



Standards on the Management of Certain Chemical Substances (Version 10.3)

Established date: December 22, 2003

Issue date: August 1, 2016

Implementation date: August 1, 2016

KYOCERA Document Solutions Inc.

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Introduction

With the idea of "LIVING TOGETHER", Kyocera Document Solutions promotes the reduction of environmental impact on all aspects of our corporate activities in accordance with the "Kyocera Document Solutions Environmental Safety Policy" that embodies the "Kyocera Environmental Charter".

In December 2003, we established "Standards on the Management of Certain Chemical Substances" and have managed Substances Included in Products through our supply chain.

Thank you very much for your cooperation in complying with "Standards on the Management of Certain Chemical Substances".

In the interest of more reliable and efficient compliance with "Standards on the Management of Certain Chemical Substances", we have recently re-examined them, introducing the chemical investigation using the communication sheet provided by JAMP.

We appreciate your continued cooperation and further understanding of our efforts and perspectives towards environment conservation.

Kyocera Environmental Charter (an abstract)

[Environmental Management Policies]

1. Compliance with internal environmental standards, of which, global environmental protection is made the number one priority
2. More efficient utilization of resources and energy, development of processing technologies
3. Development of earth-friendly products of two types: Environmental Improvement Products that will make a positive contribution to the improvement of the global environment; and Environmentally Gentle Products that will achieve a far lower burden on the global environment
4. Cooperation with government environmental policies, and participation in or support of social contribution activities

[Environment Management Objectives]

1. In order to minimize the destruction of the natural environment and any harmful effects on the ecosystem, Kyocera will establish and comply with internal standards that are equal to or more stringent than the standards specified in applicable international agreements, the legal/governmental regulations of relevant countries and the regulations of regions where the Company's facilities are located.
2. At all levels, Kyocera will study and evaluate scientifically the effects of its business activities on the environment, and take the necessary protective measures.
3. Kyocera will develop processing technologies and production facilities with maximum resource and energy efficiency in all manufacturing processes. At the same time, the Company will aim to reduce raw material utilization in all processes.
4. Kyocera will promote in-house energy conservation activities, such as more efficient use of electricity and fossil fuels, the introduction of high efficiency equipment, and the reutilization of thermal energy.
5. Kyocera intends to purchase recyclable materials that contribute to resource conservation. At the same time, the Company will maximize resource utilization by establishing recycling systems for waste-water and waste materials. The Company will take aggressive steps to recycle, decontaminate and reduce the volume of all of its industrial waste.
6. Kyocera will research and develop "Environmental Improvement Products" that make a positive contribution to the improvement of the global environment.
7. Kyocera will research and develop "Environmentally Gentle Products" that are gentle to Planet Earth and place a lighter burden on the environment at every stage of production, sales, distribution, consumption and disposal.
8. Kyocera will promote the "greening" (forestation) of its facilities in an organized effort to create lush and inviting grounds.

Chapter 1. Policy on management of Substances Included in Products

1-1. Purpose

These standards aims to help ensure proper management of chemical substances by establishing criteria and informing our business partners of the strict chemicals usage in our products or manufacturing process.

1-2. Scope of Application

Applied to all finished products, unit items, components, materials, consumables, accessories, optional items, packaging materials, sub-materials for production that are used in our products*.

This does not apply to packaging materials to be used only for shipping of items delivered to us.

*The term "our products" refers to products sold under brand regardless of manufacturers, and products manufactured by us and sold under other brands.

1-3. Terms and Definitions

<Table. 1-3>

No.	Terms	Definitions
1	Chemical substances	A chemical element or compound that either exists in nature or is obtained through a manufacturing process.
2	Mixture	A mixture intentionally comprising two or more chemical substances.
3	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.
4	Chemical products	Chemical substance and/or mixture.
5	Parts	An article to be manufactured until it turns into an end product.
6	Final products	Final molded products produced by combining or processing chemicals and/or components.
7	Products	Chemicals, components and finished products resulting from our business activities that we deliver to our clients. Note) Packaging materials to be used in product packaging are also included in the product.
8	Contain	Components and materials of such products have to contain such substances.
9	Intentional use	Refers to the use (addition) of a chemical substance in order to give a certain quality to an object. Includes the cases where these substances are added, filled or mixed; or where they adhere or remain.
10	Impurity	Substances contained in natural materials and cannot be completely removed through refinement as industrial materials; substances that cannot be completely removed such as by-products or residues of synthesis reaction.
11	Homogeneous material	Refers to materials which cannot be mechanically disassembled into different materials. The term "homogeneous" means "evenly consists of the same element". "Mechanical disassembly" refers to disassembly by mechanical work such as removal of screws, cutting, crushing, grinding or polishing.
12	Threshold	Permissible value (density) per homogeneous material for intended applications.
13	Exemption	Certain applications of the subject matters excluded from the scope of regulation.

No.	Terms	Definitions
14	Applicable category	General parts: Parts and materials not included in the following categories Printed circuit boards: Printed circuit boards and parts including printed circuit boards. Power cord: Cable for supplying electricity from power source (outlet). Batteries: Disposable primary battery e.g. coin-type lithium battery and rechargeable secondary battery e.g. nickel-metal hydride battery. Packaging: Packaging materials for packaging our products. Resin materials: Resin materials whose manufacturers, grades and hue are specified by us on the drawings of resin molded components. Supply materials: Toners, developing agents and photosensitive drums (photosensitive layers) manufactured by our company, and their raw materials.
15	JAMP (Joint Article Management Promotion-consortium)	Joint Article Management Promotion-consortium An organization formed in Japan as a cross-industry body aiming to create and popularize a concrete system to properly manage information on chemical substances contained in articles and to disclose and communicate such information smoothly within the supply chain.
16	JAMP AIS (Article Information Sheet)	A data sheet designed by JAMP to communicate and disclose information on chemical substances contained in articles.
17	JAMP MSDSplus (Material Safety Data Sheet plus)	A data sheet designed by JAMP to complement SDS for communicating information on chemical substances contained in substances/mixtures.

1-4.Revision of "Standards on the Management of Certain Chemical Substances"

Restricted substances and its exemption stipulated in our standards will be reviewed according to domestic and international laws and regulations as well as industry trends.

Please note that the prohibition date based on these standards may be implemented ahead of the legally designated prohibition date in consideration of such factors as distribution periods of our products.

Chapter 2. Standards on the Management of Certain Chemical Substances

To ensure that our products comply with laws and regulations at home and abroad as well as environmental labels, we have sorted out respective standards and established our own "Standards on the Management of Certain Chemical Substances".

2-1. Banned Substances in Products

"Banned Substances in Products" refers to chemical substances prohibited by laws and regulations at home and abroad as well as by environmental label standards.

2-1-1. List of banned substances in products

<Table. 2-1-1>

No.	Chemical substance group	Scope	Scope of JAMP investigation
1	Lead and its compounds	All	Yes
2	Mercury and its compounds	All	Yes
3	Cadmium and its compounds	All	Yes
4	Hexavalent chromium compounds	All	Yes
5	Polybrominated biphenyls (PBBs)	All	Yes
6	Polybrominated diphenyl ethers (PBDEs)	All	Yes
7	Polychlorinated biphenyl (PCB) compounds and their specific alternative substances	All	Yes
8	Polychlorinated terphenyls (PCTs)	All	Yes
9	Asbestos	All	Yes
10	Specific organotin compounds (TBTO, Tri-substituted organostannic compounds)	All	Yes

No.	Chemical substance group	Scope	Scope of JAMP investigation
11	Dibutyltin (DBT) compounds	All	Yes
12	Dimethyl fumarate (DMF)	All	Yes
13	Shortchain chlorinated paraffins (C10-C13)	All	Yes
14	Polychlorinated naphthalene (more than 1 of chlorine atoms)	All	Yes
15	Perfluorooctane sulfonic acid and its salts (PFOS)	All	Yes
16	Perfluorooctanoic acid (PFOA) and its salts and esters	All	Yes
17	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	All	Yes
18	Hexabromocyclododecane (HBCDD)	All	Yes
19	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	All	Yes
20	Ozone-depleting substances	All	Yes
21	Arsenic compounds	Packaging (wood)	Yes
22	Cobalt chloride	Packaging (desiccant)	Yes
23	Polycyclic Aromatic Hydrocarbons (PAH)	Resin materials/ Power cord	8 types : Yes 18 types : No
24	Mirex	Resin materials	Yes
25	Hexachlorobenzene	Resin materials/ Supply materials	Yes
26	Chlorinated paraffins	Printed circuit boards (PWB)	No (Partly)
27	Halogenated organic compounds and Halogenated polymers	Packaging (plastic)	No
28	Halogenated Flame Retardants	Resin materials	No (Partly)
29	Halogenated polymers (excluding fluorinated plastic.)	Resin materials	No
30	Specific phthalate	Resin materials	Yes
31	Azo compounds forming specific amine	Supply materials	Yes
32	Selenium and its compounds	Supply materials	Yes
33	Nickel and its compounds	Supply materials	Yes
34	Organotin compounds (excluding specific organotin compounds and dibutyltin (DBT) compounds)	Supply materials	Yes
35	EU REACH regulation (EC) No1907/2006 Annex XIII PBT/ vPvB	Resin materials/ Supply materials	Yes
36	EU REACH regulation (EC) No1907/2006 Candidate substances of very high concern (SVHC)	Resin materials/ Supply materials	Yes
37	EU REACH regulation (EC) No1907/2006 Annex VII Restricted substances	Supply materials	Yes
38	CLP regulation (EC) 1272/2008 Annex VI Table 3.1 CMR Cat.1A,1B,2 (Table3.2 CMR Cat.1-3)	Resin materials/ Supply materials	No (Partly)
39	CLP regulation (EC) 1272/2008 Annex VI Specified Hazardous Substances* in Table3.1	Supply materials	No
40	Germany: TRGS905 CMR Cat.1-3	Resin materials/ Supply materials	No
41	Germany: MAK CPM (C Cat.1-2, P Cat.A-B, M Cat.1-2)(excluding antimony compounds.)	Supply materials	No
42	USA: OSHA 1910 Subpart Z	Supply materials	No
43	USA: EPA Carcinogenicity; A, B1, B2	Supply materials	No
44	USA: NTP Carcinogenicity; K, R	Supply materials	No
45	California: Proposition 65 (cancer, developmental)	Supply materials	No
46	ACGIH Carcinogenicity; 1A, A2, A3 (excluding carbon black and titanium dioxide.)	Supply materials	No
47	IARC Group 1, 2A, 2B (excluding carbon black and titanium dioxide.)	Supply materials	No
48	Japan Society for Occupational Health; Class 1, 2A, 2B (excluding carbon black.)	Supply materials	No

No.	Chemical substance group	Scope	Scope of JAMP investigation
49	Japan: Chemical Substances Control Law; Class I, II Specified Chemical Substances	Supply materials	No (Partly)
50	Japan: Industrial Safety and Health Act; Prohibition substances of Manufacturing, Permission substances for Manufacturing	Supply materials	No (Partly)
51	Japan: Industrial Safety and Health Act; mutagens (chemicals with strong mutagenicity)	Supply materials	No
52	Korea: Toxic Chemicals Control Act; Prohibited substances, Restricted substances	Supply materials	No
53	China: List of Toxic Chemicals Severely Restricted for Import and Export	Supply materials	No

2-1-2. Scope of banned substances in products, thresholds, exemptions, applicable laws and regulations
<Table. 2-1-2>

No.	Chemical substance group	Scope	Thresholds/ Exemptions
1	Lead and its compounds	other than those listed below	<p>Ban on intentional use and 0.1 wt% or below</p> <p>Exemptions:</p> <ul style="list-style-type: none"> ·Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight (RoHS Exemption: 6a) ·Lead as an alloying element in aluminium containing up to 0,4 % lead by weight (RoHS Exemption: 6b) ·Copper alloy containing up to 4 % lead by weight (RoHS Exemption: 6c) ·Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead) (RoHS Exemption: 7a) ·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 (RoHS Exemption: 7c-I) ·Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher (RoHS Exemption: 7c-II) ·Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors (RoHS Exemption: 7c-IV) ·Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages (RoHS Exemption: 15) ·Lead in cermet-based trimmer potentiometer elements (RoHS Exemption: 34)
		Power cord	less than 0.03wt%(300ppm) per covering material of the power cord
		Batteries	0.0015wt% (15ppm) or below per cell
		Packaging	Total amount of a heavy metal, such as lead, mercury, cadmium and hexavalent chromium shall be less than 0.01 wt % (less than 100ppm).
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII), Power cord; California Proposition 65, Batteries; EU Battery directive (2006/66/EC), Taiwan Green Mark, Packaging; EU Packaging directive (94/62/EC)			

