

# **SII GREEN PROCUREMENT STANDARDS**

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Seiko Instruments Inc.

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## PREFACE

Government regulations related to environmental activities began in Europe and social demands for protecting the environment are intensifying. Requirements for business activities, production, and material procurement (green procurement) that are eco-friendly, such as forming a recycling-oriented society in which energy and resources are recycled and protecting from environmental pollution by managing chemical substances are constantly growing.

SII Group (SII) have been promoting our green procurement from production goods to office supplies with the cooperation of our suppliers.

SII also prioritizes procurement of eco-friendly materials from suppliers that proactively act to support environment conservation based on this standard.

SII will continue its eco-friendly production and business activities, so we will be grateful for our suppliers' cooperation based on their understanding the importance of activities for environment conservation.

## SII GREEN PROCUREMENT STANDARDS

### 1. SII Green Procurement Standards

The SII Green Procurement Standards consist of two sections. Each section contains a description of the standards for that type of product or material. They also include a set of survey questions for each supplier except for suppliers that only supply office supplies.

- (1) Environmental Control System Standard
- (2) Production Goods Procurement Standard

### 2. Scope of Application

These standards apply to all items, both tangible and intangible, that SII procures.

- (1) Tangible goods including raw materials, parts (electrical components, finished goods, and other components), packaging materials, and production equipment.
- (2) Intangible goods including services and work

SII will provide a "Purchase Item List Subjected to Survey" (Note 1) for specific items that are subject to examination for use or inclusion of chemical materials. If SII does not submit such a list, suppliers need not survey materials for use or inclusion of chemical materials.

(Note 1) Purchase Item List Subjected to Survey  
List of procurement items that SII requests suppliers to survey.

### 3. The following forms must be completed and submitted to SII, but what is instructed by the SII operating division that requested the survey, for specific requirements should be followed.

- (1) Form 1 (See page 32) Environmental Control System Questionnaire\*1
- (2) Form 2 (See page 33) Production Goods Procurement Questionnaire\*2
- (3) Form 3 (See page 34) Results of Research on Chemicals Substances Being Used in the Manufacturing Process\*3
- (4) Form 4 (See page 35) Results of Research on Chemicals Substances Contained in Goods\*4

- \*1 "Environmental Control System Questionnaire"  
SII requires this information to determine the indirect environmental impact of manufactured products.
- \*2 "Production Goods Procurement Questionnaire"  
SII requires this information to confirm that production goods to be procured are environmentally friendly.
- \*3 "Results of Research on Chemical Substances Being Used in the Manufacturing Process"  
SII requires this information if you use any item specified in the "Production Goods Procurement Questionnaire" in your production process (excluding coolants and extinguishants).
- \*4 "Results of Research on Chemical Substances Contained in Goods"  
SII requires this information if any item specified in the "Production Goods Procurement Questionnaire" is contained in products.

4. If necessary, you might be asked to submit materials (such as lists of components in in procured products, analysis data, or SDSs) other than survey sheets, or to submit them in chemSHERPA AI\*1 format if SII's customer requests.  
Please cooperate with the business units on the submission in response to their request.  
\*1 chemSHERPA AI :  
Information Communication Sheet for disclosure and communication on information of chemical substances in articles, of which Ministry of Economy, Trade and Industry is promoting the development and dissemination.
5. When necessary, SII may conduct on-site audits. We appreciate your cooperation.
6. Chemical substances specified herein are independently selected and classified by SII taking into consideration existing legislation and future rules and regulations. These are subject to change without notice depending upon the social and legal environment.
7. The SII Green Procurement Standards are subject to revision without notice in the event of changes in the social or legal environment.

Note: Please contact the SII operating division that requested the examination of goods subject to survey.

## [I] DEFINITIONS OF TERMS

- Use:** Use means to use chemical substances for cleaning products and parts. In other words, use means "to use" chemical substances during manufacturing such that they are not contained in products or parts.  
Example) Cleaning parts, etc.
- Containing:** Containing means "to contain" chemical substances that have been intentionally added to products and parts to meet their functionality and performance. Reaction-type residue like non-reaction monomer and impurities are excluded.  
If an impurity in a chemical substance for which a threshold level is specified exceeds an acceptable value, the chemical substance is judged to contain a prohibited substance.
- Not-containing:** This means that the parts and materials making up a product do not contain chemical substances, whether intentionally or otherwise.
- Contents concentration:** This is the chemical substance concentration and is calculated using the equation below.  

$$\text{Contents concentration} = \frac{\text{weight of the target chemical substance}}{\text{weight of the part that contains the target chemical substance}}$$
 The unit is ppm (parts per million), or wt% (weight percent).  
 Note that the definition of "weight of the part" used when calculating the contents concentration differs depending on the applicable laws, so see the threshold level column or remarks column for the target chemical substance.
- Intentional addition:** Intentional addition means intentionally making products or parts contain substances in order to suffice specific features, appearance, or quality. Intentional addition must be reported by filling Form 4 "Results of **Research on Chemical Substances Contained in Goods**" on page35, regardless of the contents concentration.
- Impurity:** This is a substance included in natural raw materials that cannot be completely removed during the process in which the materials are used as industrial materials for manufacturing.  
This term also refers to by-products, catalyst residue, and other substances generated during the synthetic reaction processes of materials and drugs.  
Examples) ·Lead impurities in lead-free solder  
·Monomer components that cannot be completely removed from synthetic resin materials
- Homogenous material:** Material that cannot be mechanically resolved into different material.  
Examples)  
In the case of a power cable, the homogenous materials are external covering, internal covering, and core.  
If a marking such as model name is printed on the external coating, the ink is also regarded as homogenous material.
- Article:** An object of which specific form, appearance or design given in production significantly determines the functions of final use, rather than the functions performed by the chemical composition.  
Example) Substrates, capacitors, electric motors, gears and plastic cases are articles.
- CAS No.:** Unique Nos. of chemical substances designated by the Chemical Abstract Service, a division of the American Chemistry Society.
- IEC62474:** The international standard concerning disclosure procedure of contained chemical substances provided by IEC (International Electrotechnical Commission).
- Candidate List:** The list of SVHCs (Substances of Very High Concern) which are candidate substances for authorization under REACH Regulation.

### [II] ENVIRONMENTAL CONTROL SYSTEM STANDARDS

No.	Items	Criteria	Applied Suppliers	
1	Certification of ISO14001	Obtained ISO14001 or other third-party standard certification (e.g., Eco Action 21, Eco Stage). If not yet obtained, it is desirable to be "under preparation" or "under contemplation" to obtain the certification.	Obtained ISO-14001, etc. ↓	Not yet obtained ISO-14001, etc. ↓
2	Environmental policy	Have an environmental conservation/preservation policy.	—	○
3	Environmental goals	Have concrete goals for environmental conservation/preservation.	—	○
4	Action plan	Have an action plan to achieve the goals.	—	○
5	Organization	Establish an organization to promote environmental conservation/preservation.	—	○
6	Education & Training	Provide employees with an environment-related education and training program.	—	○
7	Internal audits	Internally conduct environmental audits.	—	○
8.1	Control system	Have a system to supervise legislative and voluntary regulations.	—	○
8.2		Be aware of and comply with applicable laws and regulations (See Annex 1 on page 5 for environmental laws).	○	○
8.3		Have a system to control and save energy (e.g., lighting and facilities energy-saving program).	○	○
8.4		Have a system to control and minimize wastes (e.g., separated disposal and zero-emissions).	○	○
8.5		Have a system to control chemical substances (e.g., to update information on chemical substances being used).	○	○
8.6		Introduce or try to introduce a product assessment scheme (e.g., check that environment consideration is taken in the design and production phases).	○	○
8.7		Have a system to collect and recycle used products and packaging materials.	○	○
9	Disclosure	Have a system and tools to disclose information (e.g., Internet, environmental pamphlets and reports).	○	○
10	Biodiversity	To be actively involved in (or support) biodiversity conservation.	○	○

### [III] PRODUCTION GOODS PROCUREMENT STANDARDS

Products: Finished or semi-finished products, which provide their intended functionality and performance as they are.

Parts: Items that should be integrated or processed into or for SII products (units/parts, electronic parts, and outer cases).

No.	Items	Criteria	Goods covered by this standard		
			Packaging	Parts	Products
1	No harmful substances	No packaging materials (outer boxes, buffer materials, etc.) contain heavy metals (cadmium, hexavalent chrome, mercury and lead).	○		
2	Use prohibition of	No exterior packaging, buffer materials and bags use polyvinyl chloride.	○		
3	Resources saving	No excessive packaging. Measures are taken to reduce packaging volume (less packaging compared with similar products or parts).	○		
4	Indication of materials	Plastic packaging materials (mainly styrene foam used as cushions) bear indication of materials. Comply with ISO-11469, DIN-6120 or other appropriate standards. ISO11469-compliant marking example: >PS< Polystyrene	○		
5	Reduction of foams	The use of styrene foam is minimized or it is substituted with other materials: e.g., cardboard buffers, pulp molds	○		
6.1	Use of harmful substances	No material specified in Annex 2 (page 4) is used in any manufacturing process.	○	○	○
6.2		Use of materials specified in Annex 3 (page 4) is avoided in any manufacturing process.	○	○	○
7.1	Containing of harmful substances	No material shown in Annex 4 (page 5 to 6) is contained.	○	○	○
7.2		Containing of materials specified in Annex 6 (page 8 to 13) is avoided.	○	○	○
7.3		Conditional containing prohibition substances specified in Annex 5 (page 7) is not contained.	○	○	○
8	Indication of materials	ISO11469 or other standard is marked on plastic materials. Ex) Outer cases of products		○	○
9	Compliance with laws	The procurement goods comply with legislative controls under the Recycling Law, Energy Saving Law and other applicable laws. Ex) Rechargeable batteries, computers			○
10	Resources saving	Resources are efficiently used. (Use of recycled parts and resources, miniaturization of goods)			○
11	Energy saving	Power consumption is low in both operation and standby modes. Compliance with energy saving programs, such as Energy Star program.			○
12	Wastes	The separability and degradability at the time of disposal is taken into account to ensure proper disposition of goods.			○

## Annex 1 List of Environmental Laws

No.	
1	Laws related to air pollution prevention
2	Laws related to water pollution prevention
3	Laws related to noise control
4	Laws related vibration control
5	Laws related to offensive odor prevention
6	Laws related to waste disposal
7	Laws related to ozone layer protection
8	Laws related to handling and storing of hazardous chemical substances
9	Laws related to recycling and reuse
10	Laws related to energy saving
11	Laws related to occupational safety and health
12	Other (Local regulations, etc.)

