
Firemaster FF-1	67774-32-7
Hebutabromobiphenyl	35194-78-6
Octabromobiphenyl	61288-13-9
Nonabromo-1.1'-biphenyl	27753-52-2
Decabromobiphenyl	13654-09-6

**Table 1v: Carcinogens, mutagenic substances, reproductive toxicity substances (CMRs)**

No	Substances	CAS No.	Threshold level [Note1]
1	Cadmium and its compounds	-	1ppm expressed as Cd metal
2	Chromium VI compounds	-	1ppm expressed as Cr VI
3	Arsenic compound	-	1ppm expressed as As metal

No	Substances	CAS No.	Threshold level [Note1]
4	Lead and its compounds	-	1ppm expressed as Pb metal
5	Benzene	71-43-2	5ppm
6	Benzo[b]acephenanthrylene	56-55-3	1ppm
7	Benzo[b]acephenanthrylene	205-99-2	1ppm
8	Benzo[a]pyrene; benzo[e]fluoranthene	50-32-8	1ppm
9	Benzo[e]pyrene	192-97-2	1ppm
10	Benzo[j]fluoranthene	205-82-3	1ppm
11	Benzo[k]fluoranthene	207-08-9	1ppm
12	Chrysene	218-01-9	1ppm
13	Dibenzo [a,h] anthracene	53-70-3	1ppm
14	$\alpha$ , $\alpha$ , $\alpha$ ,4-tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1	1ppm
15	$\alpha$ , $\alpha$ , $\alpha$ -trichlorotoluene; benzotrichloride	98-07-7	1ppm
16	$\alpha$ -chlorotoluene;benzyl chloride	100-44-7	1ppm
17	Formaldehyde	50-00-0	75ppm
18	1,2-benzenedicarboxylic acid;di-C 6-8-branched alkylesteres,C 7-rich	71888-89-6	1000ppm Individually or in combination with other phthalates of No. 18-22in this table or in other phthalates.[Note 2]
19	Bis(2-methoxyethyl) phthalate	117-82-8	
20	Diisopentyl phthalate	605-50-5	
21	Di-n-pentyl phthalate(DPP)	131-18-0	
22	Di-n-pentyl phthalate(DnHP)	84-75-3	
23	N-methyl-2-pyrrolidone;1-methyl-2-pyrrolidone(NPM)	872-50-4	3000ppm
24	N,N-dimethylacetamide(DMAC)	127-19-5	
25	N,N-dimethylformamide;dimethyl formamide(DMF)	68-12-2	
26	1,4,5,8-tetraaminoanthraquinone;C.I.Disperse Blue 1	2475-45-8	50ppm
27	4,4'-(4-iminocyclohexa-2,5-ienylidenemethylene)dianiline hydrochloride; C.I. Basic Red 9	569-61-9	
28	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride;C.I.Black Violet 3 with $\geq 0.1\%$ of Michler's ketone(EC no.202-027-5)	548-62-9	
29	4-chlro-o-toluidinium chloride	3165-93-3	30ppm
30	2-Naphthylammoniumacetate	553-00-4	
31	4-methoxy-m-phenylenediammonium sulphate ;2,4-diaminoanisole ulphate	39156-41-7	
32	2,4,5-trimethylaniline hydrochloride	21436-97-5	
33	Quinoline	91-22-5	50ppm

[Note regarding Table 1v]

1) Calculation method of content as a metal

Example) Cadmium Sulfite:

$$\frac{[\text{Content of Cadmium Sulfite}] \times [\text{Atomic weight of Cd}]}{[\text{molecular weight of Cadmium Sulfite}]} = [\text{Content of Cadmium Sulfite}] \times 112.4/192.5$$

2) Phthalates that are classified in Part3 of Annex VI to Regulation(EC) No 1272/2008 in any of the hazard classes carcinogenicity, germ cell mutagenicity or reproductive toxicity category, 1A or 1B

**Table 1w: Exempted applications from the containment restriction**

No	Substances	Exempted applications (Refer to Note 1)	
001	Cadmium/Cadmium Compounds	8(b) – I	Cadmium and its compounds in electrical contacts used in: <ul style="list-style-type: none"> <li>– circuit breakers,</li> <li>- thermal sensing controls,</li> <li>- thermal motor protectors (excluding hermetic thermal motor protectors),</li> <li>- AC switches rated at: <ul style="list-style-type: none"> <li>- 6 A and more at 250 V AC and more, or</li> <li>- 12 A and more at 125 V AC and more,</li> </ul> </li> <li>- DC switches rated at 20 A and more at 18 V DC and more, and- switches for use at voltage supply frequency 200 Hz.</li> </ul> See [Note 3] for the ban date.
		13(b)-(II)	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex. See [Note 3] for the ban date. *Exclusion number 39 (Excluded unused in this regulation);Cadmium included in color conversion II - VI compound semiconductor LED (cadmium per mm <sup>2</sup> of light emitting area < 10µg) for illumination or display system applications.
		13(b)-(III)	Cadmium in glazes used for reflectance standares See [Note 3] for the ban date.
		43	Cadmium anodes for Hersch cells for oxygen sensors used in industrial surveillance and control equipment where sensitivity of 10 ppm or less is required.
		44	Cadmium in the imaging tube of a radiation resistant camcorder designed as a camera with a horizontal resolution of 450 TV Line or higher used in an ionized radiation exposure environment of 100 Gy / hand over 100 kGy overall.
002	Lead/Lead Compounds	5(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight
		6(a) – I	Lead as an alloying element in steel for machining purposes containing up to 0,35% lead by weight and in batch hot dip galvanized steel components containing up to 0,2% lead by weight. See [Note 3] for the ban date.
		6(b) – I	Lead as an alloying element in aluminium containing up to 0,4% lead by weight , provided it stems from lead bearing aluminium scrap recycling. See [Note 3] for the ban date.
		6(b) – II	Lead as an alloying element in aluminium for machining purpose with a lead. Content up to 0,4% by weight See [Note 3] for the ban date.
		6(c)	Copper alloy containing up to 4% lead by weight. See [Note 3] for the ban date.
		7(a)	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead). See [Note 3] for the ban date.
		7(c) - I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound See [Note 3] for the ban date.
		7(c) - II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher See [Note 3] for the ban date.
		13(a)	Lead in white glasses used for optical applications. See [Note 3] for the ban date.
		13(b)- I	Lead in ion coloured optical filter glass types. See [Note 3] for the ban date.