No.	Chemical substance group	Scope	Thresholds/ Exemptions
2	Mercury and its compounds	other than those listed below	Ban on intentional use and 0.1 wt% or below
			Exemptions: ·Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes Short length (≤ 500 mm) not exceeding (per lamp): 3.5 mg (RoHS Exemption: 3a)
			·Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes Medium length (> 500 mm and $\leq 1\ 500$ mm) not exceeding (per lamp): 5 mg (RoHS Exemption: 3b)
		Batteries	0.000025wt% (0.25ppm) or below per cell
Packaging	Total amount of a heavy metal, such as lead, mercury, cadmium and hexavalent chromium shall be less than 0.01 wt % (less than 100ppm).		
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII), Batteries; EU Battery directive (2006/66/EC), Taiwan Green Mark, Packaging; EU Packaging directive (94/62/EC)			
3	Cadmium and its compounds	other than those listed below	Ban on intentional use and 0.01 wt% or below
			Exemptions: -
		Batteries	0.0005wt% (5ppm) or below per cell
		Packaging	Total amount of a heavy metal, such as lead, mercury, cadmium and hexavalent chromium shall be less than 0.01 wt % (less than 100ppm).
Resin materials	Less than 0.0075wt% (75ppm)		
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII), Resin materials; Denmark Prohibition of Sales, Import, and Manufacture of Cadmium-containing Products, Batteries; EU Battery directive (2006/66/EC), Taiwan Green Mark, Packaging; EU Packaging directive (94/62/EC)			
4	Hexavalent chromium compounds	other than those listed below	Ban on intentional use and 0.1 wt% or below
		Packaging	Exemptions: - Total amount of a heavy metal, such as lead, mercury, cadmium and hexavalent chromium shall be less than 0.01 wt % (less than 100ppm).
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII), Packaging; EU Packaging directive (94/62/EC)			
5	Polybrominated biphenyls (PBBs)	All	Ban on intentional use and 0.1 wt% or below
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII)			
6	Polybrominated diphenyl ethers (PBDEs)	All	Ban on intentional use and 0.1 wt% or below
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU), EU REACH regulation (EC) No1907/2006 (Annex XVII), Chemical Substances Control Law; Class I Specified Chemical Substances			
7	Polychlorinated biphenyl (PCB) compounds and their specific alternative substances	other than those listed below	Ban on intentional use
		Supply materials	Ban on intentional use and 0.005wt% (50ppm) or below
Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII), Chemical Substances Control Law; Class I Specified Chemical Substances			

No.	Chemical substance group	Scope	Thresholds/ Exemptions
8	Polychlorinated terphenyls (PCTs)	other than those listed below	Ban on intentional use
		Supply materials	Ban on intentional use and 0.005wt% (50ppm) or below
Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII)			
9	Asbestos	All	Ban on intentional use
		Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII), USA Toxic Substances Control Act (TSCA), Industrial Safety and Health Act; Prohibition substances of Manufacturing	
10	Specific organotin compounds (TBTO, Tri-substituted organostannic compounds)	All	Ban on intentional use and 0.1 wt% or below (conversion by weight of tin)
		Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII), Chemical Substances Control Law; Class II Specified Chemical Substances	
11	Dibutyltin (DBT) compounds	All	0.1 wt% or below (conversion by weight of tin)
		Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII)	
12	Dimethyl fumarate (DMF)	All	Ban on intentional use and less than 0.00001wt%
		Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII)	
13	Shortchain chlorinated paraffins (C10-C13)	All	Ban on intentional use
		Applicable laws and regulations/ Environmental label criteria: EU POPs regulation (EC) No 850/2004	
14	Polychlorinated naphthalene (more than 1 of chlorine atoms)	All	Ban on intentional use
		Applicable laws and regulations/ Environmental label criteria: EU POPs regulation (EC) No 850/2004, Chemical Substances Control Law; Class I Specified Chemical Substances	
15	Perfluorooctane sulfonic acid and its salts (PFOS)	other than those listed below	For textiles and other coated parts, less than 1 µg/m ² .
			For any products, parts and materials other than the above, less than 0.1wt%
			Exemptions: - ·Any photoresists or anti-reflective coatings for photolithography processes (AIS use code: PFOS-1) ·Any photographic coatings applied to films, papers, or printing plates (AIS use code: PFOS-2)
		Resin materials	less than 0.1wt%
Supply materials	Ban on intentional use and less than 0.001wt%		
Applicable laws and regulations/ Environmental label criteria: POPs convention, EU POPs regulation (EC) No 850/2004, Canada PFOS regulations (SOR/2008-974), Chemical Substances Control Law; Class I Specified Chemical Substances			
16	Perfluorooctanoic acid (PFOA) and its salts and esters	other than those listed below	For textiles and other coated parts, less than 1 µg/m ² .
			For any products, parts and materials other than the above, less than 0.1wt%
		Resin materials	less than 0.1wt%
Supply materials	Ban on intentional use and less than 0.001wt%		
Applicable laws and regulations/ Environmental label criteria: Norway Prohibition on Certain Hazardous Substances in Consumer Products			
17	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	All	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria: Chemical Substances Control Law; Class I Specified Chemical Substances

No.	Chemical substance group	Scope	Thresholds/ Exemptions
18	Hexabromocyclododecane (HBCDD)	All	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: POPs convention, Chemical Substances Control Law; Class I Specified Chemical Substances		
19	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	All	Ban on intentional use
	Exemptions: rubber additives		
Applicable laws and regulations/ Environmental label criteria: Canada the Prohibition of Certain Toxic Substances Regulations			
20	Ozone-depleting substances	All	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol, Act on the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures		
21	Arsenic compounds	Packaging (wood)	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII)		
22	Cobalt chloride	Packaging (desiccant)	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII)		
23	Polycyclic Aromatic Hydrocarbons (PAH) [specific 8 types / 18 types] (see Appendix 2. PAHs list.)	Resin materials	Specific 8 types of PAHs: less than 0.1 wt% respectively; and total of 18 types of PAHs: less than 0.02 wt%.
		Power cord	0.002wt% (20ppm) or below in Benzo[a]pyrene and 0.02wt% (200ppm) or below in total specific 18 PAHs.
Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII), China; "Ten-wheels" mark			
24	Mirex	Resin materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:EU POPs regulation (EC) No 850/2004, Chemical Substances Control Law; Class I Specified Chemical Substances		
25	Hexachlorobenzene	Resin materials/ Supply materials	Ban on intentional use
			(Ban on intentional use of pigments including HCB higher than the BAT value)
Applicable laws and regulations/ Environmental label criteria:Chemical Substances Control Law; Class I Specified Chemical Substances			
26	Chlorinated paraffins (excluding Short-chain chlorinated paraffins (C10-C13))	Printed circuit boards (PWB)	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria: Germany; The Blue Angel Mark (RAL-UZ 171)
27	Halogenated organic compounds and Halogenated polymers	Packaging (plastic)	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria: Northern Europe: Nordic Swan, etc.
28	Halogenated Flame Retardants	Resin materials	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan; Eco Mark etc.
29	Halogenated polymers (excluding fluorinated plastic.)	Resin materials	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.
30	Specific phthalate (DEHP, BBP, DBP, DnHP, DINP, DIDP, DNOP)	Resin materials	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria: China; "Ten-wheels" mark
31	Azo compounds forming specific amin (Azo compounds that form over 30ppm of specific amines listed on	Supply materials	Ban on intentional use
			Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.

No.	Chemical substance group	Scope	Thresholds/ Exemptions
32	Selenium and its compounds	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
33	Nickel and its compounds	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
34	Organotin compounds (excluding specific organotin compounds and dibutyltin (DBT) compounds)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Korea; Eco-Mark		
35	EU REACH regulation (EC) No1907/2006 Annex XIII PBT/ vPvB	Resin materials/ Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
36	EU REACH regulation (EC) No1907/2006 Candidate substances of very high concern (SVHC)	Resin materials/ Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark		
37	EU REACH regulation (EC) No1907/2006 Annex VII Restricted substances	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:EU REACH regulation (EC) No1907/2006 (Annex XVII)		
38	CLP regulation (EC) 1272/2008 Annex VI Table 3.1 CMR Cat.1A, 1B, 2 (Table3.2 CMR Cat.1-3)	Resin materials/ Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: EU REACH regulation (EC) No1907/2006 (Annex XVII), Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
39	CLP regulation (EC) 1272/2008 Annex VI Specified Hazardous Substances* in Table3.1 *Specified Hazardous Substances refers to the chemical substances classified in H310, H317, H330, H334, H340, H341, H350, H350i, H351, H360D, H360F, H360Fd, H360FD, H361d, H361f, H370, H371, H372, H373 of Annex VI Table 3.1.	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
40	Germany: TRGS905 CMR Cat.1-3	Resin materials/ Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria:Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.		
41	Germany: MAK CPM (C Cat.1-2, P Cat.A-B, M Cat.1-2)(excluding antimony compounds.)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
42	USA: OSHA 1910 Subpart Z	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
43	USA: EPA Carcinogenicity; A, B1, B2	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		

No.	Chemical substance group	Scope	Thresholds/ Exemptions
44	USA: NTP Carcinogenicity; K, R	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
45	California: Proposition 65 (cancer, developmental)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
46	ACGIH Carcinogenicity; 1A, A2, A3 (excluding carbon black and titanium dioxide.)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
47	IARC Group 1, 2A, 2B (excluding carbon black and titanium dioxide.)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Korea; Eco-Mark, Voluntary standards		
48	Japan Society for Occupational Health; Class 1, 2A, 2B (excluding carbon black.)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Voluntary standards		
49	Japan: Chemical Substances Control Law; Class I, II Specified Chemical Substances	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Japan; Chemical Substances Control Law		
50	Japan: Industrial Safety and Health Act; Prohibition substances of Manufacturing, Permission substances for Manufacturing	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Japan; Industrial Safety and Health Act, Voluntary standards		
51	Japan: Industrial Safety and Health Act; mutagens (chemicals with strong mutagenicity)	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Japan; Industrial Safety and Health Act, Voluntary standards		
52	Korea: Toxic Chemicals Control Act; Prohibited substances, Restricted substances	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: Korea; Toxic Chemicals Control Act		
53	China: List of Toxic Chemicals Severely Restricted for Import and Export	Supply materials	Ban on intentional use
	Applicable laws and regulations/ Environmental label criteria: China; First import of chemicals and toxic chemicals import and export of environmental regulations		

2-2. Restricted Substances in Products

"Restricted Substances in Products" refers to chemical substances whose future use in our products is prohibited according to laws and regulations at home and abroad as well as environmental label criteria.

Restricted substances in products will be designated as banned substances in products after "Standards on the Management of Certain Chemical Substances" are revised typically 6 months prior to our scheduled prohibition date.

In consideration of the changeover period to the replacements, the scheduled prohibition date is normally set to be 1 year prior to the legally required deadline.

2-2-1. List of restricted substances in products

<Table. 2-2-1>

No.	Chemical substance group	Scope	Scope of JAMP investigation
1	Bis (2-ethyl(hexyl)phthalate) (DEHP)	All	Yes
2	Dibutyl phthalate (DBP)	All	Yes

No.	Chemical substance group	Scope	Scope of JAMP investigation
3	Benzylbutylphthalate (BBP)	All	Yes
4	Diisobutyl phthalate (DIBP)	All	Yes
5	Lead and its compounds	Exempt uses	Yes
6	Mercury and its compounds	Exempt uses	Yes

2-2-2. Scopes, thresholds, scheduled prohibition date and applicable laws for restricted substances in products
<Table. 2-2-2>

No.	Chemical substance group	CAS No.	Scopes	Thresholds	Scheduled prohibition date					
1	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	All	Ban on intentional use and 0.1 wt% or below	1.7.2018					
						Applicable laws and regulations/ Environmental label criteria:EU RoHS directive (2011/65/EU)				
2	Dibutyl phthalate (DBP)	84-74-2	All	Ban on intentional use and 0.1 wt% or below	1.7.2018					
						Applicable laws and regulations/ Environmental label criteria:EU RoHS directive (2011/65/EU)				
3	Benzylbutylphthalate (BBP)	85-68-7	All	Ban on intentional use and 0.1 wt% or below	1.7.2018					
						Applicable laws and regulations/ Environmental label criteria:EU RoHS directive (2011/65/EU)				
4	Diisobutyl phthalate (DIBP)	84-69-5	All	Ban on intentional use and 0.1 wt% or below	1.7.2018					
						Applicable laws and regulations/ Environmental label criteria:EU RoHS directive (2011/65/EU)				
5	Lead and its compounds	-	Exempt uses	Ban on intentional use and 0.1 wt% or below	*					
						<Exempt uses>				
						·Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight (RoHS Exemption: 6a)				
						·Lead as an alloying element in aluminium containing up to 0,4 % lead by weight (RoHS Exemption: 6b)				
						·Copper alloy containing up to 4 % lead by weight (RoHS Exemption: 6c)				
						·Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead) (RoHS Exemption: 7a)				
						·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 (RoHS Exemption: 7c-I)				
						·Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher (RoHS Exemption: 7c-II)				
						·Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors (RoHS Exemption: 7c-IV)				
						·Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages (RoHS Exemption: 15)				
·Lead in cermet-based trimmer potentiometer elements (RoHS Exemption: 34)										
Applicable laws and regulations/ Environmental label criteria:All ; EU RoHS directive (2011/65/EU)										

No.	Chemical substance group	CAS No.	Scopes	Thresholds	Scheduled prohibition date
6	Mercury and its compounds	-	Exempt uses	Ban on intentional use and 0.1 wt% or below	*
		<Exempt uses> ·Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes Short length (≤ 500 mm) not exceeding (per lamp): 3.5 mg (RoHS Exemption: 3a)			
		·Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes Medium length (> 500 mm and ≤ 1 500 mm) not exceeding (per lamp): 5 mg (RoHS Exemption: 3b)			
		·Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes Long length (> 1 500 mm) not exceeding (per lamp): 13 mg (RoHS Exemption:3c)			
Applicable laws and regulations/ Environmental label criteria: EU RoHS directive (2011/65/EU)					

*If an exemption is not approved, in principle delivery of the parts using exemptions will be prohibited 1 year prior to the legally required deadline.