## Annex 2 List of Use Prohibition Substances in the Manufacturing Process

More specifically, substances whose use should be prohibited in the manufacturing process (washing).

		CAS No. *	Remark
Use Prohibition	1	1,1,1-trichloroethane	71-55-6
	2	CFC group	
	3	HBFC group	
	4	Halon group	
	5	Bromochloromethane	74-97-5
	6	Tetrachloroethylene	127-18-4
	7	Benzene * <sup>1</sup>	71-43-2 When contained, see Table N on page 18.
	8	Pentachloroethane	76-01-7
	9	1,1,1,2-tetrachloroethane	630-20-6
	10	Hexachloroethylene	67-72-1
	11	Methyl bromide	74-83-9
	12	Carbon tetrachloride	56-23-5
	13	1,1,2,2-tetrachloroethane	79-34-5
	14	1,1,2-trichloroethane	79-00-5
	15	1,1-dichloroethylene	75-35-4

\*1 Excluding fuel for cars

## Annex 3 List of Use Avoidance Substances in the Manufacturing Process

More specifically, substances whose use should be avoided in the manufacturing process (washing).

		CAS No.	Remark
Use avoidance	1	1,2-dichloroethane	107-06-2 When contained, see Annex 6 on page 9.
	2	1,2-dichloroethylene	540-59-0
	3	1,3-dichloropropene	542-75-6
	4	HCFC group	
	5	HFC group	
	6	PFC group	
	7	Dichloromethane	75-09-2
	8	Cis-1,2-dichloroethylene	156-59-2
	9	Trichloroethylene	79-01-6 When contained, see Annex 6 on page 8.
	10	Nitrous oxide	10024-97-2
	11	Sulfur hexafluoride	2551-62-4
	12	Chloroform	67-66-3

## Annex 4 List of Containing Prohibition Substances in Goods

(substances that must not contained in goods)		CAS No.	Threshold Level *2	Remark
Containing Prohibition (CP) Banning the Containing	1	4-nitrobiphenyl and its salt	92-93-3	Intentional addition
	2	DDT	50-29-3	Not-containing
	3	Asbestos	Page 14 Table A	Intentional addition
	4	Aldrin	309-00-2	Not-containing
	5	Endrin	72-20-8	Not-containing
	6	Chlordane	57-74-9	Not-containing
	7	Dieldrin	60-57-1	Not-containing
	8	Bis(chloromethyl) ether	542-88-1	Intentional addition
	9	Tributyl tin oxide (TBTO)	56-35-9	Not-containing
	10	Tri-substituted organostannic compounds (including Tributyl tin and Triphenyl tin)	Page 14 Table B	Intentional addition
	11	Hexachloro benzene (HCB)	118-74-1	Not-containing
	12	Polychlorinated naphthalene (1 or more chlorine)	Page 14 Table C	Not-containing
	13	Polychlorobiphenyls (PCB)	1336-36-3	Not-containing
	14	Polychlorinated terphenyls (PCT)	61788-33-8	Intentional addition
	15	Polybrominated diphenylethers (PBDE)	Page 16 Table D	1000 ppm
	16	Polybrominated biphenyls (PBB)	Page 16 Table E	1000 ppm
	17	Azo compounds	Page 16 Table F	Intentional addition
	18	2,4,6-Tri-tert-butylphenol	732-26-3	Not-containing
	19	N,N'-ditolyl-p-phenylenediamine N-tolyl-N'-xylyl-p-phenylenediamine N,N'-dixylyl-p-phenylenediamine	27417-40-9 70290-05-0 28726-30-9	Not-containing
	20	Chlorinated paraffins (C10-13)	Page 16 Table G	Not-containing
	21	Mirex	2385-85-5	Not-containing
	22	Yellow phosphor	12185-10-3	Intentional addition
	23	Toxaphene	8001-35-2	Not-containing
	24	Monomethyl-dichloro-diphenyl methane (DBBT)	99688-47-8	Intentional addition
	25	Di-u-oxo-di-n-butyl-stanniohydroxyborane (DBB)	75113-37-0	Intentional addition
	26	Monomethyl-tetraclorodiphenyl-methane	76253-60-6	Intentional addition
	27	Monomethyl-dichloro-diphenyl-methane	81161-70-8	Intentional addition
	28	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-(UV- 320)	3846-71-7	Not-containing
	29	Perfluorooctane sulfonates (PFOS)	Page 17 Table H	Not-containing
	30	Dimethyl fumarate (DMF)	624-49-7	Intentional addition
	31	Cobalt dichloride	7646-79-9	*4
	32	Formaldehyde	50-00-0	*5
	33	Dibutyltin (DBT) compounds	Page 17 Table I	1000ppm *6
	34	Diocetyl tin (DOT) compounds	Page 17 Table J	1000ppm *7
	35	Tris(2,3-dibromopropyl)phosphate(TRIS)	126-72-7	Intentional addition
	36	Tris (1-aziridinyl) phosphine oxide(TEPA)	545-55-1	Intentional addition
	37	Hexabromocyclodecane(HBCDD)	Page 17 Table K	Not-containing
	38	Polycyclic aromatic hydrocarbons(PAH)	Page 17 Table L	1ppm *8
	39	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	1000ppm
	40	Tris(1-chloro-2-propyl)phosphate (TCPP)	13674-84-5	1000ppm
	41	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8	1000ppm
	42	PFOA, PFOA-salts, PFOA-esters	Page 17 Table M	Not-containing
	43	4,4'-isopropylidenediphenol (bisphenol A:BPA)	80-05-7	*9
	44	Pentachlorophenol and its salts and esters	87-86-5	Not-containing
	45	CMR substances in textile products	Page 18 Table N	*10

\*1 Substances that may enter the mouth or directly contact human skin for a long time or short-term repetitive contact.

\*2 Threshold level

In cases where the concentration of the material contained in the product or part (reaction-type residue like non-reaction monomer and impurities) exceeds this value, fill Form 4 "Results of Research on Chemicals Contained in Manufactured Goods" on page 35.

Note: The threshold level may be specified independently by the operational division upon customer's request, so please follow what the operational division instructed.

\*3 Exceptional applications · Semiconductor photoresist

· Business-use photographic film

\*4 This applies to humidity indicating chemicals that are intentionally added and used for drying agents (such as silica gel).

\*5 Intentionally adding this to composite materials (plywood or particle board) is prohibited, as is containing a concentration of 75 ppm or more of fiber or fabric.

In addition, effective August 6, 2026, the emission concentration shall be 0.062 mg/m<sup>3</sup> or less for wood moldings and 0.080 mg/m<sup>3</sup> or less (emission concentration) for other moldings.

\*6 When the content concentration exceeds the threshold level. The content concentration used is based on tin concentration.

\*7 This applies to fabric and leather products that might touch human skin.

When the content concentration exceeds the threshold value. The content concentration used is based on tin concentration.

\*8 The upper limit of inclusion shall be 0.5 ppm for parts used in toys/nursery items.

\*9 Content is prohibited if the concentration of thermal paper is 200 ppm or more.

\*10 Textile products are subject when they contain CMR substances (carcinogenic, mutagenic, toxic for reproduction) at or above the threshold.

## Annex 4 List of Containing Prohibition Substances in Goods

(substances that must not contained in goods)			CAS No.	Threshold Level *1	Remark
Containing Prohibition (CP) Banning the Containing	46	Phenol, isopropylated phosphate (3:1)	68937-41-7	Not-containing	*2
	47	Pentachlorobenzenethiol(PTCP)	133-49-3	1000 ppm	
	48	Hexachlorobutadiene(HCBD)	87-68-3	Not-containing	
	49	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	Page 18 Table O	Not-containing	
	50	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances	Page 19 Table P	*3	
	51	Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms		*4	*5
	52	Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings		*6	*5
	53	1,6,7,8,9,14,15,16,17,17,18,18Dodecachloropentacyclo[12.2.1.1.0.0]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	13560-89-9 135821-74-8 135821-03-3	Not-containing	*7
	54	2-(2H-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol (UV-328)	25973-55-1	Not-containing	*7*8
	55	Methoxychlor	72-43-5 30667-99-3 76733-77-2 255065-25-9 255065-26-0 59424-81-6 1348358-72-4	Not-containing	*7

\*1 Threshold level

In cases where the concentration of the material contained in the product or part (reaction-type residue like non-reaction monomer and impurities) exceeds this value, fill Form 4 "Results of Research on Chemicals Contained in Manufactured Goods" on page 35.

Note: The threshold level may be specified independently by the operational division upon customer's request, so please follow what the operational division instructed.

\*2 【Exceptional applications】

1. Lubricants and greases
2. Adhesives and sealants (until January 5, 2025)

\*3 Concentration in the article or the mixture is below 25 ppb for the sum of C9-C14 PFCAs and their salts or 260 ppb for the sum of C9-C14 PFCA-related substances.

\*4 After 2025, it shall be 1000 ppm or less in packaging materials and ink in printed matter.

\*5 This applies to printing on packaging materials and labels attached to packaging materials.  
This applies to paper for printed materials.

\*6 【Ink in packaging and printed matter】

Mineral oil aromatic hydrocarbons (MOAH) consisting of 1 to 7 aromatic rings shall not exceed 1%.  
Effective January 2025,

1. Mineral oil aromatic hydrocarbons (MOAH) consisting of 1 to 2 aromatic rings shall not exceed 1000 ppm.
2. Mineral oil aromatic hydrocarbons (MOAH) consisting of 3 to 7 aromatic rings shall not exceed 1 ppm.

\*7 The inclusion of this substance shall be prohibited after October 2024.