No	Substances	Exempted applications (Refer to Note 1)	
002	Lead/Lead Compounds	13(b) - III	Lead in glazes used for reflectance standards. See [Note 3] for the ban date.
		15(a)	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: – a semiconductor technology node of 90 nm or larger; – a single die of 300 mm <sup>2</sup> or larger in any semiconductor technology node; – stacked die packages with die of 300 mm <sup>2</sup> or larger, or silicon interposers of 300 mm <sup>2</sup> or larger. See [Note 3] for the ban date.

- [Note regarding Table 1w:]
- 1)The number is the exemption number described in RoHS directive.
  - 2)The Annex to the RoHS Directive is constantly being revised, so it is necessary to check the latest version.
  - 3)The date will be clarified after the European Commission's renewal of exclusion (Expiration Date)becomes clear.

## 2.Reportable Substances

**Table 2: Reportable Substances (refer to Notes 1, 2.)**

No.	Substances	CAS No.	Conditions of reporting	Reference
001	Cobalt dichloride	7646-79-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
002	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
003	Anthracene oil	90640-80-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
004	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
005	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
006	Anthracene oil, anthracene-low	90640-82-7	Minimum article mass content must Exceed 1000ppm.	REACH regulation
007	Anthracene oil, anthracene paste	90640-81-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
008	Aluminosilicate, Refractory Ceramic Fibres	-	<p>Minimum article mass content must Exceed 1000ppm.</p> <p>[Additional Conditions]</p> <p>They are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 and fulfil the three following conditions:</p> <p>a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges.</p> <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (<math>\mu\text{m}</math>).</p> <p>c) alkaline oxide and alkali earth oxide (<math>\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}</math>) content less or equal to 18% by weight.</p>	REACH regulation
009	Zirconia Aluminosilicate, Refractory Ceramic Fibres	-	<p>Minimum article mass content must Exceed 1000ppm.</p> <p>[Additional Conditions]</p> <p>They are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 and fulfil the three following conditions:</p> <p>a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges.</p> <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (<math>\mu\text{m}</math>).</p> <p>c) alkaline oxide and alkali earth oxide (<math>\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}</math>) content less or equal to 18% by weight.</p>	REACH regulation
010	2,4-Dinitrotoluene	121-14-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
011	Acrylamide	79-06-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
012	Boric acid	10043-35-3 11113-50-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
013	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
014	Tetraboron disodium heptaoxide, hydrate	12267-73-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
015	Cobalt(II) sulphate	10124-43-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
016	Cobalt nitrate	10141-05-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation
017	Cobalt(II) carbonate	513-79-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
018	Cobalt acetate	71-48-7	Minimum article mass content must Exceed 1000ppm.	REACH regulation
019	2-Methoxyethanol	109-86-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
020	2-Ethoxyethanol	110-80-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
021	2-Ethoxyethyl acetate	111-15-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
022	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
023	Hydrazine	7803-57-8 302-01-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
024	1,2,3-Trichloropropane	96-18-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
025	Bis(2-methoxyethyl) ether	111-96-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation
026	4-(1,1,3,3-tetramethylbutyl) phenol (4-tert-Octylphenol)	140-66-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
027	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
028	Phenolphthalein	77-09-8	Minimum article mass content must Exceed 1000ppm.	REACH regulation
029	1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
030	1,2-dimethoxyethane (ethylene glycol dimethyl ether, EGDME)	110-71-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
031	Diboron trioxide	1303-86-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
032	Formamide	75-12-7	Minimum article mass content must Exceed 1000ppm.	REACH regulation
033	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione(TGIC)	2451-62-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
034	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	Minimum article mass content must Exceed 1000ppm.	REACH regulation
035	4,4'-Bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	Minimum article mass content must Exceed 1000ppm.	REACH regulation
036	N, N, N', N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
037	[4-[[4-anilino-1-naphthyl] [4-(dimethylamino)phenyl] methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	Minimum article mass content must Exceed 1000ppm. This condition applies when it contains $\geq$ 0.1%(1000ppm) of Michler's ketone (CAS No. 90-94-8 ) or Michler's base (CAS No. 101-61-1)	REACH regulation
038	[4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	Minimum article mass content must Exceed 1000ppm. This condition applies when it contains $\geq$ 0.1%(1000ppm) of Michler's ketone (CAS No. 90-94-8 ) or Michler's base (CAS No. 101-61-1)	REACH regulation
039	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	Minimum article mass content must Exceed 1000ppm. This condition applies when it contains $\geq$ 0.1%(1000ppm) of Michler's ketone (CAS No. 90-94-8 ) or Michler's base (CAS No. 101-61-1)	REACH regulation