2-3. Monitored Substances in Products

"Monitored Substances in Products" refers to substances for which, according to laws and regulations at home and abroad, such procedures as labeling, notification and communication are required.

2-3-1. List of monitored substances in products

<Table. 2-3-1>

No.	Chemical substance group	Scopes	Scope of JAMP investigation
1	Beryllium oxide (BeO)	All	Yes
2	Formaldehyde	All (Composite Wood)	Yes
3	Perchlorates	All	Yes
4	EU REACH regulation (EC) No1907/2006 Candidate substances of very high concern (SVHC)	All	Yes
5	IEC62474 (JIG-101)	All	Yes
6	Substances H372, H373, H400, H410, H411, H412, H413 on CLP regulation (EC) 1272/2008 Annex VI Table3.1 (Substances R48, R50, R51, R53 on Table3.2) (flame retardants)	Resin materials	No
7	CLP regulation (EC) 1272/2008 Annex VI Hazardous substances	Supply materials	No
8	Japan: Chemical Substances Control Law; Monitoring Chemical Substances, Priority Assessment Chemical Substances	Supply materials	No
9	Japan: Industrial Safety and Health Act; Hazardous substances to be la	Supply materials	No
10	Japan: Industrial Safety and Health Act; Notifiable substances	Supply materials	No
11	Japan: PRTR Law; Class I, II designated chemical substances	Supply materials	No
12	Japan: Poisonous and Deleterious Substances Control Law; Poisonous substances, Deleterious substances	Supply materials	No (Partly)
13	Korea: Toxic Chemicals Control Act; Toxic substances, Substances subject to authorization, Accident Precaution Chemicals	Supply materials	No
14	Substances regulated by USA Toxic Substances Control Act (TSCA) (Article 4, 5, 7, 8, 12, 13 etc.)	Supply materials	No
15	China: Regulations on Safe Management of Hazardous Chemicals target substances (Inventory of Hazardous Chemicals, Inventory of Highly Toxic Chemicals, Inventory of Dangerous Goods)	Supply materials	No

No.	Chemical substance group	Scopes	Scope of JAMP investigation
16	Taiwan: Regulation of Labeling and Hazard Communication of Dangerous and Harmful Materials target substances (Phase I priority substances, Phase II substances, Phase III substances)	Supply materials	No
17	USA: OSHA (PEL) listed substances	Supply materials	No
18	USA: ACGIH (TLVs) listed substances	Supply materials	No
19	Australia: NHOSC1003 (TWA/STEL) listed substances	Supply materials	No
20	Japan: Society for Occupational Health; Listed substances in Recommendation of Occupational Exposure Limits	Supply materials	No
21	China: Workplace Exposure Limits listed substances	Supply materials	No
22	USA: RCRA Hazardous Waste	Supply materials	No
23	USA: EPCRA target substances: SARA Title III ; Section 302, 313	Supply materials	No
24	USA: CERCLA Hazardous Substances	Supply materials	No
25	USA: Clean Air Act (CAA) - air pollutants	Supply materials	No
26	California: Code of Regulations, Title 22 Hazardous Wastes	Supply materials	No

2-3-2. Scope of monitored substances in products, monitoring thresholds, related laws and regulations
<Table. 2-3-2>

No.	Chemical substance group	Scopes	Thresholds
1	Beryllium oxide (BeO)	All	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Industry guidance, Customer requests		
2	Formaldehyde	All (Composite Wood*)	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: California; Formaldehyde Regulation for Composite Wood Products *Composite Wood Products (HWPW-VC, HWPW-CC, PB, MDF, Thin MDF) must comply with the Californian formaldehyde emission regulations (CCR Title17, Section 93120-93120.12).		
3	Perchlorates	All	more than 6 ppb
	Applicable laws and regulations/ Environmental label criteria: California; Perchlorate Contamination Prevention Act of 2003		
4	EU REACH regulation (EC) No1907/2006 Candidate substances of very high concern (SVHC) (Appendix 3. see SVHC List)	All	more than 0.1 wt% per the parts
	Applicable laws and regulations/ Environmental label criteria:EU REACH regulation (EC) No1907/2006		
5	IEC62474 (JIG-101)	All	Intentional addition
	Applicable laws and regulations/ Environmental label criteria:EPEAT		
6	Substances H372, H373, H400, H410, H411, H412, H413 on CLP regulation (EC) 1272/2008 Annex VI Table3.1 (Substances R48, R50, R51, R53 on Table3.2) (flame retardants)	Resin materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Northern Europe; ECO DECLARATION		
7	CLP regulation (EC) 1272/2008 Annex VI Hazardous substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: CLP regulation (EC) 1272/2008		
8	Japan:Chemical Substances Control Law; Monitoring Chemical Substances, Priority Assessment Chemical Substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Japan; Chemical Substances Control Law		
9	Japan:Industrial Safety and Health Act; Hazardous substances to be labeled	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Japan; Industrial Safety and Health Act		
10	Japan:Industrial Safety and Health Act; Notifiable substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Japan; Industrial Safety and Health Act		

No.	Chemical substance group	Scopes	Thresholds
11	Japan: PRTR Law; Class I, II designated chemical substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Japan; PRTR Law		
12	Japan: Poisonous and Deleterious Substances Control Law; Poisonous substances, Deleterious substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Japan; Poisonous and Deleterious Substances Control Law		
13	Korea: Toxic Chemicals Control Act; Toxic substances, Substances subject to authorization, Accident Precaution Chemicals	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Korea; Toxic Chemicals Control Act		
14	Substances regulated by USA Toxic Substances Control Act (TSCA) (Article 4, 5, 7, 8, 12, 13 etc.)	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Toxic Substances Control Act (TSCA)		
15	China: Regulations on Safe Management of Hazardous Chemicals target substances (Inventory of Hazardous Chemicals, Inventory of Highly Toxic Chemicals, Inventory of Dangerous Goods)	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: China; Regulations on Safe Management of Hazardous Chemicals target substances		
16	Taiwan: Regulation of Labeling and Hazard Communication of Dangerous and Harmful Materials target substances (Phase I priority substances, Phase II substances, Phase III substances)	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Taiwan; Regulation of Labeling and Hazard Communication of Hazardous Chemicals target substances		
17	USA: OSHA (PEL) listed substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Hazard Communication Standard (HCS)		
18	USA: ACGIH (TLVs) listed substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Hazard Communication Standard (HCS)		
19	Australia: NHOSC1003 (TWA/STEL) listed substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Australia; Occupational Safety and Health Act		
20	Japan: Society for Occupational Health; Listed substances in Recommendation of Occupational Exposure Limits	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS) (JIS Z7253: 2012)		
21	China: Workplace Exposure Limits listed substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: China; General Rules for Preparation of Precautionary Label for Chemicals (GB15258-2009)		
22	USA: RCRA Hazardous Waste	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Resource Conservation and Recovery Act (RCRA)		
23	USA: EPCRA target substances: SARA Title III ; Section 302, 313	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Emergency Planning and Community Right-to-Know Act (EPCRA)		
24	USA: CERCLA Hazardous Substances	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)		
25	USA: Clean Air Act (CAA) - air pollutants	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: USA; Clean Air Act (CAA)		
26	California: Code of Regulations, Title 22 Hazardous Wastes	Supply materials	Intentional addition
	Applicable laws and regulations/ Environmental label criteria: California; Code of Regulations, Title 22 Hazardous Wastes		

2-4. Substances in Products to be surveyed

Substances in Products to be surveyed are designated as JAMP declarable substances.

2-4-1. JAMP declarable substance list (Ver.4.060)

<Table. 2-4-1>

No.	Chemical substance group	Scopes
1	Japan: Chemical Substances Control Law; Class I Specified Chemical Substances	Substances·Mixture (MSDSPlus)
2	Japan: Industrial Safety and Health Act; Prohibition substances of Manufacturing	Substances·Mixture (MSDSPlus)
3	Japan: Poisonous and Deleterious Substances Control Law; Specified toxic substances	Substances·Mixture (MSDSPlus)
4	EU RoHS directive; Regulated substances	Substances·Mixture (MSDSPlus), Article (AIS)
5	EU ELV directive; Regulated substances	Substances·Mixture (MSDSPlus), Article (AIS)
6	EU CLP regulation Annex VI Table 3.2 CMR-Cat.1, 2 and Table 3.1 CMR-Cat.1A, 1B	Substances·Mixture (MSDSPlus), Article (AIS)
7	EU REACH regulation Annex XVII Restricted substances (Excluding EU CLP regulation Annex VI Table 3.2 CMR-Cat.1, 2 and Table 3.1 CMR-Cat.1A, 1B)	Substances·Mixture (MSDSPlus), Article (AIS)
8	EU REACH regulation Candidate substances of very high concern (SVHC)	Substances·Mixture (MSDSPlus), Article (AIS)
9	EU POPs regulation Annex I	Substances·Mixture (MSDSPlus), Article (AIS)
10	ESIS PBT	Substances·Mixture (MSDSPlus), Article (AIS)
11	GADSL	Substances·Mixture (MSDSPlus), Article (AIS)
12	IEC 62474	Substances·Mixture (MSDSPlus), Article (AIS)

2-5. Banned Substances in Production

"Banned Substances in Production" refers to substances that is banned in the production process.

2-5-1. List of Banned Substances in Production

<Table. 2-5-1>

No.	Chemical substance group	Scopes
1	Chlorofluorocarbon (CFC)	All
2	Hydrobromofluorocarbon (Specific halon)	All
3	Carbon Tetrachloride (Tetrachloromethane)	All
4	1,1,1-Trichloroethane (methyl chloroform)	All
5	Bromochloromethane	All
6	Bromomethane (methyl chloroform)	All
7	Hydrobromofluorocarbon (HBFC)	All
8	Hydrochlorofluorocarbon (HCFC)	Printed circuit board mounting process/ Packaging process

2-5-2. Applicable processes and laws for Banned Substances in Production

<Table. 2-5-2>

No.	Chemical substance group	Scopes
1	Chlorofluorocarbon (CFC)	All
	Applicable laws and regulations/ Environmental label criteria: All; Montreal Protocol, Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.	
2	Hydrobromofluorocarbon (Specific halon)	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol, Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.	
3	Carbon Tetrachloride (Tetrachloromethane)	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol, Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.	
4	1,1,1-Trichloroethane (methyl chloroform)	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol, Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.	
5	Bromochloromethane	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol	
6	Bromomethane (methyl chloroform)	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol	
7	Hydrobromofluorocarbon (HBFC)	All
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol	
8	Hydrochlorofluorocarbon (HCFC)	Printed circuit board mounting process*, Packaging process
	Applicable laws and regulations/ Environmental label criteria: Montreal Protocol, Germany; The Blue Angel Mark (RAL-UZ 171), Japan: Eco Mark etc.	

*The scope of a part that includes a printed circuit board also covers its mounting process.

Chapter 3. Request to customers

3-1. Compliance with "Standards on the Management of Certain Chemical Substances"

For items whose compliance with our standards is instructed our drawings and requirements, please ensure that the banned substances in products respectively designated per subject according to the latest our standards are not used. For banned substances in products whose thresholds are set, please ensure that they are less than the threshold value. Please ensure that our standards are provided to your subcontractors and your suppliers, and that they are instructed to strictly adhere to these standards.

If revision is made to our standards and banned substances in products is newly added, please ensure that the banned substances in products will not be used since the implementation date of the revised standards.

* If drawings and requirements specifications include instructions on such items as halogen-free products and non-chlorine bleach, please also comply with such instructions.

3-2. System for management of Substances Included in Products

To ensure that our standards are continually adhered to, we request that you refer to the Guidelines for the Management of Chemical Substances in Products issued by JAMP and establish your own chemical substance management system.

Please ensure that these management instructions are also given to your subcontractors and your suppliers. In order to perform continuous and reliable management of Substances Included in Products, it is necessary that a management system for chemical substances covering the entire supply chain be built. Please note that we may perform audits to verify your management system on chemical substances.

3-3. Documents to be submitted

For each delivered product, please provide a non-use certificate and a JAMP AIS(MSDS plus) by the specified date. Please also submit separately a resin material data sheet for resin materials, a safety data sheet (SDS) for supply materials, and confirmation of material safety/conformity with laws and regulation.

If revision is made to our standards and banned substances (banned substances in products, banned substances in production process) are added or scope, thresholds or exemptions are changed, please re-submit the non-use certificate. Please also re-submit JAMP AIS(MSDS plus) if restricted substances in products and monitored substances in Products are added to it.

3-3-1. Non-use Certificate

Our chemical substance management system will request submission per item.

For certain customers, the requests will be sent via email.

For the non-use certificate, the following formats are available to fit their respective target categories.

I. Non-use Certificate

Firstly, please select a component category (general parts / printed circuit board / power cord / battery / packing materials). Banned substances in products and threshold values vary according to their component categories.

II. Non-use Certificate (Resin materials)

III. Non-use Certificate (Supply materials)

3-3-2. JAMP AIS/ MSDS plus

Our chemical substance management system will request submission per item.

For certain customers, the requests will be sent via email.

Please download the latest format of JAMP AIS/MSDSplus from the website of JAMP.

In filling in the JAMP AIS/MSDSplus, please refer to the "JAMP AIS·MSDSplus Practical Guide" on the JAMP website or the "JAMP AIS Preparation Guide" on our chemical substance management system.

For resin materials and sheet metal materials of some components which are specified by the drawings, our unique AIS preparation means are specified.