\*8 【Exceptional applications】

1. Industrial coating applications for motor vehicles, engineering machines, rail transportation vehicles, and heavy-duty coatings for large steel structures
2. Photographic paper



## Annex 5 List of Conditional Containing Prohibition Substances in Goods

(substances prohibited from being contained, with some exemptions)

		CAS No.	Threshold Level	Remark
1	Cadmium / cadmium compounds* <sup>1</sup> , * <sup>4</sup>	Refer to Table Q on page 19.	100 ppm	Contents concentration in homogenous material
2	Hexavalent chromium compounds* <sup>1</sup> , * <sup>2</sup> , * <sup>4</sup>	Refer to Table R on page 19.	1000 ppm	Contents concentration in homogenous material
3	Lead / lead compounds * <sup>1</sup> , * <sup>3</sup> , * <sup>4</sup>	Refer to Table S on page 19.	1000 ppm	Contents concentration in homogenous material
4	Mercury / mercury compounds* <sup>1</sup>	Refer to Table T on page 20.	1000 ppm	Contents concentration in homogenous material
5	Bis (2-ethylhexyl)phthalate (DEHP) * <sup>5</sup>	117-81-7	1000 ppm	Contents concentration in homogenous material
6	Benzyl butyl phthalate (BBP) * <sup>5</sup>	85-68-7	1000 ppm	Contents concentration in homogenous material
7	Dibutyl phthalate (DBP) * <sup>5</sup>	84-74-2	1000 ppm	Contents concentration in homogenous material
8	Diisobutyl phthalate (DIBP) * <sup>5</sup>	84-69-5	1000 ppm	Contents concentration in homogenous material
9	Polyvinyl chloride (PVC) * <sup>6</sup>	9002-86-2	1000 ppm	Contents concentration in homogenous material

\*1: The total amount of lead, cadmium, hexavalent chromium and mercury contained in packaging materials shall be less than 100 ppm at weight ratio.

\*2: The amount of hexavalent chromium compounds contained in leather parts in contact with the skin shall be less than 3ppm at weight ratio.

\*3: The amount of lead contained in PVC cable shall be less than 100 ppm at weight ratio.

\*4: If it is contained in textile products (including textile parts), refer to the Table N on page 18.

\*5: We request that management be performed so as to ensure non-containment for auxiliary materials (rubber for binding cables, strings for plastic materials, etc.) used in goods (products, parts, packaging materials, etc.) purchased for production by our company, while also ensuring that phthalic acid esters do not transition due to coming into contact with the soft resins or rubber materials (conductive mats, tape, string, film, belt conveyor mats, etc.) used in the manufacturing processes of suppliers.

\*6: "Polyvinyl chloride(PVC)" includes its homopolymer and copolymer.

### Cadmium / Cadmium Compounds

	No.	Use of Applications
Exemptions *7 (may be contained)	8(b)	Cadmium and its compounds in electrical contacts.
	13(b)	Cadmium in filter glasses and glasses used for reflectance standards.

### Hexavalent Chromium Compounds

	No.	Use of Applications
Exemptions *7 (may be contained)	9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution.

### Lead / Lead Compounds

	No.	Use of Applications
Exemptions *7 (may be contained)	5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight
	6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35% lead by weight and in batch hot dip galvanised steel components containing up to 0,2% lead by weight.
	6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight.
	6(c)	Copper alloy containing up to 4% lead by weight.
	7(a)	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead).
	7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.
	7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher.
	13(a)	Lead in white glasses used for optical applications.

### Mercury / Mercury Compounds

	No.	Use of Applications
Exemptions *7 (may be contained)		Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp).
	3(a)	Short length (≤ 500 mm):3.5 mg may be used per lamp.
	3(b)	Medium length (> 500 mm and ≤ 1 500 mm):5 mg may be used per lamp.
	3(c)	Long length (> 1 500 mm):13 mg may be used per lamp.

### Polyvinyl Chloride (PVC)

	No.	Use of Applications
Exemptions (may be contained)	PV1	PVC is required due to a safety standard or for quality retention.
	PV2	There is no substitutable item because of special application or the like.
	PV3	Material is specified based on the customer's requirement.
	PV4	Those which do not contain phthalate compounds.

\*7: Exemptions (cadmium, hexavalent chromium, mercury, lead) shall comply with the Exemptions of the RoHS directives (2011/65/EU). If a new exception other than those described above is specified, it will be regarded as an exception. Exemptions relating to batteries shall conform to the EU batteries directive(2006/66/EC(2013/56/EU)) and Regulation (EU) 2023/1542.

## Annex 6 List of Containing Avoidance Substances in Goods

(Substances for which containing in goods is to be avoided)

(Substances for which containing in goods is to be avoided)		CAS No.	Threshold Level	Remark	
Containing Avoidance	1	Arsenic / arsenic compounds *4	Refer to Table U on page 20.	1000 ppm or intentional addition	Contents concentration in homogenous material
	2	Beryllium / beryllium compounds*1	Refer to Table V on page 20.	1000 ppm or intentional addition	Contents concentration in homogenous material
	3	Nickel / Nickel compounds *2	Refer to Table W on page 20.	1000 ppm or intentional addition	Contents concentration in homogenous material
	4	Phthalates(except DEHP,BBP,DBP,DIBP)*1	Refer to Table X on page 21.	1000 ppm or intentional addition	Contents concentration in homogenous material
	5	Radioactive substances	Refer to Table Y on page 21.	intentional addition	Contents concentration in plasticized material
	6	Brominated flame retardants (except PBB,PBDE and HBCDD)	Refer to Table Z on page 21-22.	1000 ppm or intentional addition	Contents concentration in homogenous material
	7	Chlorinated flame retardants	Refer to Table AA on page 22.	In case of (1) or (2) in the remark column.	(1)1000 ppm total chlorine content by weight in the plastic material (2)900 ppm total chlorine content by weight in the laminate
	8	Red phosphorus *1	7723-14-0	Intentional addition	Except for red phosphorus in the metal
	9	Perchlorate	Refer to Table AB on page 22.	Intentional addition	
	10	Anthracene	120-12-7	In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator	
	11	4,4'-methylenedianiline	101-77-9		This is prohibited from being contained in items that might be in direct contact with human skin or the mouth for a long period of time or short-term repetitive contact.
	12	Cobalt dichloride	7646-79-9		This is prohibited from being contained in drying agents (such as silica gel).
	13	Diarsenic pentaoxide*1	1303-28-2		*4
	14	Diarsenic trioxide*1	1327-53-3		*4
	15	Sodium dichromate	7789-12-0 10588-01-9		*3 , *4
	16	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2		
	17	Lead hydrogen arsenate	7784-40-9		*3 , *4
	18	Triethyl arsenate	15606-95-8		
	19	Anthracene oil	90640-80-5		
	20	Anthracene oil, anthracene paste,distn. lights	91995-17-4		
	21	Anthracene oil, anthracene paste,anthracene fraction	91995-15-2		
	22	Anthracene oil,anthracene-low	90640-82-7		
	23	Anthracene oil, anthracenepaste	90640-81-6		
	24	Coal tar pitch, high temperature	65996-93-2		
	25	Aluminosilicate, Refractory Ceramic Fibres	-		
	26	Zirconia Aluminosilicate, Refractory Ceramic Fibres	-		
	27	2,4-Dinitrotoluene	121-14-2		
	28	Lead chromate	7758-97-6		*3 , *4
	29	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8		*3 , *4
	30	C.I. Pigment Yellow 34	1344-37-2		*3 , *4
	31	Acrylamide	79-06-1		
	32	Trichloroethylene	79-01-6		
	33	Boric acid	10043-35-3 11113-50-1		
	34	Disodium tetraborate, anhydrous	1330-43-4 12179-04-3 1303-96-4		
	35	Tetraboron disodium heptaoxide, hydrate	12267-73-1		

\*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.

\*2. Except for alloys (such as stainless steel). However, make sure that parts and materials (including alloys) that can potentially be in contact with skin for long periods of time have properties of 0.5 µg/cm<sup>2</sup>/week or less (elution amount).

\*3. This only applies to the exemptions for Lead /Lead Compounds and Hexavalent Chromium Compounds shown under Annex 5 on page 7. For other applications, the requirements under Cadmium/Cadmium Compounds and Lead/Lead Compounds and Hexavalent Chromium Compounds on Annex 5 must be satisfied.

\*4. If it is contained in textile products (including textile parts), refer to the Table N on page 18.

## Annex 6 List of Containing Avoidance Substances in Goods (continued)

(Substances for which containing in goods is to be avoided)

(Substances for which containing in goods is to be avoided)			CAS No.	Threshold Level	Remark
Containing Avoidance	36	Sodium chromate	7775-11-3	In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator	*3 , *4
	37	Potassium chromate	7789-00-6		*3 , *4
	38	Ammonium dichromate	7789-09-5		*3 , *4
	39	Potassium dichromate	7778-50-9		*3 , *4
	40	Cobalt(II) sulphate	10124-43-3		
	41	Cobalt(II) dinitrate	10141-05-6		
	42	Cobalt(II) carbonate	513-79-1		
	43	Cobalt(II) diacetate	71-48-7		
	44	2-Methoxyethanol	109-86-4		
	45	2-Ethoxyethanol	110-80-5		
	46	Chromium trioxide	1333-82-0		*3 , *4
	47	Acids generated fromchromium trioxide andtheir oligomers: ·Chromic acid ·Dichromic acid ·Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2		*3 , *4
	48	2-ethoxyethyl acetate	111-15-9		
	49	strontium chromate	7789-06-2		*3 , *4
	50	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)*1	68515-42-4		
	51	Hydrazine	7803-57-8 302-01-2		
	52	1-methyl-2-pyrrolidone	872-50-4		*4
	53	1,2,3-trichloropropane	96-18-4		
	54	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)*1	71888-89-6		*4
	55	Dichromium tris(chromate)	24613-89-6		*3 , *4
	56	Potassium hydroxy-octaoxidizincatedichromate	11103-86-9		*3 , *4
	57	Pentazinc chromate octahydroxide	49663-84-5		*3 , *4
	58	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4		
	59	Bis(2-methoxyethyl) phthalate(DMEP)*1	117-82-8		*4
	60	2-Methoxyaniline;o-Anisidine	90-04-0		This is prohibited from being contained in items that might be in direct contact with human skin or the mouth for a long period of time or short-term repetitive contact.
	61	4-(1,1,3,3-tetramethylbutyl)phenol,	140-66-9		
	62	1,2-Dichloroethane	107-06-2		
	63	Bis(2-methoxyethyl) ether	111-96-6		
	64	Arsenic acid	7778-39-4		
	65	Calcium arsenate	7778-44-1		
	66	Trilead diarsenate	3687-31-8		*3 , *4
	67	N,N-dimethylacetamide (DMAC)	127-19-5		*4
	68	4,4'-methylene-bis-(2-chloroaniline)	101-14-4		This is prohibited from being contained in items that might be in direct contact with human skin or the mouth for a long period of time or short-term repetitive contact.
	69	Phenolphthalein	77-09-8		
	70	Lead azide Lead diazide	13424-46-9		*3 , *4
	71	Lead styphnate	15245-44-0		*3 , *4
	72	Lead dipicrate	6477-64-1		*3 , *4
	73	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2		
	74	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4		
	75	Diboron trioxide	1303-86-2		
	76	Formamide	75-12-7		
	77	Lead(II) bis(methanesulfonate)	17570-76-2		*3 , *4
	78	TGIC (1.3.5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9		
	79	β-TGIC (1,3,5-tris [(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6		
	80	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	90-94-8		
	81	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1		
	82	C.I. Basic Violet 3(Hexamethylpararosaniline chloride)	548-62-9		*4
	83	[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		
	84	α,α-Bis[4-(dimethylamino) phenyl]-4 (phenylamino) naphthalene-1- methanol (C.I.Solvent Blue 4)	6786-83-0		
	85	4,4'-bis(dimethylamino)- 4''-(methylamino)trityl alcohol	561-41-1		

\*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.