No.	Substances	CAS No.	Conditions of reporting	Reference
040	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	Minimum article mass content must Exceed 1000ppm. This condition applies when it contains $\geq$ 0.1%(1000ppm) of Michler's ketone (CAS No. 90-94-8 ) or Michler's base (CAS No. 101-61-1)	REACH regulation
041	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
042	Cyclohexane-1,2-dicarboxylic anhydride [1] cis-cyclohexane-1,2-dicarboxylic anhydride [2] trans-cyclohexane-1,2-dicarboxylic anhydride [3]  [Note] The individual cis-[2] and trans-[3] isomer substances and all possible combinations of the cis- and trans-isomers[1] are covered.	85-42-7 13149-00-3 14166-21-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
043	Hexahydromethylphthalic anhydride [1] Hexahydro-4-methylphthalic anhydride [2] Hexahydro-1-methylphthalic anhydride [3] Hexahydro-3-methylphthalic anhydride [4]  [Note] The individual isomers[2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry.	25550-51-0 19438-60-9 48122-14-1 57110-29-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
044	4-(1,1,3,3-tetramethylbutyl) phenol, ethoxylated  [Note] covering well-defined substances and UVCB substances, polymers and homologues.	-	Minimum article mass content must Exceed 1000ppm.	REACH regulation
045	Poly(oxy-1,2-ethanediyl), $\alpha$ -[(1,1,3,3-tetramethylbutyl)phenyl]- $\omega$ -hydroxy-20-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-3,6,9,12,15,18-hexaoxaicosan-1-ol	9036-19-5 2497-59-8	-	-
046	Methoxy acetic acid	625-45-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation
047	Dibutyltin dichloride (DBTC)	683-18-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
048	Silicic acid, lead salt	11120-22-2	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
049	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt(1:1), lead-doped [Note] 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	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
050	Methyloxirane (Propylene oxide)	75-56-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
051	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	Minimum article mass content must Exceed 1000ppm.	REACH regulation
052	N-pentyl-isopentylphthalate	776297-69-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
053	1,2-Diethoxyethane	629-14-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
054	Acetic acid, lead salt, basic	51404-69-4	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
055	[Phthalato(2-)]dioxotrilead	69011-06-9	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
056	Fatty acids, C16-18, lead salts	91031-62-8	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
057	Pentalead tetraoxide sulphate	12065-90-6	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
058	Pyrochlore, antimony lead yellow	8012-00-8	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
059	Sulfurous acid, lead salt, dibasic	62229-08-7	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation
060	Trilead dioxide phosphonate	12141-20-7	Minimum article mass content must Exceed 1000ppm. [Applicable only when used as an exclusion application for "lead compounds" shown in Table 1w.]	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
061	Furan	110-00-9	Minimum article mass content must Exceed 1000ppm.	REACH regulation
062	Diethyl sulphate	64-67-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
063	Dimethyl sulphate	77-78-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
064	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation
065	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	Minimum article mass content must Exceed 1000ppm.	REACH regulation
066	N-methylacetamide	79-16-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
067	4-Nonylphenol, branched and linear, [Note] 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 combinations thereof.	25154-52-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
068	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	Minimum article mass content must Exceed 1000ppm.	REACH regulation
069	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	Minimum article mass content must Exceed 1000ppm.	REACH regulation
070	Trixylyl phosphate	25155-23-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
071	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)] bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	Minimum article mass content must Exceed 1000ppm.	REACH regulation
072	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
073	Sodium peroxometaborate	7632-04-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
074	Sodium perborate; perboric acid, sodium salt	15120-21-5 11138-47-9 13517-20-9 90568-23-3 125022-34-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation
075	Diocetyl tin bis(2-ethylhexyl thioglycolate); 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
076	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)	-	Minimum article mass content must Exceed 1000ppm.	REACH regulation
077	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]	186309-28-4 676367-06-9 676367-05	Minimum article mass content must Exceed 1000ppm.	REACH regulation
078	1,2-benzenedicarboxylic acid, diC6-10 alkyl ester (when it contains 0.3% or more of dihexyl phthalate (EC No. 201-559-5))	68515-51-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
079	1,2-benzenedicarboxylic acid, di-C6-10-alkylesters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)	68648-93-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
080	Nitrobenzene	98-95-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
081	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
082	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	Minimum article mass content must Exceed 1000ppm.	REACH regulation
083	1,3-propanesultone	1120-71-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation
084	p-(1,1-dimethylpropyl)phenol	80-46-6	Minimum article mass content must Exceed 1000ppm.	REACH regulation
085	4-Heptylphenol, branched and linear substance with a linear and /or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 tp phenol, covering also UVCB- and well-defind substance which include any of the indivisual isomers or a combination thereof	-	Minimum article mass content must Exceed 1000ppm.	REACH regulation
086	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear(4-HPbl)	-	Minimum article mass content must Exceed 1000ppm.	REACH regulation
087	Reaction products of carbon disulfide, formaldehyde, heptyl(linear and branched chain)phenol and hydrazine	93925-00-9	-	-
088	Terphenyl,hydrogenated	61788-32-7	Minimum article mass content must Exceed 1000ppm.	-