In creating JAMP AIS, please obtain the AIS and MSDSplus of the components and materials from your sub-customers. JAMP (Joint Article Management Promotion-consortium): <http://www.jamp-info.com/dl>

3-3-3. Other formats

The formats for the "resin material information sheet" for resin materials and the "confirmation of material safety/ conformity with laws and regulation" will be accompanied by a request email.

*To respond to the requests from our customer, substances included in products may be individually added, and then, additional request be made for answering survey or non-use or separate certification documents to acquire ecolabels.

*Please note that sub-materials such as grease, oil or adhesives are treated as chemicals, we may conduct a survey of substances included in products as we do for our supply products.

3-4. Provision of analytical data

If use of banned substances in products is suspected, it may be individually requested that the analysis data on the material be submitted. We will individually notify subject items (sections), reason of request and analysis method.

Chapter 4. Miscellaneous

4-1. Modification of information on Substances Included in Products

If any change is made to the submitted information on Substances Included in Products on JAMP AIS and others, please contact our department in charge and re-submit the AIS.

4-2. Handling of information on Substances Included in Products

The information on substances included in products provided by customers will be used for our substances included in products management. Please also note that for the purpose of disclosure to customers or upon request of administrative agencies, this information may be provided to a third party as part of our information on substances included in products.

4-3. Treatment of personal information

Your personal information will be securely stored and strictly used within the purpose of the management of substances included in products.

4-4. Contacts

CSR Division, Corporate General Affairs Division : kdc.green@dc.kyocera.com

For inquiry on our company, our standards or how to fill in JAMP AIS, please contact the following email.

4-5. Reference URLs

- EU REACH Regulation (EC) No1907/2006 SVHC
<http://echa.europa.eu/candidate-list-table>
- EU REACH Regulation (EC) No1907/2006 Annex XIIV Restricted substances
<http://echa.europa.eu/addressing-chemicals-of-concern/restrictions/substances-restricted-under-reach>
- EU CLP Regulation (EC) 1272/2008 Annex VI
<http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
- USA OSHA 1910 Subpart Z
https://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1910
- USA Environmental Protection Agency (EPA) - Carcinogen risk assessment: Independent administrative agency. See comprehensive search system for chemical substances by National Institute of Technology and Evaluation.
http://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop
- USA National Toxicology Program (NTP) - Carcinogenicity evaluation: Independent administrative agency
See comprehensive search system for chemical substances by National Institute of Technology and Evaluation.
http://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop
- California Proposition 65(cancer, developmental)
http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html#list
- IARC (International Agency for Research on Cancer)
<http://monographs.iarc.fr/ENG/Classification/index.php>
- Japan Society for Occupational Health - Carcinogenicity evaluation: Incorporated administrative agency
<See comprehensive search system for chemical substances by National Institute of Technology and Evaluation.
http://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop
- Japan Chemical Substances Control Law - Class I, II Specified Chemical Substances
<http://www.env.go.jp/chemi/kagaku/kashinkaisei.html>
- Japan Industrial Safety and Health Act - Prohibition substances of Manufacturing, Permission substances for Manufacture
Incorporated administrative agency
See comprehensive search system for chemical substances by National Institute of Technology and Evaluation.
http://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop
- Japan Industrial Safety and Health Act - mutagens (chemicals with strong mutagenicity)
<http://anzeninfo.mhlw.go.jp/user/anzen/kag/ankgc02.htm>
- Japan PRTR Law - Class 1, 2 designated chemical substances
http://www.meti.go.jp/policy/chemical_management/law/msds/2.html
- Japan Poisonous and Deleterious Substances Control Law - Poisonous substances, Deleterious substances
<http://www.nihs.go.jp/law/dokugeki/edokugeki.html>
- Korea: Toxic Chemicals Control Act (TCCA) - Prohibited substances, Restricted substances
Korea's National Institute of Environmental Research
See the chemical information search system, National Institute of Environmental Health Sciences.
<http://ncis.nier.go.kr/ncis/Index>
- Germany: TRGS905 - No reference URL. Related publications are available from the following: Japan Chemical Industry Ecology-Toxicology & Information Center (JETOC) (<http://www.jetoc.or.jp/>)
- Germany: MAK (List of MAK and BAT Values) - No reference URL.
Related publications are available from the following:
John Wiley & Sons Limited, Distribution Centre (http://www.wiley-vch.de/general/add_books.html)
- American Conference of Governmental Industrial Hygienists (ACGIH) - No reference URL.
Related publications are available from the following: ACGIH (<http://www.acgih.org/home>)

4-6. Revision record

<Table. 4-6>

Version No.	Issue date	Revision details
1	22-Dec-03	Establishment
2	19-Mar-07	2 substances added to banned materials; 5 substance groups added to managed substances; part of managed substances removed. Added RoHS directive exemption list, list of substances banned for use in consumables, list of managed substances in consumables.
3	01-Apr-08	PFOS added to banned / managed substances. PFOS example substance list added. (Ver3) 1st SVHC added to managed substances. SVHC target substance list added. (Ver3.01)
4	16-Oct-09	DMF added to banned / managed substances. Formaldehyde plywood regulations added to managed substances. (Ver4) 2nd SVHCs added to managed substances. (Ver4.01, Ver4.02)
5	28-Jun-10	Tri-substituted organostannic compounds added to banned substances. Exempted items added. (Ver5) 3rd SVHCs added to managed substances. (Ver5.01)
6	05-Apr-11	DBT, DOT, HBCDD, EU-approved substances added to banned / managed substances. 4th SVHCs added to managed substances. Exemption list updated. (Ver6) 5th SVHCs added to managed substances. (Ver6.01) 6th SVHCs added to managed substances. Application purposes of perchlorate expanded. Exempted items added. (Ver6.02) 7th SVHCs added to managed substances. 9 substance groups added to Managed Substances in Consumables. (Ver6.03) 8th SVHCs added to managed substances. Exempted items added. (Ver6.04)
7	05-Aug-13	Second and third EU-approved substances added to banned substances. Removed exemptions on cadmium. 9th SVHCs and fluorinated greenhouse gasses added to managed substances.
8	15-Jan-14	Scope and applications of banned substances expanded. PAHs and PFOAs added to banned / managed substances. 10th SVHCs added to managed substances. Managed substance HBCDD removed.
9	15-Jul-14	Exemption of banned substance DBT eliminated. Threshold of mercury compounds modified. Managed Substances in Consumables added. 11th SVHCs added to managed substances. Exempted items added.
10	23-Apr-15	With the shift to the use of AIS/MSDSplus provided by JAMP in the survey of substances included in products, our standards were thoroughly re-examined. Major Revisions <ul style="list-style-type: none"> •BNST classified as banned substances in products. •Changed lead, mercury and cadmium thresholds for banned substances in products in batteries. •Exemptions of PFOS of banned substances in roducts changed to the expression of exemptions of JAMP AIS. •Changed thresholds of PAHs (banned substances in products) for resin materials. •"PBT substances / vPvB substances" and "substances which are candidates for approval (SVHC)" added to banned substances in products for resin materials.

Version No.	Issue date	Revision details
		<ul style="list-style-type: none"> • Changed thresholds of banned substances in products for the supply materials "PCBs and their specific alternative substances" and "PCTs", as well as "perfluorooctanoic acid (PFOA) and its salts and esters". • Added "PBT substances / vPvB substances", "Substances which are candidates for approval (SVHC)", "REACH Annex XVII Restricted Substances", "Nickel and its compounds", "Organotin compounds", "Certain hazardous substances on CLP Annex VI Table 3.1", "List of Toxic Chemicals Severely Restricted to be Imported into or Exported from People Republic of China" to banned substances in products for supply materials. • Newly created "Restricted Substances in Products", "Monitored Substances in Products" and "Surveyed Substances in Products". • Removed "Managed Substances list (products)", "Managed Substance List (consumables)" and "Managed Substance List (manufacturing process)". • 12th SVHC added to Monitored Substances in Products.
10.1	21-Aug-15	<p>Changed the JAMP declarable substance list to Ver.4.040. Added 13th SVHC. (Appendix 3. No.162 - 163) Added "Dioctyltin(DOT) compounds (JAMP-SN0073)" and "Lithium perchlorate trihydrate" in the Appendix 4 "Example substance list". Correction of errors in writing.</p>
10.2	15-Feb-16	<p>Changed the JAMP declarable substance list to Ver.4.050. Added 14th SVHC. (Appendix 3. No.164 - 168) Added the CAS number of substances covered by SVHC in Appendix 3. Removed the RoHS exemption 7b of Lead because there is no actual use in our products. Added the RoHS exemption 34 of Lead because there was actual use in our products.</p>
10.3	01-Aug-16	<p>Changed the JAMP declarable substance list to Ver.4.060. Added 15th SVHC. (Appendix 3. No.169) Added the CAS number of substances covered by SVHC in Appendix 3. Revised the CAS number of example substances covered in Appendix4. Changed the Reference URLs in Chapter 4.</p>

Appendix 1. List of Specific Amines

A list of 22 specific amines in total of "Azo compounds to form specific amines " which is one of the banned chemicals.

No.	Substance name	Chemical Formula	CAS No.
1	4-amino azobenzene'	C ₁₂ H ₁₁ N ₃	60-09-3
2	o-anisidine	C ₇ H ₉ NO	90-04-0
3	2-naphthylamine	C ₁₀ H ₉ N	91-59-8
4	3,3'-dichlorobenzidine	C ₁₂ H ₁₀ Cl ₂ N ₂	91-94-1
5	4-Aminodiphenyl	C ₁₂ H ₁₁ N	92-67-1
6	Benzidine	C ₁₂ H ₁₂ N ₂	92-87-5
7	o-toluidine	C ₇ H ₉ N	95-53-4
8	4-chloro-o-toluidine	C ₇ H ₈ ClN	95-69-2
9	4-methyl-m-phenylenediamine	C ₇ H ₁₀ N ₂	95-80-7
10	o-aminoazotoluene	C ₁₄ H ₁₅ N ₃	97-56-3
11	5-nitro-o-toluidine	C ₇ H ₈ N ₂ O ₂	99-55-8
12	4,4'-methylenebis[2-chloroaniline]	C ₁₃ H ₁₂ Cl ₂ N ₂	101-14-4
13	4,4'-methylenedianiline	C ₁₃ H ₁₄ N ₂	101-77-9
14	4,4'-oxydianiline	C ₁₂ H ₁₂ N ₂ O	101-80-4
15	r-chloroaniline	C ₆ H ₆ ClN	106-47-8
16	3,3'-Dimethoxybenzidine	C ₁₄ H ₁₆ N ₂ O ₂	119-90-4
17	3,3'-dimethylbenzidine	C ₁₄ H ₁₆ N ₂	119-93-7
18	6-methoxy-m-toluidine	C ₈ H ₁₁ NO	120-71-8
19	2,4,5-trimethylaniline	C ₉ H ₁₃ N	137-17-7
20	4,4'-thiodianiline	C ₁₂ H ₁₂ N ₂ S	139-65-1
21	4-methoxy-m-phenylenediamine	C ₇ H ₁₀ N ₂ O	615-05-4
22	4,4'-methylenedi-o-toluidine	C ₁₅ H ₁₈ N ₂	838-88-0

Appendix 2. PAHs List

A list of aromatic hydrocarbons (PAHs) and their thresholds

No.	Substance name	Chemical Formula	CAS No.	Power cord thresholds (ppm)	Resin materials thresholds (ppm)
1	Benzo[a]pyrene	C ₂₀ H ₁₂	50-32-8	<20	<1
2	Benzo[e]pyrene	C ₂₀ H ₁₂	192-97-2		<1
3	Benz[a]anthracene	C ₁₈ H ₁₂	56-55-3		<1
4	Benzo[b]fluoranthene	C ₂₀ H ₁₂	205-99-2		<1
5	Benzo[j]fluoranthene	C ₂₀ H ₁₂	205-82-3		<1
6	Benzo[k]fluorathene	C ₂₀ H ₁₂	207-08-9		<1
7	Chrysene	C ₁₈ H ₁₂	218-01-9		<1
8	Dibenz[a,h]anthracene	C ₂₂ H ₁₄	53-70-3		<1
9	Benzo[ghi]perylene	C ₂₂ H ₁₂	191-24-2		
10	Indeno[1,2,3-cd]pyrene	C ₂₂ H ₁₂	193-39-5		
11	Acenaphthene	C ₁₂ H ₁₀	83-32-9		
12	Acenaphthylene	C ₁₂ H ₈	208-96-8		
13	Anthracene	C ₁₄ H ₁₀	120-12-7		
14	Fluoranthene	C ₁₆ H ₁₀	206-44-0		
15	Fluorene	C ₁₃ H ₁₀	86-73-7		
16	Phenanthrene	C ₁₄ H ₁₀	85-01-8		
17	Pyrene	C ₁₆ H ₁₀	129-00-0		
18	Naphthalene	C ₁₀ H ₈	91-20-3		
	Sum 18 PAH	-	-	<200	<200

Appendix 3. SVHC

A list to SVHCs which notification and information provision is required according to the EU REACH Regulation (EC No.1907/2006)