\*3. This only applies to the exemptions for Lead/Lead Compounds and Hexavalent Chromium Compounds shown under Annex 5 on page 7. For other applications, the requirements under Lead/Lead Compounds and Hexavalent Chromium Compounds on Annex 5 must be satisfied.

\*4. If it is contained in textile products (including textile parts), refer to the Table N on page 18.

## Annex 6 List of Containing Avoidance Substances in Goods (continued)

(Substances for which containing in goods is to be avoided)

		CAS No.	Threshold Level	Remark
86	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-		
87	4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	Refer to Table AC on page 22.		CAS No. is not stated in the Candidate List, but stated in IEC62474.
88	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3		
89	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7		
90	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9		
91	Methoxy acetic acid	625-45-6		
92	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear *1	84777-06-0		
93	Diisopentylphthalate (DIPP) *1	605-50-5		*4
94	N-pentyl-isopentylphthalate *1	776297-69-9		
95	1,2-Diethoxyethane	629-14-1		
96	N,N-dimethylformamide; dimethyl formamide	68-12-2		*4
97	Dibutyltin dichloride (DBT)	683-18-1		For the fabric and leather product that might have contact with human skin, the content concentration exceeding 1000 ppm in tin component is prohibited.
98	Acetic acid, lead salt, basic	51404-69-4	In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator	*3, *4
99	Lead (II) carbonate basic	1319-46-6		
100	Lead oxide sulfate (basic lead sulfate)	12036-76-9		
101	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)	69011-06-9		
102	Dioxobis(stearato)trilead	12578-12-0		
103	Fatty acids, C16-18, lead salts	91031-62-8		
104	Lead bis(tetrafluoroborate)	13814-96-5		
105	Lead cyanamate	20837-86-9		
106	Lead dinitrate	10099-74-8		
107	Lead oxide (lead monoxide)	1317-36-8		
108	Lead tetroxide (orange lead)	1314-41-6		
109	Lead titanium trioxide	12060-00-3		
110	Lead Titanium Zirconium Oxide	12626-81-2		
111	Pentalead tetraoxide sulphate	12065-90-6		
112	C.I. Pigment Yellow 41	8012-00-8		
113	Silicic acid, barium salt, lead-doped	68784-75-8		
114	Silicic acid, lead salt	11120-22-2		
115	Sulfurous acid, lead salt, dibasic	62229-08-7		
116	Tetraethyllead	78-00-2		
117	Tetralead trioxide sulphate	12202-17-4		
118	Trilead dioxide phosphonate	12141-20-7		
119	Furan	110-00-9		
120	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9		
121	Diethyl sulphate	64-67-5		
122	Dimethyl sulphate	77-78-1		
123	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2		
124	Dinoseb	88-85-7		
125	4,4'-methylenedi-o-toluidine	838-88-0		
126	4,4'-oxydianiline and its salts	101-80-4		
127	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3		
128	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7		
129	6-methoxy-m-toluidine (p-cresidine)	120-71-8		
130	Biphenyl-4-ylamine	92-67-1		
131	o-aminoazotoluene	97-56-3		
132	o-Toluidine; 2-Aminotoluene	95-53-4		
133	N-methylacetamide	79-16-3		
134	1-bromopropane; n-propyl bromide	106-94-5		
135	Cadmium	7440-43-9		*3, *4

\*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.

\*3. This only applies to the exemptions for Lead/Lead Compounds and Hexavalent Chromium Compounds shown under Annex 5 on page 7. For other applications, the requirements under Lead/Lead Compounds and Hexavalent Chromium Compounds on Annex 5 must be satisfied.

\*4. If it is contained in textile products (including textile parts), refer to the Table N on page 18.

## Annex 6 List of Containing Avoidance Substances in Goods (continued)

(Substances for which containing in goods is to be avoided)

		CAS No.	Threshold Level	Remark
136	Cadmium oxide	1306-19-0	In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator	*3 , *4
137	Dipentyl phthalate(DPP)	131-18-0		*1 , *4
138	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations	-		It is prohibited to place in market textile products or components made of textiles which contain this substance at the concentration of 100 ppm or more and assumed to be water-washed in ordinary conditions of use.
139	Cadmium sulphide	1306-23-6		*3 , *4
140	Diethyl phthalate (DnHP)	84-75-3		*1 , *4
141	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0		
142	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		
143	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7		
144	Lead di(acetate)	301-04-2		*3 , *4
145	Triethyl phosphate	25155-23-1		
146	1,2-Benzenedicarboxylic acid, diethyl ester, branched and linear (DIHP) *1	68515-50-4		
147	Cadmium chloride	10108-64-2		*3 , *4
148	Sodium perborate; perboric acid, sodium salt	(15120-21-5) (11138-47-9)		
149	Sodium peroxometaborate	7632-04-4		
150	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1		*6
151	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1		*5
152	Cadmium fluoride	7790-79-6		*3 , *4
153	Cadmium sulphate	10124-36-4 31119-53-6		*3 , *4
154	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)	-		*5
155	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of diethyl phthalate (EC No. 201-559-5, CAS No. 84-75-3)	68515-51-5 68648-93-1		
156	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	-		
157	1,3-propanesultone	1120-71-4		
158	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1		
159	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3		
160	Nitrobenzene	98-95-3		
161	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8		Use is prohibited in the cases where it falls under the scope of application of polycyclic aromatic hydrocarbon (PAH).
162	4,4'-isopropylidenediphenol (bisphenol A:BPA)	80-05-7		Inclusion of 200 ppm or higher concentration in thermal paper will be prohibited.
163	4-heptylphenol, branched and linear	-		
164	p-(1,1-dimethylpropyl)phenol	80-46-6		

\*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.

\*3. This only applies to the exemptions for Lead /Lead Compounds and Hexavalent Chromium Compounds shown under Annex 5 on page 7. For other applications, the requirements under Cadmium/Cadmium Compounds and Lead/Lead Compounds and Hexavalent Chromium Compounds on Annex 5 must be satisfied.

\*4. If it is contained in textile products (including textile parts), refer to the Table N on page 18.

\*5. This is prohibited from being contained in fabric and leather products that might touch human skin.

\*6. Only the following applications shall be avoided

- Industrial coating applications for motor vehicles, engineering machines, rail transportation vehicles, and heavy-duty coatings for large steel structures
- Photographic paper

## Annex 6 List of Containing Avoidance Substances in Goods (continued)

(Substances for which containing in goods is to be avoided)

		CAS No.	Threshold Level	Remark
Containing Avoidance	165	chrysene	218-01-9	*4 , *7
	166	benz[a]anthracene	56-55-3	*4 , *7
	167	cadmium nitrate	10325-94-7	*3 , *4
	168	cadmium hydroxide	21041-95-2	*3 , *4
	169	cadmium carbonate	513-78-0	*3 , *4
	170	1,6,7,8,9,14,15,16,17,17,18,18Dodecachloropentacyclo [12.2.1.1.0.0]octadeca-7,15-diene ("Dechlorane Plus" TM) [covering any of its individual anti- and syn-isomers or any combination thereof]	13560-89-9 135821-74-8 135821-03-3	CAS No. is not stated in the Candidate List, but stated in IEC62474.
	171	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear	-	
	172	Octamethylcyclotetrasiloxane (D4)	556-67-2	
	173	Decamethylcyclopentasiloxane (D5)	541-02-6	
	174	Dodecamethylcyclohexasiloxane (D6)	540-97-6	
	175	Lead	7439-92-1	*3 , *4
	176	Disodium octaborate	12008-41-2	
	177	Benzo[ghi]perylene	191-24-2	
	178	Terphenyl hydrogenated	61788-32-7	
	179	Ethylenediamine (EDA)	107-15-3	
	180	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	
	181	Dicyclohexyl phthalate (DCHP)	84-61-7	*1
	182	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	
	183	Benzo[k]fluoranthene	207-08-9	*4 , *7
	184	Fluoranthene	206-44-0	
	185	Phenanthrene	85-01-8	
	186	Pyrene	129-00-0	
	187	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	
	188	2-methoxyethyl acetate	110-49-6	
	189	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	3050-88-2 31631-13-7 106599-06-8	CAS No. is not stated in the Candidate List, but stated in IEC62474.
	190	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	
	191	4-tert-butylphenol	98-54-4	
	192	Perfluorobutane sulfonic acid (PFBS) and its salts	25628-08-4 34454-97-2 375-73-5 375-72-4	
	193	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	
	194	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	
	195	Diisohexyl phthalate	71850-09-4	
	196	Butyl 4-hydroxybenzoate	94-26-8	
	197	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	
	198	1-vinylimidazole	1072-63-5	
	199	2-methylimidazole	693-98-1	
	200	Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8	
	201	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-	

In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator

- \*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.
- \*3. This only applies to the exemptions for Lead /Lead Compounds and Hexavalent Chromium Compounds shown under Annex 5 on page 7. For other applications, the requirements under Cadmium/Cadmium Compounds and Lead/Lead Compounds and Hexavalent Chromium Compounds on Annex 5 must be satisfied.
- \*4. If it is contained in textile products (including textile parts), refer to the Table N on page 18.
- \*7. Substances that can potentially be in direct contact and frequently in short-term or long-term contact with human skin or oral cavities are prohibited.