No.	Substances	CAS No.	Conditions of reporting	Reference
089	Octamethylcyclotetrasiloxane(D4)	556-67-2	Minimum article mass content must Exceed 1000ppm.	-
090	Ethylenediamine(EDA)	107-15-3	Minimum article mass content must Exceed 1000ppm.	-
091	Dodecamethylcyclohexasiloxane (D6)	540-97-6	Minimum article mass content must Exceed 1000ppm.	-
092	Disodium octaborate	12008-41-2	Minimum article mass content must Exceed 1000ppm.	-
093	Dicyclohexyl phthalate(DCHP)	84-61-7	Minimum article mass content must Exceed 1000ppm.	-
094	Decamethylcyclopentasiloxane(D5)	541-02-6	Minimum article mass content must Exceed 1000ppm.	-
095	Benzo[ghi]perylene	191-24-2	Minimum article mass content must Exceed 1000ppm.	-
096	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride;TMA)	552-30-7	Minimum article mass content must Exceed 1000ppm.	-
097	Antimony and Antimony Compounds	1309-64-4 / etc	Report any weight except impurity	-
098	Bismuth and Bismuth Compounds	7440-69-9 / etc	Report any weight except impurity	-
099	Selenium and Selenium Compounds	7782-49-2 / etc	Report any weight except impurity	-
100	Copper and Copper Compounds	7440-50-8 / etc	Report any weight except impurity	-
101	Gold and Gold Compounds	7440-57-5 / etc	Report any weight except impurity	-
102	Palladium and Palladium Compounds	7440-05-3 / etc	Report any weight except impurity	-
103	Silver and Silver Compounds	7440-22-4 / etc	Report any weight except impurity	-
104	Pyrene	129-00-0, 1718-52-1	Minimum article mass content must Exceed 1000ppm.	-
105	Phenanthrene	85-01-8	Minimum article mass content must Exceed 1000ppm.	-
106	Huoranthene	206-44-0	Minimum article mass content must Exceed 1000ppm.	-
107	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	Minimum article mass content must Exceed 1000ppm.	-
108	1,7,7-trimethyl-3-(phenylmethylene) bicyclo [2.2.1] heptan-2-one (3-benzylidene camphor; 3-BC)	15087-24-8	Minimum article mass content must Exceed 1000ppm.	-
109	2-Methoxyethyl acetate	110-49-6	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 21th SVHC
110	Tris(4-nonylphenyl, branched and linear) phosphite ( <del>TNPP</del> ) with <del>0.1% w/w of 4-nonylphenol, branched and linear (4-NP)</del>	3050-88-2 26523-78-4	Endocrine disrupting properties- environment Minimum article mass content must Exceed 1000ppm.	REACH regulation <del>24</del> 32th SVHC
111	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	Equivalent level of concern having probable serious effects to environment Equivalent level of concern having probable serious effects to human health Minimum article mass content must Exceed 1000ppm.	REACH regulation 21th SVHC
112	4-tert-butylphenol	98-54-4	Endocrine disrupting properties- environment Minimum article mass content must Exceed 1000ppm.	REACH regulation 21th SVHC
113	Potassium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionate	67118-55-2	-	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
114	2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoyl fluoride	2062-98-8	-	REACH regulation
115	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid	13252-13-6	-	REACH regulation
116	Ammonium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate	62037-80-3	-	REACH regulation
117	Perfluorobutane sulfonic acid(PFBS)and its salts	-	Equivalent level of concern having probable serious effects to human health Equivalent level of concern having probable serious effects to Minimum article mass content must Exceed 1000ppm.	REACH regulation 22th SVHC
118	Diisohexyl phthalate	71850-09-4	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 22th SVHC
119	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 22th SVHC
120	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 22th SVHC
121	1-vinylimidazole	1072-63-5	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 23th SVHC
122	2-methylimidazole	693-98-1	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 23th SVHC
123	Butyl4-hydroxybenzoate(Butylparaben)	94-26-8	Endocrine disrupting properties- human health Minimum article mass content must Exceed 1000ppm.	REACH regulation 23th SVHC
124	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 23th SVHC
125	Dibromo-neopentyl-glycol	3296-90-0	Carcinogenic	25th SVHC
126	Dibromo-propanol	96-13-9	Carcinogenic	25th SVHC
127	Tribromo-neopentyl-alcohol	36483-57-5	Carcinogenic	25th SVHC
128	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	80-54-6 75166-31-3 75166-30-2	Reproductive toxicity Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
129	Orthoboric acid, sodium salt	13840-56-7 25747-83-5 22454-04-2 14312-40-4 1333-73-9 14890-53-0	Reproductive toxicity Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
130	2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,2-bis(bromomethyl)propane-1,3-diol(BMP) 2,3-dibromo-1-propanol(2,3-DBPA)	1522-92-5	Carcinogenic Minimum article mass content must Exceed 1000ppm.	REACH regulation
131	Glutaral	111-30-8	Respiratory Sensitization- Human Health Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC

No.	Substances	CAS No.	Conditions of reporting	Reference
132	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	1372804-76-6 85535-85-9 198840-65-2	PBT (persistent, bioaccumulative ,toxic substance) vPvB (a substance that is extremely persistent and highly bioaccumulative) Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
133	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	210555-94-5 27459-10-5 27147-75-7 121158-58-5 74499-35-7 57427-55-1	Endocrine disruption to the environment and human health. Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
134	1,4-dioxane	123-91-1	Level of concern that has a serious impact on the Environment. Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
135	4,4'-(1methylpropylidene)bisphenol; (bisphenol B)	77-40-7	Level of concern that has a serious impact on the Environment. Minimum article mass content must Exceed 1000ppm.	REACH regulation 25th SVHC
136	2-(2-Methoxyethoxy)ethanol	111-77-3	Minimum article mass content must Exceed 1000ppm.	REACH regulation
137	2-nitrobenzaldehyde	552-89-6	-	REACH regulation
138	2-(2-Butoxyethoxy)ethanol	112-34-5	-	REACH regulation
139	Cyclohexane	110-82-7	-	REACH regulation
140	Sulfuric acid	7664-93-9	-	-
141	Thionyl dichloride	7719-09-7	-	-
142	(±)-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)	36861-47-9 etc.	Endocrine disrupting properties- human health Minimum article mass content must Exceed 1000ppm.	REACH 26 <sup>th</sup> SVHC
143	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH 26 <sup>th</sup> SVHC
144	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	PBT Minimum article mass content must Exceed 1000ppm.	REACH 26 <sup>th</sup> SVHC
145	tris(2-methoxyethoxy)vinylsilane	1067-53-4	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH 26 <sup>th</sup> SVHC
146	4-Nonylphenol, branched and linear, ethoxylated	-	Minimum article mass content must Exceed 1000ppm. Substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB-and well-defined substances,polymers and homologues,which include any of the individual isomers and/or combinations thereof.	REACH regulation