No.	Substances group	CAS number	Date of inclusion
1	Anthracene	120-12-7	28.10.2008
2	4,4'- Diaminodiphenylmethane	101-77-9	28.10.2008
3	Dibutyl phthalate	84-74-2	28.10.2008
4	Cobalt dichloride	7646-79-9	28.10.2008 20.09.2011
5	Diarsenic pentaoxide	1303-28-2	28.10.2008
6	Diarsenic trioxide	1327-53-3	28.10.2008
7	Sodium dichromate	7789-12-0 10588-01-9	28.10.2008
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	28.10.2008
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	28.10.2008 17.12.2014
10	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified*1 (α - HBCDD, β -HBCDD, γ -HBCDD)	25637-99-4 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	28.10.2008
11	Alkanes, C10-13, chloro*1(Short Chain Chlorinated Paraffins)	85535-84-8	28.10.2008
12	Bis(tributyltin)oxide (TBTO)	56-35-9	28.10.2008
13	Lead hydrogen arsenate	7784-40-9	28.10.2008
14	Triethyl arsenate	15606-95-8	28.10.2008
15	Benzyl butyl phthalate (BBP)	85-68-7	28.10.2008
16	Anthracene oil	90640-80-5	13.01.2010
17	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	13.01.2010
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	13.01.2010
19	Anthracene oil, anthracene-low	90640-82-7	13.01.2010
20	Anthracene oil, anthracene paste	90640-81-6	13.01.2010
21	Pitch, coal tar, high temp.	65996-93-2	13.01.2010
22	2,4-Dinitrotoluene	121-14-2	13.01.2010
23	Diisobutyl phthalate	84-69-5	13.01.2010
24	Lead chromate	7758-97-6	13.01.2010
25	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	13.01.2010
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	13.01.2010
27	Tris(2-chloroethyl)phosphate	115-96-8	13.01.2010
28	Acrylamide	79-06-1	30.03.2010
29	Trichloroethylene	79-01-6	18.06.2010
30	Boric acid	10043-35-3 11113-50-1	18.06.2010
31	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	18.06.2010
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	18.06.2010
33	Sodium chromate	7775-11-3	18.06.2010
34	Potassium chromate	7789-00-6	18.06.2010
35	Ammonium dichromate	7789-09-5	18.06.2010
36	Potassium dichromate	7778-50-9	18.06.2010
37	Cobalt(II) sulphate	10124-43-3	15.12.2011
38	Cobalt(II) dinitrate	10141-05-6	15.12.2011
39	Cobalt (II) carbonate	513-79-1	15.12.2011
40	Cobalt(II) diacetate	71-48-7	15.12.2011
41	2-Methoxyethanol	109-86-4	15.12.2011
42	2-Ethoxyethanol	110-80-5	15.12.2011

No.	Substances group	CAS number	Date of inclusion
43	Chromium trioxide	1333-82-0	15.12.2011
44	Acids generated from chromium trioxide and their oligomers Group containing: Chromic acid Dichromic acid Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2 JAMP-SN0071*2	15.12.2011
45	2-Ethoxyethyl acetate	111-15-9	20.06.2011
46	Strontium chromate	7789-06-2	20.06.2011
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	20.06.2011
48	Hydrazine	302-01-2 7803-57-8	20.06.2011
49	1-Methyl-2-pyrrolidone	872-50-4	20.06.2011
50	1,2,3-Trichloropropane	96-18-4	20.06.2011
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	20.06.2011
52	Lead styphnate	15245-44-0	19.12.2011
53	Lead diazide, Lead azide	13424-46-9	19.12.2011
54	Lead dipicrate	6477-64-1	19.12.2011
55	Phenolphthalein	77-09-8	19.12.2011
56	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	19.12.2011
57	N,N-dimethylacetamide	127-19-5	19.12.2011
58	Trilead diarsenate	3687-31-8	19.12.2011
59	Calcium arsenate	7778-44-1	19.12.2011
60	Arsenic acid	7778-39-4	19.12.2011
61	Bis(2-methoxyethyl) ether	111-96-6	19.12.2011
62	1,2-dichloroethane	107-06-2	19.12.2011
63	4-(1,1,3,3-Tetramethylbutyl)phenol; 4-tert-octyl phenol	140-66-9	19.12.2011
64	2-Methoxyaniline; o-Anisidine	90-04-0	19.12.2011
65	Bis(2-methoxyethyl) phthalate	117-82-8	19.12.2011
66	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	19.12.2011
67	Zirconia Aluminosilicate Refractory Ceramic Fibres*3	JAMP-SN0055*2	19.12.2011
68	Aluminosilicate Refractory Ceramic Fibres*4	JAMP-SN0007*2	19.12.2011
69	Pentazinc chromate octahydroxide	49663-84-5	19.12.2011
70	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	19.12.2011
71	Dichromium tris(chromate)	24613-89-6	19.12.2011
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	18.06.2012
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	18.06.2012
74	Diboron trioxide	1303-86-2	18.06.2012
75	Formamide	75-12-7	18.06.2012
76	Lead(II) bis(methanesulfonate)	17570-76-2	18.06.2012
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	18.06.2012
78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	18.06.2012
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	18.06.2012
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	18.06.2012
81	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)*5	2580-56-5	18.06.2012
82	[4-[[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)*5	548-62-9	18.06.2012
83	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol*5	561-41-1	18.06.2012
84	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)*5	6786-83-0	18.06.2012
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	19.12.2012
86	Pentacosafuorotridecanoic acid	72629-94-8	19.12.2012
87	Tricosafuorododecanoic acid	307-55-1	19.12.2012
88	Henicosafuoroundecanoic acid	2058-94-8	19.12.2012

No.	Substances group	CAS number	Date of inclusion
89	Heptacosafuorotetradecanoic acid	376-06-7	19.12.2012
90	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	19.12.2012
91	Cyclohexane-1,2-dicarboxylic anhydride [1] cis-cyclohexane-1,2-dicarboxylic anhydride [2] trans-cyclohexane-1,2-dicarboxylic anhydride [3]*6	85-42-7 13149-00-3 14166-21-3	19.12.2012
92	Hexahydromethylphthalic anhydride [1] Hexahydro-4-methylphthalic anhydride [2] Hexahydro-1-methylphthalic anhydride [3] Hexahydro-3-methylphthalic anhydride [4]*7	25550-51-0 19438-60-9 48122-14-1 57110-29-9	19.12.2012
93	4-Nonylphenol, branched and linear*8	JAMP-SN0082*2	19.12.2012
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated*9	JAMP-SN0081*2	19.12.2012
95	Methoxyacetic acid	625-45-6	19.12.2012
96	N,N-dimethylformamide	68-12-2	19.12.2012
97	Dibutyltin dichloride (DBTC)	683-18-1	19.12.2012
98	Lead monoxide (Lead oxide)	1317-36-8	19.12.2012
99	Orange lead (Lead tetroxide)	1314-41-6	19.12.2012
100	Lead bis(tetrafluoroborate)	13814-96-5	19.12.2012
101	Trilead bis(carbonate)dihydroxide	1319-46-6	19.12.2012
102	Lead titanium trioxide	12060-00-3	19.12.2012
103	Lead titanium zirconium oxide	12626-81-2	19.12.2012
104	Silicic acid, lead salt	11120-22-2	19.12.2012
105	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped*10	68784-75-8	19.12.2012
106	1-bromopropane (n-propyl bromide)	106-94-5	19.12.2012
107	Methyloxirane (Propylene oxide)	75-56-9	19.12.2012
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	19.12.2012
109	Diisopentylphthalate (DIPP)	605-50-5	19.12.2012
110	N-pentyl-isopentylphthalate	776297-69-9	19.12.2012
111	1,2-diethoxyethane	629-14-1	19.12.2012
112	Acetic acid, lead salt, basic	51404-69-4	19.12.2012
113	Lead oxide sulfate	12036-76-9	19.12.2012
114	[Phthalato(2-)]dioxotrilead	69011-06-9	19.12.2012
115	Dioxobis(stearato)trilead	12578-12-0	19.12.2012
116	Fatty acids, C16-18, lead salts	91031-62-8	19.12.2012
117	Lead cyanamidate	20837-86-9	19.12.2012
118	Lead dinitrate	10099-74-8	19.12.2012
119	Pentalead tetraoxide sulphate	12065-90-6	19.12.2012
120	Pyrochlore, antimony lead yellow	8012-00-8	19.12.2012
121	Sulfurous acid, lead salt, dibasic	62229-08-7	19.12.2012
122	Tetraethyllead	78-00-2	19.12.2012
123	Tetralead trioxide sulphate	12202-17-4	19.12.2012
124	Trilead dioxide phosphonate	12141-20-7	19.12.2012
125	Furan	110-00-9	19.12.2012
126	Diethyl sulphate	64-67-5	19.12.2012
127	Dimethyl sulphate	77-78-1	19.12.2012
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	19.12.2012
129	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	19.12.2012
130	4,4'-methylenedi-o-toluidine	838-88-0	19.12.2012
131	4,4'-oxydianiline and its salts	101-80-4	19.12.2012
132	4-aminoazobenzene	60-09-3	19.12.2012
133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	19.12.2012
134	6-methoxy-m-toluidine (p-cresidine)	120-71-8	19.12.2012
135	Biphenyl-4-ylamine	92-67-1	19.12.2012
136	o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3	19.12.2012
137	o-toluidine	95-53-4	19.12.2012
138	N-methylacetamide	79-16-3	19.12.2012
139	Cadmium	7440-43-9	20.06.2013
140	Cadmium oxide	1306-19-0	20.06.2013
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	20.06.2013
142	Pentadecafluorooctanoic acid (PFOA)	335-67-1	20.06.2013
143	Dipentyl phthalate (DPP)	131-18-0	20.06.2013

No.	Substances group	CAS number	Date of inclusion
144	4-Nonylphenol, branched and linear, ethoxylated*11	JAMP-SN0083*2	20.06.2013
145	Cadmium sulphide	1306-23-6	16.12.2013
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	16.12.2013
147	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	16.12.2013
148	Dihexyl phthalate	84-75-3	16.12.2013
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	16.12.2013
150	Lead di(acetate)	301-04-2	16.12.2013
151	Trixylyl phosphate	25155-23-1	16.12.2013
152	Cadmium chloride	10108-64-2	16.06.2014
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	16.06.2014
154	Sodium peroxometaborate	7632-04-4	16.06.2014
155	Sodium perborate; perboric acid, sodium salt*1	15120-21-5 11138-47-9 (13517-20-9, 37244-98-7, 12040-72-1, 10332-33-9 , 10486-00-7)	16.06.2014
156	Cadmium fluoride	7790-79-6	17.12.2014
157	Cadmium sulphate	10124-36-4 31119-53-6	17.12.2014
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	17.12.2014
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	17.12.2014
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	17.12.2014
161	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) *12	JAMP-SN0084*2	17.12.2014
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters*13; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters*13	68515-51-5 68648-93-1	15.06.2015
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2]*14	JAMP-SN0085*2	15.06.2015
164	1,3-propanesultone	1120-71-4	17.12.2015
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	17.12.2015
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	17.12.2015
167	Nitrobenzene	98-95-3	17.12.2015
168	Perfluorononan-1-oiic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	17.12.2015
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	20.06.2016

*1: The substance classified into the this substances group also includes substances other than the CAS number listed in this table. (Please refer to ECHA website.)

*2: It means substances being assigned JAMP- SN (Substance Number).

The CAS number of example substances are shown below.

JAMP-SN0081 : CAS No. 2315-61-9, 2315-67-5, 2497-59-8, 9002-93-1

JAMP-SN0082 : CAS No. 104-40-5, 142731-63-3, 17404-66-9, 186825-36-5, 26543-97-5, 30784-30-6, 52427-13-1, 84852-15-3

JAMP-SN0083 : CAS No. 14409-72-4, 20427-84-3, 26027-38-3, 27942-27-4, 34166-38-6, 7311-27-5, [104-35-8](#), [127087-87-0](#), [156609-10-8](#), [37205-87-1](#)

JAMP-SN0085 : CAS No. 117933-89-8, 186309-28-4, 343934-04-3, 343934-05-4, 676367-02-5, 676367-03-6, 676367-04-7, 676367-05-8, 676367-06-9, 676367-07-0, 676367-08-1, 676367-09-2

*3: Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions:

a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges

- b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm).
- c) alkaline oxide and alkali earth oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight
- *4: Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions:
- a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges
- b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm)
- c) alkaline oxide and alkali earth oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight
- *5: with $\geq 0.1\%$ of Michler's ketone (CAS No.90-94-8) or Michler's base (CAS No.101-61-1)
- *6: The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry.
- *7: 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.
- *8: substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof
- *9: covering well-defined substances and UVCB substances, polymers and homologues
- *10: 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.
- *11: 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
- *12: It is stated as reaction product, however, it means "the substances which consist of DOTE and MOTE", in practice.
- *13: with $\geq 0.3\%$ of dihexyl phthalate (CAS No. 84-75-3)
- *14: covering any of the individual stereoisomers of [1] and [2] or any combination thereof

<Please see also references>

*Candidate List of SVHC of ECHA website <http://echa.europa.eu/candidate-list-table>