## Annex 6 List of Containing Avoidance Substances in Goods (continued)

(Substances for which containing in goods is to be avoided)

		CAS No.	Threshold Level	Remark
Containing Avoidance	202	Medium-chain chlorinated paraffins (MCCP)	Refer to Table AD on page 22.	
	203	Orthoboric acid, sodium salt	13840-56-7	
	204	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/or combinations thereof (PDDP)	-	
	205	4,4'-(1-methylpropylidene)bisphenol	77-40-7	
	206	2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5 1522-92-5 96-13-9	
	207	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	
	208	1,4-dioxane	123-91-1	
	209	glutaral	111-30-8	
	210	S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	
	211	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	
	212	tris(2-methoxyethoxy)vinylsilane	1067-53-4	
	213	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	In the cases where concentration of contained substance exceeds 1000 ppm, using weight of each article composing supplies as denominator
	214	N-(hydroxymethyl)acrylamide	924-42-5	
	215	Isobutyl 4-hydroxybenzoate	4247-02-3	
	216	1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]	37853-59-1	
	217	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	79-94-7	
	218	4,4'-sulphonyldiphenol	80-09-1	
	219	Barium diboron tetraoxide	13701-59-2	
	220	bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	26040-51-7	
	221	Melamine	108-78-1	
	222	Perfluoroheptanoic acid and its salts	375-85-9 20109-59-5 6130-43-4 21049-36-5	
	223	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	1093615-61-2	
	224	bis(4-chlorophenyl) sulphone	80-07-9	
	225	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	
	226	per- and polyfluoroalkyl substances (PFAS)*1	-	*8

\*1. This may be specified as containing prohibition substance, by each business unit of SII upon request from an SII customer. Please follow the instructions made by each business unit.

\*8. Excluding PFOS, PFOA, PFHxS, and PFCAs (C9-C14) listed in Annex 4 on P5-6.

## Tables: Compound Details (Main Examples)

Table A: Asbestos (Containing Prohibition)		CAS No.
1	Asbestos	1332-21-4
2	Amosite	12172-73-5
3	Crocidolite	12001-28-4
4	Actinolite	77536-66-4
5	Anthophyllite	77536-67-5
6	Chrysotile	12001-29-5
7	Tremolite	77536-68-6

**Table B:** Tri-substituted organostannic compounds (including Tributyl tin and Triphenyl tin)  
(Containing Prohibition)

		CAS No.
1	Triphenyltin N, N'-dimethyldithiocarbamate	1803-12-9
2	Triphenyltin fluoride	379-52-2
3	Triphenyltin acetate	900-95-8
4	Triphenyltin chloride	639-58-7
5	Triphenyltin hydroxide	76-87-9
6	Triphenyltin fatty acid salts (C=9-11)	18380-71-7 18380-72-8 47672-31-1 94850-90-5
7	Triphenyltin chloroacetate	7094-94-2
8	Tributyltin methacrylate	2155-70-6
9	Bis (tributyltin) fumarate	6454-35-9
10	Tributyltin fluoride	1983-10-4 7304-48-5
11	Bis (tributyltin) 2, 3-dibromosuccinate	31732-71-5 56323-17-2
12	Tributyltin acetate	56-36-0
13	Tributyltin laurate	3090-36-6
14	Bis (tributyltin) phthalate	4782-29-0
15	Copolymer of alkyl(c=8) acrylate, methyl methacrylate and tributyltin methacrylate	67772-01-4
16	Tributyltin sulfamate	6517-25-5
17	Bis (tributyltin) maleate	14275-57-1
18	Tributyltin chloride	1461-22-9 7342-38-3
19	Tributyltin cyclopentane carbonate = mixture	85409-17-2
20	Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylatemix	26239-64-5
21	Tributyltin bromide	1461-23-0
22	Bis(tributan-1-ylstannyl) but-2-enedioate	24291-45-0

Table C: Polychlorinated naphthalene (1 or more chlorine) (Containing Prohibition)		CAS No.
1	Naphthalene, chloro derivatives	70776-03-3
2	1-Chloronaphthalene	90-13-1
3	2-Chloronaphthalene	91-58-7
4	1,5-Dichloronaphthalene	1825-30-5
5	1,4-Dichloronaphthalene	1825-31-6
6	1,2-Dichloronaphthalene	2050-69-3
7	1,6-Dichloronaphthalene	2050-72-8
8	1,7-Dichloronaphthalene	2050-73-9
9	1,8-Dichloronaphthalene	2050-74-0
10	2,3-Dichloronaphthalene	2050-75-1
11	2,6-Dichloronaphthalene	2065-70-5
12	1,3-Dichloronaphthalene	2198-75-6
13	2,7-Dichloronaphthalene	2198-77-8
14	Chloronaphthalene	25586-43-0
15	Dichloronaphthalene	28699-88-9
16	Pentachloronaphthalene	1321-64-8
17	Trichloronaphthalene	1321-65-9
18	Hexachloronaphthalene	1335-87-1
19	Tetrachloronaphthalene	1335-88-2
20	1,2,3,4,5,6,7,8-Octachloronaphthalene	2234-13-1



**Table C:** Polychlorinated naphthalene (1 or more chlorine) (Containing Prohibition)

(continued)		CAS No.
21	1,4,6-Trichloronaphthalene	2437-54-9
22	1,4,5-Trichloronaphthalene	2437-55-0
23	1,4,5,8-Tetrachloronaphthalene	3432-57-3
24	1,2,4,8-Tetrachloronaphthalene	6529-87-9
25	1,2,4,5-Tetrachloronaphthalene	6733-54-6
26	1,2,3,6,7,8-Hexachloronaphthalene	17062-87-2
27	1,2,3,4-Tetrachloronaphthalene	20020-02-4
28	1,3,5,8-Tetrachloronaphthalene	31604-28-1
29	Heptachloronaphthalene	32241-08-0
30	2,3,6,7-Tetrachloronaphthalene	34588-40-4
31	1,2,4-Trichloronaphthalene	50402-51-2
32	1,2,3-Trichloronaphthalene	50402-52-3
33	1,3,5-Trichloronaphthalene	51570-43-5
34	1,2,6-Trichloronaphthalene	51570-44-6
35	1,2,4,6-Tetrachloronaphthalene	51570-45-7
36	1,2,3,5-Tetrachloronaphthalene	53555-63-8
37	1,3,5,7-Tetrachloronaphthalene	53555-64-9
38	1,2,3,5,7-Pentachloronaphthalene	53555-65-0
39	1,2,5-Trichloronaphthalene	55720-33-7
40	1,2,7-Trichloronaphthalene	55720-34-8
41	1,2,8-Trichloronaphthalene	55720-35-9
42	1,3,6-Trichloronaphthalene	55720-36-0
43	1,3,7-Trichloronaphthalene	55720-37-1
44	1,3,8-Trichloronaphthalene	55720-38-2
45	1,6,7-Trichloronaphthalene	55720-39-3
46	2,3,6-Trichloronaphthalene	55720-40-6
47	1,2,3,7-Tetrachloronaphthalene	55720-41-7
48	1,3,6,7-Tetrachloronaphthalene	55720-42-8
49	1,4,6,7-Tetrachloronaphthalene	55720-43-9
50	1,2,3,4,5,6,7-Heptachloronaphthalene	58863-14-2
51	1,2,3,4,5,6,8-Heptachloronaphthalene	58863-15-3
52	1,2,3,4,5,6-Hexachloronaphthalene	58877-88-6
53	1,2,4,7-Tetrachloronaphthalene	67922-21-8
54	1,2,5,6-Tetrachloronaphthalene	67922-22-9
55	1,2,5,7-Tetrachloronaphthalene	67922-23-0
56	1,2,6,8-Tetrachloronaphthalene	67922-24-1
57	1,2,3,4,5-Pentachloronaphthalene	67922-25-2
58	1,2,3,4,5,7-Hexachloronaphthalene	67922-27-4
59	1,2,4,5,6,8-Hexachloronaphthalene	90948-28-0
60	1,2,4,5,7,8-Hexachloronaphthalene	103426-92-2
61	1,2,3,4,5,8-Hexachloronaphthalene	103426-93-3
62	1,2,3,5,7,8-Hexachloronaphthalene	103426-94-4
63	1,2,3,5,6,8-Hexachloronaphthalene	103426-95-5
64	1,2,3,4,6,7-Hexachloronaphthalene	103426-96-6
65	1,2,3,5,6,7-Hexachloronaphthalene	103426-97-7
66	1,2,3,6-Tetrachloronaphthalene	149864-78-8
67	1,2,6,7-Tetrachloronaphthalene	149864-79-9
68	1,2,5,8-Tetrachloronaphthalene	149864-80-2
69	1,2,3,8-Tetrachloronaphthalene	149864-81-3
70	1,2,7,8-Tetrachloronaphthalene	149864-82-4
71	1,2,3,7,8-Pentachloronaphthalene	150205-21-3
72	1,3,6,8-Tetrachloronaphthalene	150224-15-0
73	1,2,3,6,7-Pentachloronaphthalene	150224-16-1
74	1,2,4,6,7-Pentachloronaphthalene	150224-17-2
75	1,2,3,5,6-Pentachloronaphthalene	150224-18-3
76	1,2,4,5,7-Pentachloronaphthalene	150224-19-4
77	1,2,4,5,6-Pentachloronaphthalene	150224-20-7
78	1,2,4,7,8-Pentachloronaphthalene	150224-21-8
79	1,2,4,6,8-Pentachloronaphthalene	150224-22-9
80	1,2,3,6,8-Pentachloronaphthalene	150224-23-0
81	1,2,3,5,8-Pentachloronaphthalene	150224-24-1
82	1,2,4,5,8-Pentachloronaphthalene	150224-25-2
83	Other polychlorinated naphthalenes	-