No.	Substances	CAS No.	Conditions of reporting	Reference
147	Per-and polyfluoroalkyl substances(PFAS)	Representative example 34455-29-3 375-72-4 423-39-2 16090-14-5 69116-72-9 15290-77-4 428-59-1 382-28-5 38565-52-5 475678-78-5 42532-60-5 1623-05-8 1682-78-6 376-90-9 27619-88-1 355-80-6 3330-14-1 355-42-0 422-05-9	Conditions of reporting: If the contain of the target substance is known, report its content and use. The standards for prohibition of inclusion also apply to "PFOS/PFOS-related substances", "PFOA,its salts and PFOA-related compounds", "C9-C14 PFCA, their salts and C9-C14 PFCA-related substances", and "PFHxS including its slts and related substances"	TSCA REACH regulation POPs treaty
148	N-(hydroxymethyl)acrylamide	924-42-5	Carcinogenic Mutagenic Minimum article mass content must Exceed 1000ppm	REACH regulation 27th SVHC
149	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm.	REACH regulation 29th SVHC
150	Bis(4-chlorophenyl) sulphone	80-07-9	Very Persistent and very Bioaccumulative Minimum article mass content must Exceed 1000ppm.	REACH regulation 29th SVHC
151	1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]	37853-59-1	Very Persistent and very Bioaccumulative Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
152	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBPA)	79-94-7	Carcinogenic Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
153	Barium diboron tetraoxide	13701-59-2	Toxic for Reproduction Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
154	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	26040-51-7	Substances that are extremely persistent and bioaccumulate Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
155	Isobutyl 4-hydroxybenzoate	4247-02-3	Endocrine disrupting properties- human health Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
156	Melamine	108-78-1	Equivalent level of concern having probable serious effects to human health Equivalent level of concern having probable serious effects to environment Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
157	Sodium tridecafluoroheptanoate	20109-59-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
158	potassium perfluoroheptanoate	21049-36-5	Minimum article mass content must Exceed 1000ppm.	REACH regulation
159	Ammonium perfluoroheptanoate	6130-43-4	Minimum article mass content must Exceed 1000ppm.	REACH regulation



No.	Substances	CAS No.	Conditions of reporting	Reference
160	Perfluoroheptanoic acid and its salts	375-85-9	PBT Toxic for Reproduction vPvB Equivalent level of concern having probable serious effects to human health Equivalent level of concern having probable serious effects to environment Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
161	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	-	Extremely persistent and highly bioaccumulative substances vPvB Minimum article mass content must Exceed 1000ppm	REACH regulation 28th SVHC
162	4,4'-Dihydroxydiphenylmethane	620-92-8	Endocrine disrupting effects on people and the environment	CSCL
163	4,4'-(Hexafluoroisopropylidene)diphenol	1478-61-1	Endocrine disrupting effects on people and the environment	CSCL
164	Distillates (coal tar), heavy oils, pyrene fraction	91995-42-5 91995-52-7	Carcinogenicity, mutagenicity, and reproductive toxicity	TSCA
165	Bis( $\alpha$ dimethylbenzyl) peroxide	80-43-3	c) Toxic for Reproduction	REACH regulation 31th SVHC
166	6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid	2156592-54-8	c) Toxic for Reproduction	REACH regulation 32th SVHC
167	O,O,O-triphenyl phosphorothioate	597-82-0	d) PBT (persistent, bioaccumulative and toxic substances)	REACH regulation 32th SVHC
168	Octamethyltrisiloxane	107-51-7	e) vPvB (very persistent and highly bioaccumulative substances)	REACH regulation 32th SVHC
169	Perfluamine	338-83-0	e) vPvB (very persistent and highly bioaccumulative substances)	REACH regulation 32th SVHC
170	Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	192268-65-8	d) PBT (persistent, bioaccumulative and toxic substances)	REACH regulation 32th SVHC
171	Pitch, coal tar, high-temp.	65996-93-2	Minimum article mass content must Exceed 1000ppm.	REACH regulation

Notes regarding Table 2:

1) Management report contents

- Minimum molded product and packing material contain the chemical substances listed in Table 2), grasp and manage whether or not they meet the "target conditions", and if so, the mass of the target substance, the intended use, Report the content site, etc.

2) About the concept of content rate calculation

- In this item, the denominator for calculating the content is the mass of the minimum total mass molded product. The numerator for calculating the content is the mass of the chemical substance to be calculated.

## 3. Control Substances

**Table 3: Control Substances (refer to Notes 1, 2, 3)**

No	Substances	CAS No.	Conditions of Deliverables to be controlled	Remark
001	Brominated Flame Retardants (other than PBB <sub>s</sub> , PBDE <sub>s</sub> or HBCDD <sub>s</sub> )	-	Intentionally added	Detailed substances: Refer to Table 3b
002	Persistent, bioaccumulative and toxic substances (PBT <sub>s</sub> ), Very persistent and very bioaccumulative substances (vPvB <sub>s</sub> )	-	Intentionally added	Detailed substances: Refer to Note 3
003	neodymium	-	Intentionally added	-

Notes regarding Table 3:

## 1) Contents of management

In the case minimum molded product meet "Conditions to be controlled" defined in the above table, with respect to "Control Substance", its total mass, purpose of use, and application area, etc., shall be managed and recorded.

## 2) In terms of "Control Substances", methodology of how to calculate concentration shall follow below:

- In this article, the denominator in calculations of the concentration shall be the mass of the "Material" or Minimum part mass. You can decide which mass to choose complying with the "Control Substances" in Table 3 in individual substances,

- In the case of complex substances or materials, the following will be the "Material".