Appendix 4. Example substance list

No.	Chemical substance group	Chemical name	CAS No.
1	Lead and its compounds	Lead	7439-92-1
		Lead hydrogen arsenate	7784-40-9
		Lead(II) carbonate	598-63-0
		Lead(IV) oxide	1309-60-0
		Lead(II,IV) oxide	1314-41-6
		Lead(II) sulfide	1314-87-0
		Lead(II) oxide	1317-36-8
		Lead(II) carbonate basic	1319-46-6
		Lead hydroxidcarbonate	1344-36-1
		Lead(II) sulfate	7446-14-2
		Lead(II) phosphate	7446-27-7
		Lead(II) chromate	7758-97-6
		Lead(II) titanate	12060-00-3
		Lead sulfate,sulphuric acid, lead salt	15739-80-7
		Lead di(acetate)	301-04-2
		Acetic acid, lead(2+) salt, trihydrate	6080-56-4
		lead selenide	12069-00-0
		Lead oxide sulfate (Pb4O3(SO4))	12202-17-4
		Lead distearate	1072-35-1
		Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
		Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
		Lead styphnate	15245-44-0
		Lead diazide, Lead azide	13424-46-9
		Lead dipicrate	6477-64-1
		Trilead diarsenate	3687-31-8
		Lead(II) bis(methanesulfonate)	17570-76-2
		Lead bis(tetrafluoroborate)	13814-96-5
		Lead titanium zirconium oxide	12626-81-2
		Silicic acid, lead salt	11120-22-2
		Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped	68784-75-8
		Acetic acid, lead salt, basic	51404-69-4
		Lead oxide sulfate	12036-76-9
		[Phthalato(2-)]dioxotrilead	69011-06-9
Dioxobis(stearato)trilead	12578-12-0		

No.	Chemical substance group	Chemical name	CAS No.
1	Lead and its compounds	Fatty acids, C16-18, lead salts	91031-62-8
		Lead cyanidate	20837-86-9
		Lead dinitrate	10099-74-8
		Pentalead tetraoxide sulphate	12065-90-6
		Pyrochlore, antimony lead yellow	8012-00-8
		Sulfurous acid, lead salt, dibasic	62229-08-7
		Tetraethyllead	78-00-2
		Trilead dioxide phosphonate	12141-20-7
		Other lead compounds	JAMP-SN0023
2	Mercury and its compounds	Mercury	7439-97-6
		mercury dichloride	7487-94-7
		Mercury(II) oxide	21908-53-2
		mercury sulphate	7783-35-9
		mercury dinitrate	10045-94-0
		mercury sulphide, natural	1344-48-5
		Other mercury compounds	JAMP-SN0024
3	Cadmium and its compounds	Cadmium	7440-43-9
		Cadmium oxide	1306-19-0
		Cadmium sulphide	1306-23-6
		Cadmium chloride	10108-64-2
		Cadmium sulfate	10124-36-4
		Cadmium sulfite	31119-53-6
		Cadmium fluoride	7790-79-6
		Other cadmium compounds	JAMP-SN0016
4	Hexavalent chromium compounds	Sodium dichromate	10588-01-9
		Disodium dichromate dihydrate	7789-12-0
		Chromium(VI) oxide	1333-82-0
		Calcium chromate	13765-19-0
		Lead(II) chromate	7758-97-6
		Potassium dichromate	7778-50-9
		Potassium chromate	7789-00-6
		barium chromate	10294-40-3
		Sodium chromate	7775-11-3
		Strontium chromate	7789-06-2
		zinc chromate	13530-65-9
		Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
		Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
		Ammonium dichromate	7789-09-5
		Chromic acid	7738-94-5
		Dichromic acid	13530-68-2
		Pentazinc chromate octahydroxide	49663-84-5
		Potassium hydroxyoctaoxidizincatedichromate	11103-86-9
		Dichromium tris(chromate)	24613-89-6
		Oligomers of chromic acid and dichromic acid	JAMP-SN0071
Other hexavalent chromium compounds	JAMP-SN0019		
5	Polybrominated biphenyls (PBB)	Polybromobiphenyls	2052-07-5
			2113-57-7
			92-66-0
			59536-65-1
		decabromo-1,1'-biphenyl	13654-09-6
		Octabromobiphenyl	61288-13-9
		Hexabromobiphenyl	59080-40-9
			36355-01-8
			67774-32-7
	40088-45-7		
	92-86-4		
	Other polybrominated biphenyls (PBB)	JAMP-SN0065	
6	Polybrominated diphenyl ethers (PBDE)	Hexabromodiphenylether	36483-60-0
		Octabromodiphenylether	32536-52-0
		Decabromodiphenylether	1163-19-5
		Pentabromodiphenylether	32534-81-9
		Tetrabromodiphenylether	40088-47-9
		Heptabromodiphenylether	68928-80-3
		Nonabromodiphenylether	63936-56-1
		diphenyl ether, tribromo derivative	49690-94-0

No.	Chemical substance group	Chemical name	CAS No.
6	Polybrominated diphenyl ethers (PBDE)	Dibromodiphenyl ether	2050-47-7
		Polybrominated diphenyl ether	101-55-3
		Other polybrominated diphenyl ethers (PBDE)	JAMP-SN0066
7	Polychlorinated biphenyls (PCBs) and specific substitutes	Polychlorinated biphenyls (PCBs)	1336-36-3
		Aroclor	12767-79-2
		Chlorodiphenyl (Aroclor 1260)	11096-82-5
		Kanechlor 500	27323-18-8
		Aroclor 1254	11097-69-1
		Monomethyl dichlorodiphenyl ethane	81161-70-8
		Bromobenzylbro motoluene	99688-47-8
		Dichloro((dichlorophenyl)methyl)methyl-benzene	76253-60-6
		Other Polychlorinated biphenyls (PCBs)	-
8	Polychlorinated terphenyls (PCTs)	Polychlorinated terphenyls (PCTs)	61788-33-8
		Other polychlorinated terphenyls (PCTs)	-
9	Asbestos	Asbestos	1332-21-4
		Actinolite	77536-66-4
		Amosite	12172-73-5
		Anthophyllite	77536-67-5
		Chrysotile	12001-29-5
		Crocidolite	12001-28-4
		Tremolite	77536-68-6
		Other Asbestos	JAMP-SN0056 JAMP-SN0057
10	Specific organic tin compounds (TBTO, Tri-substituted organostannic compounds)	Bis(tri-n-butyltin) oxide (TBTO)	56-35-9
		Triphenyltin N,N'-dimethyldithiocarbamate	1803-12-9
		Triphenyltin fluoride	379-52-2
		Triphenyltin acetate	900-95-8
		Triphenyltin chloride	639-58-7
		Triphenyltin hydroxide	76-87-9
		Triphenyltin fatty acid salts(C=9-11)	47672-31-1 18380-71-7 18380-72-8 94850-90-5
		Triphenyltin chloroacetate	7094-94-2
		Triphenyltin methacrylate	2155-70-6
		Bis(tributyltin) fumarate	6454-35-9
		Tributyltin fluoride	1983-10-4
		Bis(tributyltin) 2,3-dibromosuccinate	31732-71-5
		Tributyltin acetate	56-36-0
		Tributyltin laurate	3090-36-6
		Tributyltin phthalate	4782-29-0
		Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate(alkyl; C=8)	67772-01-4
		Tributyltin sulfamate	6517-25-5
		Tributyltin chloride	1461-22-9 7342-38-3
		Mixture of tributyltin cyclopentanecarboxylate and its analogs(Tributyltin naphthenate)	85409-17-2
		Mixture of tributyltin 1,2,3,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthlenecarboxylate and its analogs(Tributyltin rosin salt)	26239-64-5
		Tri-n-butyltinbromode	1461-23-0
		tripheny tin	1262-21-1
		Tri-n-butyltin methanolate	1067-52-3
		Tributyltin hydroxide	1067-97-6
		Tri-n-butyltin methanesulfonate	13302-06-2
		(acryloyloxy)tributylstannane	13331-52-7
		Bis(tributyltin) maleate	14275-57-1
		Tributyltin dimethyldithiocarbamate	20369-63-5
		Tributyltin cyanide	2179-92-2
		Tributyltin linoleate	24124-25-2
Bis(tributyltin) itaconate	25711-26-6		

No.	Chemical substance group	Chemical name	CAS No.
10	Specific organic tin compounds (TBTO, Tri-substituted organostannic compounds)	Tributyltin cinnamate	27147-18-8
		Tripropyltin bromide	2767-61-5
		Tributyl(oleoyloxy)stannane	3090-35-5
		Tributyltin gammachlorobutyrate	33550-22-0
		Tributyl(4-nitrophenoxy)stannane	3644-32-4
		([1,1'-Biphenyl]-2-yloxy)tributylstannane	3644-37-9
		Tributyltin naphthenate	36631-23-9
		Tributyltin nonanoate	4027-14-9
		Cyanatotributylstannane	4027-17-2
		4-oxo-4-[(tributylstannyl)oxy]but-2-enoic acid	4027-18-3
		Tributylstannyl 2-hydroxybenzoate	4342-30-7
		Tributyltin benzoate	4342-36-3
		Tributyltin 2-ethylhexanoate	5035-67-6
		Tributyltin isopropylsuccinate	53404-82-3
		Tributyltin monopropylene glycol maleate	53466-85-6
		Tributyltin chloroacetate	5847-52-9
		Tributyltin	56573-85-4
		Tri-n-butylisocyanatotin	681-99-2
		Tri-n-butyltin hydride	688-73-3
		Tributyl(undecoxy)stannane	69226-47-7
		Tributyltin iodide	7342-47-4
		Tributyltin iodoacetate	73927-91-0
		o-Iodobenzoic acid tributylstannyl ester	73927-93-2
		Tributyltin .beta.-iodopropionate	73927-95-4
		Tributyltin isooctylthioacetate	73927-97-6
		Benzoic acid, p-iodo-, tributylstannyl ester	73940-88-2
		Stannane, tributyl(2-(2,4,5-trichlorophenoxy)-2-propionyloxy)-	73940-89-3
		1,3,5-Tris(tributylstannyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione	752-58-9
		Triphenyltin hydride	892-20-6
		Triphenyliodotin	894-09-7
		[(1-Oxododecyl)oxy]triphenylstannane	3644-29-9
		Tributyl(pentachlorophenoxy)stannane	3644-38-0
		[(terephthaloylbis(oxy))]bis(tributylstannane)	4756-53-0
		Tributyl(formyloxy)stannane	5847-51-8
		Stannylum, triphenyl-	668-34-8
		Benzoic acid triphenyltin	910-06-5
		Bromotrimethylstannane	1066-44-0
		Trimethyltin chloride	1066-45-1
		Trimethyltin azide	1118-03-2
		Trimethyltin acetate	1118-14-5
		Stannane,triethylphenoxy-	1529-30-2
		Triethyltin acetate	1907-13-7
		Tri-n-propylchlorotin	2279-76-7
		Triethyliodotin(IV)	2943-86-4
		Tri-n-propyltin acetate	3267-78-5
		Tripropyltin methacrylate	4154-35-2
		Trimethyltin thiocyanate	4638-25-9
Trimethyltin hydroxide	56-24-6		
Tripropyltin laurate	57808-37-4		
Trimethyltinsulphate	63869-87-4		
Tripropyltin iodide	7342-45-2		
Stannane, (iodoacetoxy)tripropyl-	73927-92-1		
Trimethyliodostannane	811-73-4		
Triethyltin chloride	994-31-0		
Triethyltin hydroxide	994-32-1		
Other tri-substituted organostannic compounds	JAMP-SN0068		
11	Dibutyltin (DBT) compounds	Dibutyltin maleate	78-04-6
		Dibutyl tin	1002-53-5
		Dibutyltin dimaleate	10192-92-4
		Dibutyltin diacetate	1067-33-0
		Dibutyltin dilauryl mercaptide	1185-81-5
		Ethyl (Z,Z)-9,9-dibutyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate	13173-04-1
		Dibutylbis(octadec-9(Z)-enoxyloxy)stannane	13323-62-1