**Table D: Polybromodiphenyl ethers (PBDE) (Containing Prohibition)**

	CAS No.
1 Bromodiphenyl ether	101-55-3
2 Dibromodiphenyl ether	2050-47-7
3 Tribromodiphenyl ether	49690-94-0
4 Tetrabromodiphenyl ether	40088-47-9
5 Pentabromodiphenyl ether	32534-81-9
6 Hexabromodiphenyl ether	36483-60-0
7 Heptabromodiphenyl ether	68928-80-3
8 Octabromodiphenyl ether	32536-52-0
9 Nonabromodiphenyl ether	63936-56-1
10 Decabromodiphenyl ether	1163-19-5

**Table E: Polybrominated biphenyls (PBB)(Containing Prohibition)**

	CAS No.
1 Polybrominated Biphenyls	59536-65-1
2 DibromobiphenylX	92-86-4
3 2-Bromobiphenyl	2052-07-5
4 3-Bromobiphenyl	2113-57-7
5 4-Bromobiphenyl	92-66-0
6 Tribromobiphenyl	59080-34-1
7 Tetrabromobiphenyl	40088-45-7
8 Pentabromobiphenyl	56307-79-0
9 Hexabromobiphenyl	59080-40-9
10 Hexabromo-1,1-biphenyl	36355-01-8
11 Firemaster FF-1	67774-32-7
12 Heptabromobiphenyl	35194-78-6
13 Octabromobiphenyl	61288-13-9
14 Nonabromobiphenyl	27753-52-2
15 Decabromobiphenyl	13654-09-6

**Table F: Azo Compounds(Containing Prohibition)**

Amines from which azo compounds should not be generated due to chemical dissolution

	CAS No.
1 o-anisidine	90-04-0
2 2-naphthylamine	91-59-8
3 3,3'-dichlorobenzidine	91-94-1
4 Biphenyl-4-ylamine	92-67-1
5 Benzidine	92-87-5
6 o-toluidine	95-53-4
7 4-chloro-o-toluidine	95-69-2
8 2,4-toluenediamine	95-80-7
9 o-aminoazotoluene	97-56-3
10 5-nitro-o-toluidine	99-55-8
11 4,4'-methylene-bis-(2-chloroaniline)	101-14-4
12 4,4'-methylenedianiline	101-77-9
13 4,4'-oxydianiline	101-80-4
14 p-chloroaniline	106-47-8
15 3,3'-dimethoxybenzidine	119-90-4
16 3,3'-dimethylbenzidine	119-93-7
17 2-methoxy-5-methylaniline	120-71-8
18 2,4,5-trimethylaniline	137-17-7
19 4,4'-thiodianiline	139-65-1
20 4-methoxy-m-phenylenediamine	615-05-4
21 4,4'-methylenedi-o-toluidine	838-88-0
22 4-amino azobenzene	60-09-3

Amine: Hydrogen atom of ammonia was substituted with hydrocarbon group.

Azo compounds: Has an atomic group of "-N=N-." The term "azo" means nitrogen.

**Table G: Chlorinated paraffins (C10-13) (Containing Prohibition)**

	CAS No.
1 Alkanes, C10-13, chloro	85535-84-8
2 Alkanes, C10-12, chloro	108171-26-2
3 Alkanes, C12-13, chloro	71011-12-6
4 Alkanes, chloro	61788-76-9
5 Other chlorinated paraffins	-

<b>Table H: Perfluorooctane sulfonates (PFOS) (Containing Prohibition)</b>		CAS No.
1	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
2	Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7
3	Perfluorooctane sulfonyl fluoride	307-35-7
4	Other perfluorooctane sulfonates	-

<b>Table I: Dibutyltin Compounds (DBT) (Containing Prohibition)</b>		CAS No.
1	Dibutyltin oxide	818-08-6
2	Dibutyltin diacetate	1067-33-0
3	Dibutyltin dilaurate	77-58-7
4	Dibutyltin maleate	78-04-6
5	Dibutyltin dichloride	683-18-1
6	Other dibutyltin compounds	-

<b>Table J: Dioctyltin Compounds (DOT) (Containing Prohibition)</b>		CAS No.
1	Dioctyltin Oxide	870-08-6
2	Dioctyltin dilaurate	3648-18-8
3	Dioctyltin dichloride	3542-36-7
4	Dioctyltin maleate	16091-18-2
5	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
6	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)	-
7	Other dioctyltin compounds	-

<b>Table K: Hexabromocyclododecane(HBCDD) (Containing Prohibition)</b>		CAS No.
1	Hexabromocyclododecane	25637-99-4
2	1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
3	rel-(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	134237-50-6
4	rel-(1R,2S,5R,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	134237-51-7
5	rel-(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	134237-52-8
6	rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6
7	rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5
8	(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7
9	(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8
10	(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9
11	(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2
12	(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5
13	(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6
14	(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7

<b>Table L: Polycyclic aromatic hydrocarbons(PAH) (Containing Prohibition)</b>		CAS No.
1	Benzo[a]pyrene (BaP)	50-32-8
2	Benzo[e]pyrene (BeP)	192-97-2
3	Benzo[a]anthracene (BaA)	56-55-3
4	Chrysen (CHR)	218-01-9
5	Benzo[b]fluoranthene (BbFA)	205-99-2
6	Benzo[j]fluoranthene (BjFA)	205-82-3
7	Benzo[k]fluoranthene (BkFA)	207-08-9
8	Dibenzo[a,h]anthracene(DBAhA)	53-70-3

<b>Table M: PFOA, PFOA-salts, PFOA-esters (Containing Prohibition)</b>		CAS No.
1	Perfluorooctanoic acid	335-67-1
2	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
3	Sodium salt of Perfluorooctanoic acid	335-95-5
4	Potassium salt of Perfluorooctanoic acid	2395-00-8
5	Silver(1+) salt of Perfluorooctanoic acid	335-93-3
6	Perfluorooctanoyl fluoride	335-66-0
7	Methyl perfluorooctanoate	376-27-2
8	Ethyl perfluorooctanoate	3108-24-5

**Table N** CMR substances in textile products (Containing Prohibition)

		CAS No.	Threshold Level(Contents concentration in homogenous material)	Remark
1	Cadmium and its compounds (Listed under entries 28-30 to Appendices 1-6 in Annex XVII of REACH)	-	1 mg/kg (1ppm) (expressed as Cd metal that can be extracted from the material)	Heavy Metals
2	Chromium VI compounds (Listed under entries 28-30 to Appendices 1-6 in Annex XVII of REACH)	-	1 mg/kg (1ppm) (expressed as Cr VI that can be extracted from the material)	
3	Arsenic compounds (Listed under entries 28-30 to Appendices 1-6 in Annex XVII of REACH)	-	1 mg/kg (1ppm) (expressed as As metal that can be extracted from the material)	
4	Lead and its compounds (Listed under entries 28-30 to Appendices 1-6 in Annex XVII of REACH)	-	1 mg/kg (1ppm) (expressed as Pb metal that can be extracted from the material)	
5	Benzene	71-43-2	5 mg/kg(5ppm)	Benzene
6	Benz[a]anthracene	56-55-3	1 mg/kg (1ppm)	Polycyclic aromatic hydrocarbons(PAHs)
7	Benz[e]acephenanthrylene	205-99-2	1 mg/kg (1ppm)	
8	benzo[a]pyrene	50-32-8	1 mg/kg (1ppm)	
9	Benzo[e]pyrene	192-97-2	1 mg/kg (1ppm)	
10	Benzo[j]fluoranthene	205-82-3	1 mg/kg (1ppm)	
11	Benzo[k]fluoranthene	207-08-9	1 mg/kg (1ppm)	
12	Chrysene	218-01-9	1 mg/kg (1ppm)	
13	Dibenz[a,h]anthracene	53-70-3	1 mg/kg (1ppm)	
14	$\alpha$ , $\alpha$ , $\alpha$ , 4-tetrachlorotoluene; p-chlorobenzotrachloride	5216-25-1	1 mg/kg (1ppm)	
15	$\alpha$ , $\alpha$ , $\alpha$ -trichlorotoluene; benzotrachloride	98-07-7	1 mg/kg (1ppm)	
16	$\alpha$ -chlorotoluene; benzyl chloride	100-44-7	1 mg/kg (1ppm)	
17	Formaldehyde	50-00-0	75 mg/kg (75ppm)	Formaldehyde
18	1,2-benzenedicarboxylic acid; di-C 6-8-branched alkylesters, C 7-rich(DIHP)	71888-89-6	1000 mg/kg (1000ppm) (individually or in combination with other phthalates in this entry)	Phthalates
19	Bis(2-methoxyethyl) phthalate(DMEP)	117-82-8		
20	Diisopentylphthalate(DIPP)	605-50-5		
21	Di-n-pentyl phthalate (DPP)	131-18-0		
22	Di-n-hexyl phthalate (DnHP)	84-75-3		
23	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone (NMP)	872-50-4	3000 mg/kg (3000ppm)	Solvents
24	N,N-dimethylacetamide (DMAC)	127-19-5	3000 mg/kg (3000ppm)	
25	N,N-dimethylformamide; dimethyl formamide (DMF)	68-12-2	3000 mg/kg (3000ppm)	
26	1,4,5,8-tetraaminoanthraquinone; C.I. Disperse Blue 1	2475-45-8	50 mg/kg (50ppm)	Dyestuff
27	Benzenamine, 4,4' -(4-iminocyclohexa- 2,5-dienylidenemethylene)dianiline hydrochloride; C.I. Basic Red 9	569-61-9	50 mg/kg (50ppm)	
28	[4-[4,4' -bis(dimethylamino)benzhydrylidene]cyclohexa- 2,5-dien-1-ylidene]dimethylammonium chloride; C.I. Basic Violet 3	548-62-9	50 mg/kg (50ppm)	
29	4-chloro-o-toluidinium chloride	3165-93-3	30 mg/kg (30ppm)	Others
30	2-Naphthylammoniumacetate	553-00-4	30 mg/kg (30ppm)	
31	4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	30 mg/kg (30ppm)	
32	2,4,5-trimethylaniline hydrochloride	21436-97-5	30 mg/kg (30ppm)	
33	Quinoline	91-22-5	50 mg/kg (50ppm)	