- Chemical compound, polymer alloy, metal alloy.
- In the case that Deliverables are raw material such as paint, adhesive, ink, paste, polymer resin, glass powder, ceramic powder, each finally formed product by means of expected normal usage.

Examples: - Dried and hardened material for paints or adhesives

- Molded article for polymer resins

- Hardened material for glass or ceramic powder

- Single layer of paint, printing, or plating. Or, in the case of multi layers, each single layer shall be defined as the "Material".
- In the case of packing material, corrugated board (base material), adhesive, tape, ink, etc.

- The numerator in calculations of the concentration shall be mass of the applicable chemical substance. In the case of metal alloy, metal element in the metal alloy will be the numerator.

3) Persistent, bioaccumulative and toxic substances (PBT<sub>s</sub>) and Very persistent and very bioaccumulative substances (vPvB<sub>s</sub>) are substances that meet the conditions stipulated in Article 57 of the REACH Regulation are targeted.**Table 3a: Control Substances**

No	Substance/Category	CAS No	Crite ria	Reportable Application(s)	Threshold Level	Laws and regulations
1	Chlorinated flame Retardants	See IEC62474	2	Plastic parts >25grams and printed wiring board assemblies	0.09wt% of the product	IEC62474
2	[2.2-bis (chloromethyl)-1,3-propandy] bisoxybis phosphonic acid tetrakis (2-chloroethyl)	38051-10-4	2	Plastic parts >25grams and printed wiring board assemblies	0.09wt% of the product	IEC62474
3	Tris phosphate (1-methyl-2-chloroethyl)	13674-84-5	2	Plastic parts >25grams and printed wiring board assemblies	0.09wt% of the product	IEC62474

No	Substance/Category	CAS No	Criteria	Reportable Application(s)	Threshold Level	Laws and regulations
4	Phosphate 2,2-bis (bromomethyl)-3-chloropropyl= Bis[2-chloro-1-(chloromethyl) ethyl]	66108-37-0	2	Plastic parts >25grams and printed wiring board assemblies	0.09wt% of the product	IEC62474
5	Disodium tetraborate, anhydrous	See IEC62474	1	All	0.1wt% of the product	REACH regulation
6	Perchlorates	See IEC62474	1	All	0.006 ppm by weight of the	IEC62474
7	Lithium perchlorate	7791-03-9	1	All	0.006 ppm by weight of the	IEC62474
8	Phthalates [Diisodecyl phthalate(DIDP), Diisononyl phthalate(DINP), Di-n-octyl phthalate(DNOP)]	See IEC62474	1	All	Child care items, can be put in a child's mouth 0.1% by weight of plasticized material	REACH regulation
9	phenol, 4-(1-propylbutyl)	6465-71-0	1	All	0.1wt% of the product	REACH regulation
10	p-tert-heptylphenol	-	1	All	0.1wt% of the product	REACH regulation
11	phenol, 4-(1-ethylpentyl)	6465-74-3	1	All	0.1wt% of the product	REACH regulation
12	phenol, 4-(1-methylhexyl)	6863-24-7	1	All	0.1wt% of the product	REACH regulation
13	p-n-heptylphenol      4-heptylphenol phenol, 4-heptyl-      phenol, p-heptyl-	1987-50-4	1	All	0.1wt% of the product	REACH regulation
14	Phenol, heptyl derivs.	72624-02-3	1	All	0.1wt% of the product	REACH regulation
15	Phenol, 4-[2-methyl-1-(1-methylethyl)propyl]	1824346-00-0	1	All	0.1wt% of the product	REACH regulation
16	Phenol, 4-(4-methylhexyl)	1139800-98-8	1	All	0.1wt% of the product	REACH regulation
17	Phenol, 4-(1,3,3-trimethylbutyl)	911371-07-8	1	All	0.1wt% of the product	REACH regulation
18	Phenol, 4-(1,2,2-trimethylbutyl)	911371-06-7	1	All	0.1wt% of the product	REACH regulation
19	Phenol, 4-(3-ethylpentyl)	911370-98-4	1	All	0.1wt% of the product	REACH regulation
20	Phenol, 4-(1,1,2-trimethylbutyl)	861011-60-1	1	All	0.1wt% of the product	REACH regulation
21	Phenol, 4-(1-ethyl-2,2-dimethylpropyl)	861010-65-3	1	All	0.1wt% of the product	REACH regulation
22	Phenol, 4-(1,4-dimethylpentyl)	857629-71-1	1	All	0.1wt% of the product	REACH regulation
23	Phenol, 4-(1,2-dimethylpentyl)	854904-93-1	1	All	0.1wt% of the product	REACH regulation
24	Phenol, 4-(1-ethyl-3-methylbutyl)	854904-92-0	1	All	0.1wt% of the product	REACH regulation
25	Phenol, 4-(3-methylhexyl)	102570-52-5	1	All	0.1wt% of the product	REACH regulation
26	Phenol, 4-(5-methylhexyl)	100532-36-3	1	All	0.1wt% of the product	REACH regulation
27	Phenol, 4-(1,1,2,2-tetramethylpropyl)	72861-06-4	1	All	0.1wt% of the product	REACH regulation
28	Phenol, 4-(1,3-dimethylpentyl)	71945-81-8	1	All	0.1wt% of the product	REACH regulation
29	Phenol, 4-(1,1-diethylpropyl)	37872-24-5	1	All	0.1wt% of the product	REACH regulation
30	Phenol, 4-(1,1,3-trimethylbutyl)	33104-11-9	1	All	0.1wt% of the product	REACH regulation