No.	Chemical substance group	Chemical name	CAS No.
11	Dibutyltin (DBT) compounds	Dibutylbis(palmitoyloxy)stannane	13323-63-2
		Dibutylbis[(2-hydroxybenzoyl)oxy]stannane	14214-24-5
		Methyl (Z,Z)-8,8-dibutyl-3,6,10-trioxo-2,7,9-trioxa-8-stannatrideca-4,11-dien-13-oate	15546-11-9
		2-ethylhexyl 6,6-dibutyl-14-ethyl-4,8,11-trioxo-5,7,12-trioxa-6-stannaoctadeca-2,9-dienoate	15546-12-0
		Butyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stanna-hexadeca-2,9-dienoate	15546-16-4
		Tin, dibutyl(1,2-ethanediamine- κ .N1, κ .N2)bis(1-isooctyl 2-butenedioato- κ .O4)-	163206-28-8
		Bis(acetato)dibutyltin	17523-06-7
		Dibutylbis[(1-oxohexyl)oxy]stannane	19704-60-0
		Isopropyl (Z,Z)-9,9-dibutyl-2-methyl-4,7,11-trioxo-3,8,10-trioxa-9-stannatetradeca-5,12-dien-14-oate	22535-42-8
		Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
		Tin, dibutyl-bis-isooctylmercaptoacetate	25168-24-5
		Diisooctyl 3,3'-[(dibutylstannylene)bis(thio)]-dipropionate	26761-46-6
		Octyl 4,4-dibutyl-7-oxo-8-oxa-3,5-dithia-4-stanna-hexadecanoate	2781-09-1
		Dibutyltin bis(2-ethylhexanoate)	2781-10-4
		(Z)-octadec-9-enyl (all-Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatriaconta-2,9,21-trienoate	29881-72-9
		Acetate, S,S'-bisooctylmercapto-, dibutyltin	32011-18-0
		Dibutylbis(methyl 3-mercaptopropionato-O,S)tin	32011-19-1
		Dodecyl (Z,Z)-6,6-dibutyl-4,8,11-trioxo-5,7,12-trioxa-6-stannatetracos-2,9-dienoate	33466-31-8
		Dibutoxydibutylstannane	3349-36-8
		Dibutylbis(octanoyloxy)stannane	4731-77-5
		Dodecyl 5,5-dibutyl-9-oxo-10-oxa-4,6-dithia-5-stannadocosanoate	51287-83-3
		2-ethylhexyl 5,5-dibutyl-12-ethyl-9-oxo-10-oxa-4,6-dithia-5-stanna-hexadecanoate	53202-61-2
		Dibutylbis(ethyl 3-oxobutyrate-O1',O3)tin	54581-65-6
		Bis(benzoyloxy)dibutylstannane	5847-54-1
		Dibutylbis(stearoyloxy)stannane	5847-55-2
		Diisobutyltin oxide	61947-30-6
		Dibutylbis(triethylamine)difluorotin	67924-24-7
		Dibutyl[N-(carboxymethyl)-N-(2-hydroxyethyl)glycinato(2-)]tin	68239-46-3
		Stannane, dibutyl-dichloro- [SVHC]	683-18-1
		Benzyl (Z,Z)-8,8-dibutyl-3,6,10-trioxo-1-phenyl-2,7,9-trioxa-8-stannatrideca-4,11-dien-13-oate	7324-74-5
		Stannane, dibutylbis[(1-oxododecyl)oxy]-	77-58-7
		2,2-dibutyl-dihydro-6H-1,3,2-oxathia-stannin-6-one	78-06-8
		2,2-dibutyl-1,3,2-oxathia-stannolan-5-one	78-20-6
		Stannane, dibutyl-oxo-	818-08-6
		Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3
		Dibutylbis[(1-oxoisooctyl)oxy]stannane	85702-74-5
		Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2
		2-Butenoic acid, 4,4'-[(dibutylstannylene)-bis(oxy)]bis[4-oxo-, diisooctyl ester, (2Z,2'Z)-	25168-21-2
		8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 4,4-dibutyl-10-ethyl-7-oxo-, 2-ethylhexyl ester	10584-98-2
		Butanoic acid,1,1'-(dibutylstannylene) ester	28660-63-1
Dibutylbis[(1-oxoisooctadecyl)oxy]stannane	59963-28-9		
Other dibutyltin (DBT) compounds	JAMP-SN0072		
12	Dimethyl fumarate (DMF)	Dimethyl fumarate (DMF)	624-49-7
13	Short chain chlorinated paraffins (C10-C13)	Short-chain Chlorinated paraffin (C10-C13)	85535-84-8
		Chlorinated Paraffins (C12, 60% Chlorine)	108171-26-2
		Paraffin waxes and Hydrocarbon waxes, chloro	63449-39-8
		Chlorinated paraffin (C12-13)	71011-12-6
		Alkanes, chloro (C10-13)	61788-76-9
		Other short chain chlorinated paraffins (C10-C13)	-

No.	Chemical substance group	Chemical name	CAS No.
14	Polychlorinated naphthalenes (more than 1 chlorine atoms)	Polychlorinated Naphthalenes	70776-03-3
		Trichloronaphthalene	1321-65-9
		Tetrachloronaphthalene	1335-88-2
		Pentachloronaphthalene	1321-64-8
		Octachloronaphthalene	2234-13-1
		1-Chloronaphthalene	90-13-1
		2-Chloronaphthalene	91-58-7
		1,5-Dichloronaphthalene	1825-30-5
		1,4-Dichloronaphthalene	1825-31-6
		1,2-Dichloronaphthalene	2050-69-3
		1,6-Dichloronaphthalene	2050-72-8
		1,7-Dichloronaphthalene	2050-73-9
		1,8-Dichloronaphthalene	2050-74-0
		2,3-Dichloronaphthalene	2050-75-1
		2,6-Dichloronaphthalene	2065-70-5
		1,3-Dichloronaphthalene	2198-75-6
2,7-Dichloronaphthalene	2198-77-8		
Dichloronaphthalene	28699-88-9		
Monochloronaphthalene	25586-43-0		
Other polychlorinated Naphthalenes	-		
15	Perfluorooctane sulfonic acid and its salts (PFOS)	1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	307-35-7
		2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester	376-14-7
		2-Propenoic acid, 2-[butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester	383-07-3
		2-Propenoic acid, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester	423-82-5
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-2-propenyl-	423-86-9
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	754-91-6
		1-Propanaminium, 3-[[heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, iodide	1652-63-7
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-	1691-99-2
		1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	1763-23-1
		Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, ethyl ester	1869-77-8
		1-Octanesulfonamide, N,N',N''-[phosphinylidynetris(oxy-2,1-ethanediy)]tris[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	2250-98-8
		1-Octanesulfonamide, N-butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-	2263-09-4
		1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt	2795-39-3
		Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-	2991-50-6
		Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonooxy)ethyl]-	3820-83-5
		Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, sodium salt	3871-50-9
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	4151-50-2
		1-Octanesulfonamide, 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)sulfonyl]methylamino]ethyl ester	14650-24-9
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-methyl-	24448-09-7

No.	Chemical substance group	Chemical name	CAS No.
15	Perfluorooctane sulfonic acid and its salts (PFOS)	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-2-propenyl-	24924-36-5
		2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl] ester	25268-77-3
		1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt	29081-56-9
		Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-	29117-08-6
		1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, lithium salt	29457-72-5
		1-Octanesulfonamide, 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-Octanesulfonamide, N,N'-[phosphinicobis(oxy-2,1-ethanediyl)]bis[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt	30381-98-7
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-	31506-32-8
		1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, chloride	38006-74-5
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(phenylmethyl)-	50598-29-3
		Poly(oxy-1,2-ethanediyl), .alpha.-[2-[[[(heptadecafluorooctyl)sulfonyl]propylamino]ethyl]-.omega.-hydroxy-	52550-45-5
		Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid (1:1)	56773-42-3
		Benzoic acid, 2,3,4,5-tetrachloro-6-[[[3-[[[(heptadecafluorooctyl)sulfonyl]oxy]phenyl]amino]carbonyl]-, monopotassium salt	57589-85-2
		2-Propenoic acid, 4-[[[(heptadecafluorooctyl)sulfonyl]methylamino]butyl] ester	58920-31-3
		2-Propenoic acid, 2-methyl-, 4-[[[(heptadecafluorooctyl)sulfonyl]methylamino]butyl] ester	61577-14-8
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-	61660-12-6
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trichlorosilyl)propyl]-	67939-42-8
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonoxy)ethyl]-, diammonium salt	67969-69-1
		1-Octanesulfonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, monohydrochloride	67939-88-2
		Carbamic acid, (4-methyl-1,3-phenylene)bis-, bis[2-[ethyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl] ester	68081-83-4
		1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulfonyl](3-sulfopropyl)amino]-N-(2-hydroxyethyl)-N,N-dimethyl-, inner salt	68298-11-3
		2-Propenoic acid, eicosyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl] 2-propenoate, hexadecyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and octadecyl 2-propenoate	68329-56-6
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(4-hydroxybutyl)-N-methyl-	68239-73-6
		1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, iodide, ammonium salt	68310-75-8
		2-Propenoic acid, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-propenoate	68541-80-0
		2-Propenoic acid, butyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl] 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate	68555-90-8

No.	Chemical substance group	Chemical name	CAS No.
15	Perfluorooctane sulfonic acid and its salts (PFOS)	2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate	68555-91-9
		2-Propenoic acid, 2-methyl-, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate	68555-92-0
		Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 1,1'-methylenebis[4-isocyanatobenzene]	68608-14-0
		1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-, reaction products with N-ethyl-1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-1-butanefulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-1-heptanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-1-hexanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,5-undecafluoro-N-(2-hydroxyethyl)-1-pentanesulfonamide, polymethylenepolyphenylene isocyanate and stearyl alc.	68649-26-3
		2-Propenoic acid, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and .alpha.-(1-oxo-2-propenyl)-.omega.-methoxypoly(oxy-1,2-ethanediy)	68867-60-7
		2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and 2-methyl-1,3-butadiene	68877-32-7
		Chromium, diaquatetrachloro[.mu.-[N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]glycinato-.kappa.O:.kappa.O']]-.mu.-hydroxybis(2-methyl-1-propanol)di-	68891-96-3
		2-Propenoic acid, eicosyl ester, polymers with branched octyl 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 stearyl acrylate	68909-15-9
		Poly(oxy-1,2-ethanediy), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-methoxy-	68958-61-2
		1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)	70225-14-8
		2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 1,1-dichloroethene, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, N-(hydroxymethyl)-2-propenamamide, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate	70776-36-2
		Phosphonic acid, [3-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]propyl]-	71463-78-0
Phosphonic acid, [3-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]propyl]-, diethyl ester	71463-80-4		

No.	Chemical substance group	化学名	CAS No.
15	Perfluorooctane sulfonic acid and its salts (PFOS)	2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid	71487-20-2
		Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with epichlorohydrin, adipates (esters)	91081-99-1
		Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-ethoxyethyl 2-propenoate, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate and oxiranylmethyl 2-methyl-2-propenoate	92265-81-1
		1-Propanesulfonic acid, 3-[[3-(dimethylamino)propyl][(heptadecafluorooctyl)sulfonyl]amino]-2-hydroxy-, monosodium salt	94133-90-1
		Carbamic acid, [5-[[[2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethoxy]carbonyl]amino]-2-methylphenyl]-, 9-octadecenyl ester, (Z)-	94313-84-5
		Sulfonamides, C7-8-alkane, perfluoro, N-methyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl], polymers with 2-ethoxyethyl acrylate, glycidyl methacrylate and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride	98999-57-6
		2-Propenoic acid, 2-methyl-, polymers with Bu methacrylate, lauryl methacrylate and 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate	127133-66-8
		Sulfonamides, C4-8-alkane, perfluoro, N-methyl-N-(oxiranylmethyl)	129813-71-4
		Fatty acids, C18-unsatd., trimers, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters	148240-78-2
		Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with 1,6-diisocyanatohexane homopolymer and ethylene glycol	148684-79-1
		Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 2-ethyl-1-hexanol and polymethylenepolyphenylene isocyanate	160901-25-7
		1-Octanesulfonamide, 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
		Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), polymers with 1,1'-methylenebis[4-isocyanatobenzene] and polymethylenepolyphenylene isocyanate, 2-ethylhexyl esters, Me Et ketone oxime-blocked	178535-22-3
		1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-, reaction products with benzene-chlorine-sulfur chloride (S2Cl2) reaction products chlorides	182700-90-9
		2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and 2-propenoic acid	-
		Polymethylenepolyphenylene isocyanate and bis(4-NCO-phenyl)methane reaction products with 2-ethyl-1-hexanol, 2-butanone, oxime, N-ethyl-N-(2-hydroxyethyl)-1-C4-C8 perfluoroalkanesulfonamide	-
		Sulfonamides, C4-8-alkane, perfluoro, N-[3-(dimethylamino)propyl], reaction products with acrylic acid	192662-29-6
1-Decanaminium, 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-1-octanesulfonic acid (1:1)	251099-16-8		
Fatty acids, linseed-oil, dimers, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters	306973-46-6		
Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with 12-hydroxyoctadecanoic acid and 2,4-TDI, ammonium salts	306973-47-7		
Sulfonamides, C4-8-alkane, perfluoro, N-methyl-N-[(3-octadecyl-2-oxo-5-oxazolidinyl)methyl]	306974-19-6		

No.	Chemical substance group	Chemical name	CAS No.
15	Perfluorooctane sulfonic acid and its salts (PFOS)	Siloxanes and Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl group]-terminated, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and stearyl methacrylate	306974-28-7
		Sulfonic acids, C6-8-alkane, perfluoro, compds. with polyethylene-polypropylene glycol bis(2-aminopropyl) ether	306974-45-8
		Fatty acids, C18-unsatd., dimers, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl esters	306974-63-0
		Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer 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-(2-hydroxyethyl)-1-heptanesulfonamide, compds. with triethylamine	306975-56-4
		Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] and 1,2,3-propanetriol, 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-(2-hydroxyethyl)-1-heptanesulfonamide, compds. with morpholine	306975-57-5
		2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidene chloride	306975-62-2
		Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, polymer with 1,6-diisocyanatohexane, N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides-blocked	306975-84-8
		2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with N-(hydroxymethyl)-2-propenamide, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate, stearyl methacrylate and vinylidene chloride	306975-85-9
		1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-propenyl)oxy]ethyl]-, bromide, polymers with Bu acrylate, Bu methacrylate and 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate	306976-25-0
		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-alkanesulfonamides-blocked	306976-55-6
		2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymers with acrylic acid, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and propylene glycol monoacrylate, hydrolyzed, compds. with 2,2'-(methylimino)bis[ethanol]	306977-58-2
		2-Propenoic acid, butyl ester, polymers with acrylamide, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidene chloride	306978-04-1
		Hexane, 1,6-diisocyanato-, homopolymer, N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides- and stearyl alc.-blocked	306978-65-4
		Poly(oxy-1,2-ethanediyl), .alpha.-[2-(methylamino)ethyl]-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-, N-[(perfluoro-C4-8-alkyl)sulfonyl] derivs.	306979-40-8
Sulfonamides, C4-8-alkane, perfluoro, N,N'-[1,6-hexanediy]bis[(2-oxo-3,5-oxazolidinediyl)methylene]]bis[N-methyl-	306980-27-8		
Other perfluorooctane sulfonic acid and its salts (PFOS)	JAMP-SN0035		
16	Perfluorooctanoic acid (PFOA) and its salts and esters	Pentadecafluorooctanoic acid (PFOA)	335-67-1
		Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
		Sodium pentadecafluorooctanoate	335-95-5
		Potassium perfluorooctanoate	2395-00-8
		Silver(1+) perfluorooctanoate	335-93-3
		Pentadecafluorooctyl fluoride	335-66-0
		Methyl perfluorooctanoate	376-27-2
		Ethyl perfluorooctanoate	3108-24-5
		Other Perfluorooctanoic acid (PFOA) and its salts and esters	JAMP-SN0036
17	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	3846-71-7