**Table O** Perfluorohexane-1-sulphonic acid and its salts(Containing Prohibition)

	CAS No.
1 Perfluorohexane-1-sulphonic acid	355-46-4
2 Ammonium perfluorohexane-1-sulphonate	68259-08-5
3 Potassium perfluorohexane-1-sulphonate	3871-99-6
4 Tridecafluorohexane-1-sulfonyl fluoride	423-50-7
5 Perfluorohexanesulfonamide	41997-13-1
6 Other perfluorohexane-1-sulphonic acid and its salts	-

Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances (Containing Prohibition)		CAS No.
1	Perfluorononan-1-oic acid(PFNA)	375-95-1
2	Perfluorononan-1-oic acid ammonium salt	4149-60-4
3	Perfluorononan-1-oic acid sodium salt	21049-39-8
4	Nonadecafluorodecanoic acid(PFDA)	335-76-2
5	Nonadecafluorodecanoic acid ammonium salt	3108-42-7
6	Nonadecafluorodecanoic acid sodium salt	3830-45-3
7	Pentacosfluorotridecanoic acid(PFTrDA)	72629-94-8
8	Tricosafluorododecanoic acid(PFDoDA)	307-55-1
9	Henicosfluoroundecanoic acid(PFUnDA)	2058-94-8
10	Heptacosfluorotetradecanoic acid(PFTDA)	376-06-7
11	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosfluoro-12-iodo-	307-60-8
12	2-Propenoic acid, 2-methyl-,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosfluorododecyl ester	2144-54-9
13	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances,	-

Table Q: Cadmium / Cadmium Compounds (Conditional Containing Prohibition)		CAS No.
1	Cadmium	7440-43-9
2	Cadmium oxide	1306-19-0
3	Cadmium sulfide	1306-23-6
4	Cadmium chloride	10108-64-2
5	Cadmium sulphate	10124-36-4 31119-53-6
6	Cadmium nitrate	10325-94-7
7	Cadmium nitrate tetrahydrate	10022-68-1
8	Cadmium stearate (cadmium soap)	2223-93-0
9	Cadmium fluoride	7790-79-6
10	Other cadmium compounds	-

Table R: Hexavalent Chromium Compounds (Conditional Containing Prohibition)		CAS No.
1	Sodium dichromate	10588-01-9
2	Potassium dichromate	7778-50-9
3	Chromium trioxide	1333-82-0
4	Lead (II) chromate	7758-97-6
5	Potassium chromate	7789-00-6
6	Calcium chromate	13765-19-0
7	Barium chromate	10294-40-3
8	Strontium chromate	7789-06-2
9	Zinc chromate	13530-65-9
10	Sodium chromate	7775-11-3
11	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8
12	C.I. Pigment Yellow 34	1344-37-2
13	Ammonium dichromate	7789-09-5
14	Pentazinc chromate octahydroxide	49663-84-5
15	Potassium zinc chromate hydroxide	11103-86-9
16	Dichromium tris(chromate)	24613-89-6
17	Acids generated from chromium trioxide and their oligomers: • Chromic acid • Dichromic acid • Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2
18	Potassium chlorochromate	16037-50-6
19	Ammonium chromate	7788-98-9
20	Copper chromate	13548-42-0
21	Magnesium chromate	13423-61-5
22	Calcium dichromate	14307-33-6
23	Other hexavalent chromium compounds	-

Table S: Lead/Lead Compounds (Conditional Containing Prohibition)		CAS No.
1	Lead	7439-92-1
2	Lead (II) carbonate	598-63-0
3	Lead (IV) oxide	1309-60-0
4	Lead (II,IV) oxide	1314-41-6
5	Lead (II) sulfide	1314-87-0
6	Lead (II) oxide	1317-36-8
7	Lead (II) carbonate basic	1319-46-6
8	Lead hydroxide carbonate	1344-36-1
9	Lead (II) sulfate	7446-14-2
10	Lead (II) phosphate	7446-27-7
11	Lead (II) chromate	7758-97-6

<b>Table S: Lead/Lead Compounds (Conditional Containing Prohibition) (continued)</b>		CAS No.
12	Lead titanium trioxide	12060-00-3
13	Lead sulfate, sulphuric acid, lead salt	15739-80-7
14	Lead difluoride	7783-46-2
15	Lead dichloride	7758-95-4
16	Lead(II) acetate	301-04-2
17	Lead (II) acetate, trihydrate	6080-56-4
18	Lead selenide	12069-00-0
19	Lead sulphate, tribasic	12202-17-4
20	Lead stearate	1072-35-1
21	Lead hydrogen arsenate	7784-40-9
22	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8
23	C.I. Pigment Yellow 34	1344-37-2
24	Trilead diarsenate	3687-31-8
25	Lead diazide	13424-46-9
26	Lead 2,4,6-trinitro-m-phenylene dioxide	15245-44-0
27	Lead dipicrate	6477-64-1
28	Lead(II) dimethanesulfonate	17570-76-2
29	Other lead compounds	-

<b>Table T: Mercury/Mercury Compounds (Conditional Containing Prohibition)</b>		CAS No.
1	Mercury	7439-97-6
2	Mercury(II) chloride	7487-94-7
3	Mercury(II) oxide	21908-53-2
4	Diethylmercury	627-44-1
5	Phenylmercury chloride	100-56-1
6	Mercuric sulfate	7783-35-9
7	Mercuric nitrate	10045-94-0
8	Mercuric sulfide	1344-48-5
9	Mercuric chloride	33631-63-9
10	Dimercury sulphate	7783-36-0
11	Mercury difulminate	628-86-4
12	Mercury diacetate	1600-27-7
13	Other mercury compounds	-

<b>Table U: Arsenic / Arsenic Compounds (Containing Avoidance)</b>		CAS No.
1	Arsenic	7440-38-2
2	Gallium arsenide	1303-00-0
3	Calcium arsenite	27152-57-4
4	Potassium arsenite	10124-50-2
5	Potassium arsenate	7784-41-0
6	Other arsenate compounds	-

<b>Table V: Beryllium /Beryllium Compounds (Containing Avoidance)</b>		CAS No.
1	Beryllium	7440-41-7
2	Beryllium-aluminum alloy	12770-50-2
3	Beryllium chloride	7787-47-5
4	Beryllium fluoride	7787-49-7
5	Beryllium hydroxide	13327-32-7
6	Beryllium oxide	1304-56-9
7	Beryllium phosphate	13598-15-7
8	Beryllium sulfate	13510-49-1
9	Beryllium sulfate tetrahydrate	7787-56-6
10	Beryl ore	1302-52-9
11	Beryllium copper	11108-64-8
12	Other beryllium compounds	-

<b>Table W: Nickel / Nickel Compounds (Containing Avoidance)</b>		CAS No.
1	Nickel	7440-02-0
2	Nickel carbonyl	13463-39-3
3	Nickel oxide	1313-99-1
4	Nickelous carbonate	3333-67-3
5	Nickel sulfate	7786-81-4
6	Nickel sulfide	12035-72-2
7	Nickel (II) chloride	7718-54-9
8	Nickel (II) chloride, hexahydrate	7791-20-0
9	Nickel(II) sulfate, hexahydrate	10101-97-0
10	Nickel(II) sulfate, heptahydrate	10101-98-1
11	Antimony nickel titanium oxide yellow (C.I. Pigment Yellow 53)	8007-18-9
12	Nickel niobium titanium yellow rutile (C.I. Pigment Yellow 161)	68611-43-8
13	Cobalt titanate green spinel (C.I. Pigment Green 50)	68186-85-6
14	Other nickel compounds	-

**Table X: Phthalates (Containing Avoidance)**

		CAS No.
1	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0
2	1,2-Benzenedicarboxylic acid diisodecyl ester (DIDP)	26761-40-0 68515-49-1
3	Di-n-octyl phthalate (DNOP)	117-84-0
4	Diisooctyl phthalate(DIOP)	27554-26-3

**Table Y: Radioactive substances (Containing Avoidance)**

		CAS No.
1	Uranium-238	7440-61-1
2	Radon	10043-92-2
3	Americium-241	14596-10-2
4	Thorium-232	7440-29-1
5	Cesium-137	10045-97-3
6	Strontium-90	10098-97-2

**Table Z: Brominated flame retardants (except PBB,PBDE and HBCDD)  
(Containing Avoidance)**

		CAS No.
1	Poly (2, 6-dibromo-phenylene oxide)	69882-11-7
2	Tetra-decabromo-diphenoxy-benzene	58965-66-5
3	1, 2-Bis (2, 4, 6-tribromo-phenoxy) ethane	37853-59-1
4	3, 5, 3', 5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
5	TBBA, unspecified	30496-13-0
6	TBBA-epichlorhydrin oligomer	40039-93-8
7	TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
8	TBBA carbonate oligomer	28906-13-0
9	TBBA carbonate oligomer, phenoxy end capped	94334-64-2
10	TBBA carbonate oligomer, 2, 4, 6-tribromo-phenol terminated	71342-77-3
11	TBBA-(2, 3-dibromo-propyl-ether)	21850-44-2
12	TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
13	TBBA-bis-(allyl-ether)	25327-89-3
14	TBBA-dimethyl-ether	37853-61-5
15	Tetrabromo-bisphenol S	39635-79-5
16	TBBS-bis-(2, 3-dibromo-propyl-ether)	42757-55-1
17	2, 4-Dibromo-phenol	615-58-7
18	2, 4, 6-tribromo-phenol	118-79-6
19	Pentabromo-phenol	608-71-9
20	2, 4, 6-Tribromo-phenyl-allyl-ether	3278-89-5
21	Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
22	Tetrabromo-chyclo-octane	31454-48-5
23	1, 2-Dibromo-4-(1, 2 dibromo-ethyl)-cyclo-hexane	3322-93-8
24	Tetrabromo phthalic-anhydride	632-79-1
25	1, 3-Butadiene homopolymer, brominated	68441-46-3
26	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
27	2, 3-Dibromo-2-butene-1, 4-diol	3234-02-4
28	Dibromo-neopentyl-glycol	3296-90-0
29	Dibromo-propanol	96-13-9
30	Tribromo-neopentyl-alcohol	36483-57-5
31	Poly tribromo-styrene	57137-10-7
32	Tibromo-styrene	61368-34-1
33	Poly-dibromo-styrene	31780-26-4
34	Bromo-/Chloro-paraffins	68955-41-9
35	Bromo-/Chloro-alpha-olefin	82600-56-4
36	Vinylbromide	593-60-2
37	Tris-(2, 3-dibromo-propyl)-isocyanurate	52434-90-9
38	Tris (2, 4-Dibromo-phenyl) phosphate	49690-63-3
39	Tris (tribromo-neopentyl) phosphate	19186-97-1
40	Pentabromo-toluene	87-83-2
41	Pentabromo-benzyl bromide	38521-51-6
42	Pentabromo-benzyl-acrylate, monomer	59447-55-1
43	Pentabromo-benzyl-acrylate, polymer	59447-57-3
44	TBBA-bisphenol A-phosgene polymer	32844-27-2
45	Brominated epoxy resin end-capped with tribromophenol	139638-58-7
46	Bis (methyl) tetrabromo-phtalate	55481-60-2
47	Bis (2-ethylhexyl) tetrabromo-phtalate	26040-51-7