No	Substance/Category	CAS No	Criteria	Reportable Application(s)	Threshold Level	Laws and regulations
31	Phenol, 4-(1-ethyl-1-methylbutyl)	30784-32-8	1	All	0.1wt% of the product	REACH regulation
32	Phenol, 4-(1,1-dimethylpentyl)	30784-31-7	1	All	0.1wt% of the product	REACH regulation
33	Phenol, 4-(1-ethyl-1,2-dimethylpropyl)	30784-27-1	1	All	0.1wt% of the product	REACH regulation
34	Perfluorocaproic acid (PFHxA) Undecafluorocaproic acid	307-24-4	1	All	Intentional addition	<del>Candidate</del> substances added to Annex 17 of REACH Regulation (EC) NO.1907 / 2006
35	Sodium salt of perfluorocaproic acid	2923-26-4	1	All	Intentional addition	<del>Candidate</del> substances added to Annex 17 of REACH Regulation (EC) NO.1907 / 2006
36	Ammonium salt of perfluorocaproic acid	21615-47-4	1	All	Intentional addition	<del>Candidate</del> substances added to Annex 17 of REACH Regulation (EC) NO.1907 / 2006

**Table 3b: Brominated flame retardants (other than PBBs, PBDEs or HBCDD)**

Brominated flame retardants (other than PBBs, PBDEs or HBCDD)	CAS No.
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(17) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Tetra-decabromo-diphenoxy-benzene	58965-66-5
TBBA, unspecified	30496-13-0
TBBA-epichlorhydrin oligomer	40039-93-8
TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer	28906-13-0
TBBA carbonate oligomer, phenoxy end capped	94334-64-2
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-bisphenol A-phosgene polymer	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7 135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
TBBA-bis-(allyl-ether)	25327-89-3
TBBA-dimethyl-ether	37853-61-5

Brominated flame retardants (other than PBBs, PBDEs or HBCDD)	CAS No.
Tetrabromo-bisphenol S	39635-79-5
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
2,4-Dibromo-phenol	615-58-7
2,4,6-Tribromo-phenol	118-79-6
Pentabromo-phenol	608-71-9
2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
Bis(methyl)tetrabromo-phthalate	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
2-Hydroxy-propyl-2-(2-hydroxy-ethyl)-ethyl-TBP	20566-35-2
TBPA, glycol-and propylene-oxide esters	75790-69-1
N,N'-Ethylene-bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Poly tribromo-styrene	57137-10-7
Tribromo-styrene	61368-34-1
Dibromo-styrene grafted PP	171091-06-8
Poly-dibromo-styrene	31780-26-4
Bromo-/Chloro-paraffins	68955-41-9
Bromo-/Chloro-alpha-olefin	82600-56-4
Vinylbromide	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
Tris(2,4-dibromo-phenyl) phosphate	49690-63-3
Tris(tribromo-neopentyl) phosphate	19186-97-1
Chlorinated and brominated phosphate ester	125997-20-8
Pentabromo-toluene	87-83-2
Pentabromo-benzyl bromide	38521-51-6
1,3-Butadiene homopolymer, brominated	68441-46-3
Pentabromo-benzyl-acrylate, monomer	59447-55-1
Pentabromo-benzyl-acrylate, polymer	59447-57-3
Decabromo-diphenyl-ethane	84852-53-9
Tribromo-bisphenyl-maleinimide	59789-51-4
Brominated trimethylphenyl-lindane	-
Other Brominated Flame Retardants	-
Tetrabromo-cyclo-octane	31454-48-5
1,2-Dibromo-4-(1,2-dibromo-methyl)-cyclo-hexane	3322-93-8
TBPA Na salt	25357-79-3
Tetrabromo phthalic-anhydride	632-79-1
Octabromo-1,1,3-trimethyl-1-phenylindane(FR-1808)	155613-93-7
4,4-isopropylidenediphenol(Bisphenol A)	80-05-7
Bromodichloromethane	75-27-4
Dodecyl(trimethyl)ammonium bromide	1119-94-4
Polymer of 4,4'-isopropylidenebis(2,6-dibromophenol) / 2,2'-[propane-2,2-diylbis(4,1-phenyleneoxymethylene)]dioxirane	31942-06-0
Bromine, compound with graphite (1:16)	12079-58-2
2,3-Dibromopropanoic acid	600-05-5
4-Bromophenol	106-41-2
Benzene, ethenyl-, ar-bromo derivs., homopolymers	148993-99-1
Formaldehyde, polymer with bromophenol and 2-(chloromethyl)oxirane	68541-56-0
1,3-Butadiene	106-99-0
2-Bromopropane	75-26-3

## 4.Prohibited Substances in manufacturing process

**Table 4: Prohibited Substances in manufacturing process**

Substances	Details
Ozone Depleting Substances in Table 1f	<p>The following cases are exempted:  The substances are used for indirect manufacturing process such as analytical determination and product development.  The substances are used for freezing machines and/or air-conditioning machines.</p> <p>The following substances are exempted from the substances:  Substances of Note 1 of Table 1f:  HCFCs  Halon-1202  Bromoethane (Ethyl bromide)  Bromopropane (n-propyl bromide)  Trifluoroiodomethane (Trifluoromethyl iodide)  Chloromethane (Methyl chloride)  [Note] If you use HCFCs, please work to reduce the emission and/or the use.</p>