No.	Chemical substance group	Chemical name	CAS No.
18	Hexabromocyclododecane (HBCDD)	Hexabromocyclododecane	25637-99-4
		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
		rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6
		rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5
		(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7
		(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8
		(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9
		(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2
		(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5
		(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6
		(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7
		Other Hexabromocyclododecane	-
19	Benzenamine N-phenyl, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	Benzenamine N-phenyl, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9
20	Ozone Depleting Substances	CFC-11	75-69-4
		CFC-12	75-71-8
		CFC-113	354-58-5 76-13-1
		CFC-114	1320-37-2 76-14-2
		CFC-114a	374-07-2
		CFC-115	76-15-3
		Halon 1211	353-59-3
		Halon 1301	75-63-8
		Halon 2402	124-73-2
		Other Halons	-
		CFC-13	75-72-9
		CFC-111	354-56-3
		CFC-112	76-12-0 76-11-9
		CFC-211	422-78-6 135401-87-5
		CFC-212	3182-26-1
		CFC-213	2354-06-5 134237-31-3
		CFC-214	29255-31-0 2268-46-4
		CFC-215	1599-41-3 4259-43-2 1652-81-9
		CFC-216	661-97-2
		CFC-217	422-86-6
		Other Chloro-fluoro-carbons (CFC)	JAMP-SN0058
		Carbon tetrachloride	56-23-5
		1,1,1-Trichloroethane	71-55-6
		HCFC-21	75-43-4
		HCFC-22	75-45-6
		HCFC-31	593-70-4
		HCFC-121	134237-32-4 354-11-0 354-14-3
		HCFC-122	41834-16-6 354-21-2
		HCFC-123	34077-87-7
		HCFC-123	90454-18-5
HCFC-123	306-83-2		

No.	Chemical substance group	Chemical name	CAS No.
20	Ozone Depleting Substances	HCFC-123a	354-23-4
		HCFC-123b	812-04-4
		HCFC-124	63938-10-3
		HCFC-124	2837-89-0
		HCFC-124a	354-25-6
		HCFC-131	27154-33-2 (134237-34-6) 359-28-4 811-95-0
		HCFC-132	25915-78-0 1649-08-7 1842-05-3 471-43-2 431-06-1
		HCFC-133	1330-45-6 75-88-7
		HCFC-141	1717-00-6 (25167-88-8) 430-57-9
		HCFC-141b	1717-00-6
		HCFC-142	25497-29-4
		HCFC-142b	75-68-3
		HCFC-142a	25497-29-4
		HCFC-151	1615-75-4
		HCFC-221	134237-35-7
		HCFC-222	134237-36-8
		HCFC-223	134237-37-9
		HCFC-224	134237-38-0
		HCFC-225	127564-92-5 (2713-09-9)
		HCFC-225aa	128903-21-9
		HCFC-225ba	422-48-0
		HCFC-225bb	422-44-6
		HCFC-225ca	422-56-0
		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
		HCFC-226	134308-72-8
		HCFC-231	134190-48-0
		HCFC-232	134237-39-1
		HCFC-233	134237-40-4 7125-83-9
		HCFC-234	127564-83-4
HCFC-235	134237-41-5 460-92-4		
HCFC-241	134190-49-1		
HCFC-242	134237-42-6		
HCFC-243	134237-43-7 7125-99-7 338-75-0 460-69-5		
HCFC-244	134190-50-4 679-85-6		
HCFC-251	134190-51-5 818-99-5		
HCFC-252	134190-52-6		
HCFC-253	134237-44-8 460-35-5		

No.	Chemical substance group	Chemical name	CAS No.
20	Ozone Depleting Substances	HCFC-261	134237-45-9 7799-56-6
		HCFC-262	134190-53-7 102738-79-4
		HCFC-271	134190-54-8 420-44-0
		Other hydrochlorofluorocarbons (HCFC's)	JAMP-SN0061
		Dibromofluoromethane	1868-53-7
		Bromodifluoromethane	1511-62-2
		Bromofluoromethane	373-52-4
		Tetrabromofluoroethane	306-80-9
		Tribromodifluoroethane	7304-53-2
		Dibromotrifluoroethane	354-04-1
		Bromotetrafluoroethane	124-72-1
		Tribromofluoroethane	420-88-2
		Dibromodifluoroethane	75-82-1
		Bromotrifluoroethane	421-06-7
		Dibromofluoroethane	358-97-4
		Bromodifluoroethane	359-07-9
		Bromofluoroethane	762-49-2
		Hexabromofluoropropane	-
		Pentabromodifluoropropane	-
		Tetrabromotrifluoropropane	-
		Tribromotetrafluoropropane	666-48-8
		Dibromopentafluoropropane	431-78-7
		Bromohexafluoropropane	2252-79-1
		Pentabromofluoropropane	-
		Tetrabromodifluoropropane	148875-98-3
		Tribromotrifluoropropane	421-90-9
		Dibromotetrafluoropropane	460-86-6
		Bromopentafluoropropane	460-88-8
		Tetrabromofluoropropane	148875-95-0
		Tribromodifluoropropane	70192-80-2
		Dibromotrifluoropropane	70192-83-5
		Bromotetrafluoropropane	679-84-5
		Tribromofluoropropane	75372-14-4
		Dibromodifluoropropane	460-25-3
		Bromotrifluoropropane	421-46-5
		Dibromofluoropropane	51584-26-0
		Bromodifluoropropane	111483-20-6
		Bromofluoropropane	352-91-0
		Other hydrobromofluorocarbons (HBFC's)	JAMP-SN0060
		Chlorobromomethane	74-97-5
Methyl bromide	74-83-9		
21	Arsenic compounds	Gallium arsenide	1303-00-0
		Calcium arsenate	7778-44-1
		calcium arsenate	27152-57-4
		Arsenic pentoxide	1303-28-2
		Arsenic trioxide	1327-53-3
		Potassium arsonate	10124-50-2
		Potassium arsonate	7784-41-0
		Trilead diarsenate	3687-31-8
		Lead hydrogen arsenate	7784-40-9
		Triethyl arsenate	15606-95-8
		Arsenic acid	7778-39-4
		Other arsenic acid and its salts	JAMP-SN0009
		Other arsenic compounds	JAMP-SN0010
		22	Cobalt chloride
Cobalt (II) chloride, hexahydrate	7791-13-1		
Cobalt chloride (CoCl ₃)	10241-04-0		
Cobalt chloride (CoCl)	34240-80-7		
23	Polycyclic Aromatic Hydrocarbons (PAHs)	See Appendix 2 PAHs list.	-

No.	Chemical substance group	Chemical name	CAS No.		
24	Mirex	Mirex	2385-85-5		
25	Hexachlorobenzene	Hexachlorobenzene	118-74-1		
26	Chlorinated Paraffins	Alkanes, chloro; chloroparaffins (>C14)	61788-76-9		
		Chlorinated Paraffins (C23, 43% Chlorine)	108171-27-3		
		Alkanes, C14-17, chloro	85535-85-9		
		Chlorinated Paraffins, Medium Chain Length (MCCP)	JAMP-SN0018		
		Other Chlorinated Paraffins	-		
27	Halogenated organic compounds and Halogenated polymers	Polytetrafluoroethylene (PTFE)	9002-84-0		
		Perfluoroalkoxy(PFA)	26655-00-5		
		Fluorinated Ethylene Propylene (FEP)	25067-11-2		
		Ethylene tetrafluoroethylene (ETFE)	94228-79-2		
		Polyvinylidene difluoride (PVDF)	24937-79-9		
		Poly(vinyl fluoride)	24981-14-4		
		Poly(vinylidene fluoride co-hexafluoro-propylene)	9011-17-0		
		Trichloroethylene	79-01-6		
		1,2,3-Trichloropropane	96-18-4		
		[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		
		[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9		
		Pentacosafuorotridecanoic acid	72629-94-8		
		Tricosafuorododecanoic acid	307-55-1		
		Henicosafuoroundecanoic acid	2058-94-8		
		Heptacosafuorotetradecanoic acid	376-06-7		
		2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1		
		Perfluorononan-1-oic acid	375-95-1		
		Sodium salts of perfluorononan-1-oic-acid	21049-39-8		
		Ammonium salts of perfluorononan-1-oic-acid	4149-60-4		
		Other halogenated organic compounds and halogenated polymers	-		
		28	Halogenated Flame Retardants	3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
				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, 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				
Brominated epoxy resin end-capped with tribromophenol	135229-48-0				
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2				
TBBA-bis-(allyl-ether)	25327-89-3				
TBBA-dimethyl-ether	37853-61-5				
Tetrabromo-bisphenol S	39635-79-5				
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1				
2,4-Dibromophenol	615-58-7				
2,4,6-Tribromophenol	118-79-6				
Pentabromophenol	608-71-9				
2,4,6-Tribromo-phenyl-alltl-ether	3278-89-5				
Tribromo-phenyl-allyl-ether, unspecified	26762-91-4				
Bis(methyl)tetrabromo-phtalate	55481-60-2				
Bis(2-ethylhexyl)tetrabromo-phtalate	26040-51-7				
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-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				
Dibromo-neopentyl-glycol	3296-90-0				
Dibromo-propanol	96-13-9				
Tribromo-neopentyl-alcohol	36483-57-5				
Poly tribromo-styrene	57137-10-7				
Tribromo-styrene	61368-34-1				
Dibromo-styrene grafted PP	171091-06-8				
Poly-dibromo-styrene	31780-26-4				

No.	Chemical substance group	Chemical name	CAS No.
28	Halogenated Flame Retardants	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
		Tetrabromo-cyclo-octane	31454-48-5
		1,2-Dibromo-4-(1,2-dibromo-ethyl)cyclo-hexane	3322-93-8
		TBBA Na salt	25357-79-3
		Tetrabromo phthalic-anhydride	632-79-1
		Tris(2-chloroethyl) phosphate	115-96-8
		TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
		Poly(2,6-dibromo-phenylene oxide)	69882-11-7
		Tetra-decabromo-diphenoxy-benzene	58965-66-5
		1,2-Bis(2,4,6-tribromo-phenoxy)ethane	37853-59-1
		Tris(2-chloro-1-methylethyl) phosphate	13674-84-5
Other Brominated flame retardant	JAMP-SN0015		
Other Chlorinated Flame Retardants	JAMP-SN0075		
Other Halogenated Flame Retardants	-		
29	Halogenated polymers (excluding fluorinated plastic.)	Polyvinylidene chloride	9002-85-1
		Polychloroprene	9010-98-4
		Poly(vinyl chloride)	9002-86-2
		Polychlorotrifluoroethylene (PCTFE)	9002-83-9
		Ethylene chlorotrifluoroethylene (ECTFE)	25101-45-5
		Other halogenated polymers	-
30	Specific phthalate	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7
		Benzylbutylphthalate (BBP)	85-68-7
		Dibutyl phthalate (DBP)	84-74-2
		Dihexyl phthalate (DnHP)	84-75-3
		Diisononyl phthalate(DINP)	28553-12-0
		Diisononyl phthalate(DINP)	68515-48-0
		Diisodecyl phthalate(DIDP)	26761-40-0
		Diisodecyl phthalate(DIDP)	68515-49-1
		Diocetyl phthalate (DNOP)	117-84-0
31	Azo compounds forming specific amine	For specific amines, please see Appendix 1 "List of specific amines".	JAMP-SN0011
32	Selenium and its compounds	Selenium	7782-49-2
		Selenous acid	7783-00-8
		Hydrogen selenide	7783-07-5
		Sodium selenide	1313-85-5
		Selenium dioxide	7446-08-4
		Sodium selenate	10112-94-4
		Dimethyl selenide	593-79-3
		Selenium oxide	12640-89-0
		Other selenium compounds	JAMP-SN0053
33	Nickel and its compounds	Nickel	7440-02-0
		Nickel(II) oxide	1313-99-1
		Nickel(II) carbonate	3333-67-3
		Nickel(II) Sulfate	7786-81-4
		Nickel bis(sulphamidate)	13770-89-3
Other nickel compounds	JAMP-SN0027		
34	Organotin compounds (excluding specific organotin compounds and dibutyltin (DBT))	Tin, dichloro[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (OC-6-12)-	18253-54-8
		Diisooctyl 2,2'-[(dimethylstannylene)bis(thio)]diacetate	26636-01-1
		Diocetyl(tin(DOT) compounds	JAMP-SN0073
		Other organic tin compounds	JAMP-SN0080

No.	Chemical substance group	Chemical name	CAS No.
35	Beryllium oxide (BeO)	Beryllium oxide (BeO)	1304-56-9
36	Formaldehyde	Formaldehyde	50-00-0
37	Perchlorates	Ammonium Perchlorate	7790-98-9
		Potassium Perchlorate	7778-74-7
		Sodium Perchlorate	7601-89-0
		Lithium perchlorate trihydrate	13453-78-6
		Other Perchlorates	JAMP-SN0034