## [Revision record]

Rev.	Date	Description
-	April 1 <sup>st</sup> 2016	Issue
a	June 15 <sup>th</sup> 2016	Add red phosphorous in inorganic phosphorous to be used in the resin. Add English and Chinese.
b	Sep. 27 <sup>th</sup> 2016	Table 2 Reportable Substances 079, 140, 141 delete [Additional Conditions]. Add 149.
c	Mar. 23 <sup>rd</sup> 2017	Table 1: 016, 021, 022 add CAS No. 045 change. 053, 054 add. Table 2: 150, 151, 152, 153 add.
d	Nov. 06 <sup>rd</sup> 2017	Addition of Table 5. Restricted Substances (Detail substances shall be referred IEC62474 (and the latest revision of the law)) and reconsideration. Chinese the whole text elimination.
e	Feb. 15 <sup>rd</sup> 2018	Change with 18 <sup>th</sup> SVHC material addition.
f	Apr. 02 <sup>rd</sup> 2018	Prohibit the regulated phthalic acid ester is used for packing material. The containing prohibited standard is changed about a molded article of HBCDD. Addition of a containing report substance (No.154 ~161)
g	Jun. 26 <sup>th</sup> 2018	Change table number from "Table 5" to "Table 2"
h	Sep.03. 2018	Table 1. Deletion and addition of the component prohibition material Table 1-e. Deletion and addition of the exclusion use that I am prohibited from a component Table 2. Correct the table 2.(Some are sifted table 3 or table 4) Table 3. Addition (10 substances ) of the Reportable Substances
i	Apr.23.2019	Table 1. Addition, change of prohibition criteria Table 1e. Addition or change of excluded application Table 3. Addition, change of content report substance Table 4. Addition of controlled substance
j	Nov.20. 2019	Change with 21 <sup>st</sup> SVHC material addition.
k	Apr.09.2020	Review and add banned substances Table 1i: Addition of arsenic and its inorganic compounds Table 1j: Addition of hexavalent chromium compound
l	Jun.16.2020	Added control values for lead in electroless nickel plating Review and add prohibited substances Table 1k: Addition of asbestos
m	Sep.03. 2020	REACH regulation (23rd SVHC) added Review and addition of prohibited substances and prohibited standards Table 1e. Review and change of uses excluded from inclusion prohibition Table 2. Review and addition of reported substances
n	Nov.27.2020	Review and addition of prohibited substances and prohibited standards Table 1: The prohibited chemical substances are summarized in Table 1: Prohibited substances. Table 1a: Addition of lead / lead compounds Table 1b: Addition of mercury / mercury compounds Table 1c: Addition of cadmium / cadmium compounds Table 1f: Addition of PFOS Table 1n: Addition of soluble uranium compounds Table 1o: Addition of beryllium and its compounds Table 1p: Addition of polynaphthalene chloride (substance with a chlorine number of 1 or more) Table 1q: Addition of short-chain chlorinated paraffins (C10 to C13) Table 1r: Addition of chlordane Table 1s: Addition of nickel / nickel compounds
o	Feb.10. 2021	Register separately for each language (Japanese version and English version) Table 1t: Addition of specific organotin compounds Table 1u: Addition of polybrominated biphenyls (PBBs) Table 3a: Addition of contained control substances Add REACH regulation (24th SVHC) substances Unify packaging into packing

Rev.	Date	Description
p	Jul.21.2021	Table 1: Addition of 3 substances to prohibited substances from [US TSCA, Hazardous Substances Control Law] Table 2: REACH regulation added 8 substances from the 25th VHC to the reported substances Changed the total mass of delivered products and the mass of products to the minimum mass of molded products. POPs regulation, POPs rules-> Unified to POPs treaty
q	Jan. 06.2022	Table 1: Addition of prohibited substances and CAS No. Table 1 Addition of prohibited substances containing a, 1b, 1c, 1f, 1i, 1j, 1l, 1m. Table 1v: Addition of carcinogens, mutagenic substances, and reproductive toxicity substances (CMRs). Table 2: Addition of 2,2-bis (promomethyl) propane-1,3-diol; 2,3-dipromopropane-1-ol to the reported substances. Added CAS No. Table 3b: Addition of brominated flame retardants.
r	Feb.28.2022	Table 2: REACH regulation (26th SVHC <del>candidate</del> 4 substances) was added to the contained reported substances.(Page 65)
s	Dec. 13.2022	Table 2: REACH regulation (27th SVHC <del>candidate</del> 1 substances) was added to the contained reported substances. Table 1, Table 1a, Table 1i, Table 1l, Table 1m, Table 1t: Addition of prohibited substances. Table 1p: Addition of polynaphthalene chloride (substance with a chlorine number of 1 or more) are changed to (more than 2 chlorine atom) Table 1v: Addition of annotations . Table 1w: Addition of exclusion use of inclusion prohibition, change of use prohibition date. Table 2: addition of contained report substances Table 3a: Removed and modified PFHxS.
t	Mar.17.2023	Added to Table 1: Table 3. Table 2: Review of reported substances contained. Table 3b: Added REACH regulation (28th SVHC <del>candidate</del> ).
u	Jul.05.2023	Table 2: Added REACH regulation (29th SVHC <del>candidate</del> ) to Reportable Substances. Table 1: Addition of prohibited substances and change in content.. Added to Table 1j, Table 1l.
v	Mar. 06.2024	1. Added REACH regulation (30th SVHC <del>candidate</del> ) to prohibited substances. Table 1: Changes, additions, and deletions to prohibited inclusion standards Table 1v: CAS No. added 2. Contained reportable substances Table 2: Modification 3. Contained controlled substances Table 3b: Modification
w	Aug. 20.2024	1. Added REACH Regulation (31st SVHC <del>candidate</del> ) to prohibited substances. Table 1: CAS No. added. Changes to prohibited substances standards. Table 1k: Added substance names. Table 1p: Added substance names. Table 1q: Added substance names. Table 2: Added substance names. CAS No. added. Changes in eligibility criteria.
x	Feb.17.2025	Change "Substances in question for approval" to "Approved substances" 1. The standards for prohibited substances have been partially changed and revised. 2. Added and revised REACH regulation (32st SVHC) to prohibited substances.