**Table Z:** Brominated flame retardants (except PBB,PBDE and HBCDD)

(Containing Avoidance) (continued)		CAS No.
48	TBPA, glycol-and propylene-oxide esters	75790-69-1
49	N, N'-Ethylene-bis-(tetrabromo-phthalimide)	32588-76-4
50	Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
51	Chlorinated and brominated phosphate ester	125997-20-8
52	Tribromo-bisphenyl-maleinimide	59789-51-4
53	TBPA Na salt	25357-79-3
54	Decabromo-diphenyl-ethane	84852-53-9
55	Dibromo-styrene grafted PP	171091-06-8
56	Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
57	Brominated epoxy resin end-capped with tribromophenol	135229-48-0
58	Other brominated flame retardants	-

**Table AA:** Chlorinated Flame Retardants (Excluding Short-chain chlorinated paraffins)

(Containing Avoidance)		CAS No.
1	Tetrakis(2-chloroethyl)dichloroisopentyldiphosphate	38051-10-4
2	Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0
3	Other chlorinated flame retardants	-

**Table AB:** Perchlorates (Containing Avoidance)

		CAS No.
1	Lithium Perchlorate	7791-03-9
2	Ammonium perchlorate	7790-98-9
3	Barium perchlorate	13465-95-7
4	Lead perchlorate	13637-76-8
5	Magnesium Perchlorate	10034-81-8
6	Perchloric acid, cobalt (2+) salt	13455-31-7
7	Perchloric acid, mercury(2+) salt	7616-83-3
8	Perchloric acid, nickel(2+) salt, hexahydrate	13520-61-1
9	Nickel perchlorate	13637-71-3
10	Potassium Perchlorate	7778-74-7
11	Sodium Perchlorate	7601-89-0
12	Thallium(3+) perchlorate	15596-83-5
13	Other perchlorates	-

**Table AC:** 4-Nonylphenol, branched and linear, ethoxylated (Containing Avoidance)

		CAS No.
1	Poly(oxy-1,2-ethanediyl), $\alpha$ -(4-nonylphenyl)- $\omega$ -hydroxy-	26027-38-3
2	Ethanol, 2-[2-[2-(4-nonylphenoxy)ethoxy]ethoxy]ethoxy]-	7311-27-5
3	Ethanol, 2-[2-(4-nonylphenoxy)ethoxy]-	20427-84-3
4	3,6,9,12,15-Pentaoxaheptadecan-1-ol,17-(4-nonylphenoxy)-	34166-38-6
5	3,6,9,12,15,18-Hexaoxaicosan-1-ol, 20-(4-nonylphenoxy)-	27942-27-4
6	3,6,9,12,15,18,21,24-Octaoxahexacosan-1-ol,26-(4-nonylphenoxy)-	14409-72-4
7	Ethanol, 2-(4-nonylphenoxy)-	104-35-8
8	Isononylphenol ethoxylate	37205-87-1
9	Poly(oxy-1,2-ethanediyl), $\alpha$ -(4-nonylphenyl)- $\omega$ -hydroxy-, branched	127087-87-0
10	4-tert-Nonylphenol diethoxylate	156609-10-8
11	Other 4-Nonylphenol, branched and linear, ethoxylated	-

**Table AD:** Medium-chain chlorinated paraffins (MCCP) (Containing Avoidance)

		CAS No.
1	Alkanes, C14-16, chloro	1372804-76-6
2	Alkanes, C14-17, chloro	85535-85-9
3	Tetradecane, chloro derivs.	198840-65-2
4	Other medium-chain chlorinated paraffins (MCCP)	-



## Use Prohibition Substances

Applicable Standards and Applications of Restricted Chemical Substances		(A)	(B)	(C)	(D)	End Use Applications
		Ozone Layer Protection Law	Global Warming Prevention Law	Volatile Organic Compounds	EU Directives	
1	1,1,1-trichloroethane	UP			○	Detergents, solvents
2	CFC group	UP				Washing agents, coolants, forming agents
3	HBFC group	UP				Extinguishants
4	Halon group	UP				Extinguishants, washing agents
5	Bromochloromethane	UP				Solvents, Extinguishants
6	Tetrachloroethylene			○		Solvents
7	Benzene			○	○	Solvents, washing agents
8	Pentachloroethane				○	Solvents, washing agents
9	1,1,1,2-tetrachloroethane				○	Solvents
10	Hexachloroethylene				○	Solvents
11	Methyl bromide	○				Soil fumigants
12	Carbon tetrachloride	UP				Solvents, washing agents
13	1,1,2,2-tetrachloroethane				○	Solvents, washing agents
14	1,1,2-trichloroethane			○	○	Solvents
15	1,1-dichloroethylene			○	○	Solvents

## Use Avoidance Substances

Use Avoidance Substances		(A)	(B)	(C)	(D)	End Use Applications
1	1,2-dichloroethane			○		Solvents, washing agents
2	1,2-dichloroethylene			○		Solvents, washing agents
3	1,3-dichloropropene			○		Soil fumigants
4	HCFC group	○				Washing agents
5	HFC group		○			Washing agents, coolants
6	PFC group		○			Washing agents, coolants
7	Dichloromethane			○		Solvents, washing agents
8	Cis-1,2-dichloroethylene			○		Solvents, washing agents
9	Trichloroethylene			○	○	Washing agents
10	Nitrous oxide		○			Anaesthetics for medical treatments
11	Sulfur hexafluoride		○			Etching gas, insulated gas
12	Chloroform			○	○	Solvents, anaesthetics

UP: Relevant to II of Annexes A, B and C attached to the Montreal Protocol

Q: Relevant to I of Annex C and I of Annex E attached to the Montreal Protocol

○: Appropriate substances

○: Relevant to volatile organic compounds which might cause soil pollution (SII Standards)

O: Relevant to REACH Regulation or RoHS Directives

### Ozone Layer Protection Law:

Sets forth measures including production control, emission restraint and use rationalization of specified ozone depleting substances. Production of specific fluorine and halon is prohibited; HCFC will also be prohibited step by step.

Restricts emissions of greenhouse gases, such as CO<sub>2</sub> and PFC for global warming prevention.

Sets forth measures for workers to ensure their safety and health and build up their comfortable working environment. It also lays down chemical substances whose manufacture should be prohibited or allowed and whose indication should be imposed.

Manufacture and import of new chemical substances should be examined for their decomposition level under this law and use restraint rules should be set forth in this law.

Rules defined in the Occupational Safety and Health Law to prevent workers' health disturbance, such as dermatitis and neuropathy. Confirmation of toxicity of substances to be used, measures for improvement of related facilities to minimize the term and the extent of exposure to chemical substances are set forth herein.

Sets forth rules and regulations to confirm and report emissions of substances into the air and submit material safety data sheet information with the aim of promoting voluntary control of chemical substances and preventing environmental conservation-related issues.

This regulation pertains to the registration, evaluation, approval, and restriction of chemical substances. This regulation restricts the sale and use of chemical substances that are carcinogenic, mutagenic, or otherwise harmful, and the regulation also requires that information be submitted for any article containing more than 1,000 ppm of an SVHC (substance of very high concern).

Specifics containing prohibition instructions of toxic substances in electric and electronic products.  
Specific hazardous chemical substances (lead, mercury, cadmium, hexavalent chromium, polybrominate biphenyls (PBB), and polybrominated diphenyl ethers (PBDE), DEHP, DBP, BBP, DIBP)

		(A) Occupational Safety and Health Law	(B) Chemical Substances Examination Law	(C) Special Chemical Substance Regulation	(D) PRTR Law	(E) EU Directives	
Containing Prohibition Substances							End Use Applications
1	4-nitrobiphenyl and its salt	MP			1		Synthetic intermediates
2	DDT		1				Antiseptics, fungicides, paints
3	Asbestos			2	S1	○	Adiabators, insulators, bulking agents
4	Aldrin (HCB)		1				Antiseptics, fungicides, paints
5	Endrin		1				Antiseptics, fungicides, paints
6	Chlordane		1				Adhesives, paints
7	Dieldrin		1				Antiseptics, fungicides, paints
8	Bis(chloromethyl) ether	MP					Insecticides
9	Tributyl tin oxide (TBTO)		1				Antiseptics, paints, pigments
10	Tri-substituted organostannic compounds (including Tributyl tin and Triphenyl tin)					○	Fungicides, antiseptics, paints, pigments
11	Hexachloro benzene (HCB)		1				Disinfectants, antirust
12	Polychlorinated naphthalene (1 or more chlorine)		1			○	Lubricants, paints
13	Polychlorobiphenyls (PCB)		1		1	○	Insulation oil, lubricants
14	Polychlorinated terphenyls (PCT)					○	Insulation oil, lubricants
15	Polybrominated diphenylethers group (PBDE)					○	Fire retardant
16	Polybrominated biphenyls group (PBB)					○	Fire retardant
17	Azo compounds						Pigments, dyes
18	2,4,6-Tri-tert-butylphenol		1				Antioxidants
19	N,N'-ditolyl-p-phenylenediamine N-toly-N'-xylyl-p-phenylenediamine N,N'-dixylyl-p-phenylenediamine		1				Antioxidants, lubricants
20	Chlorinated paraffins (C10-13)		1			○	Plasticizer, fire retardant
21	Mirex		1				Fire retardant
22	Yellow phosphor	MP					Lucifer
23	Toxaphene		1				Insecticide
24	Monomethyl-dichloro-diphenyl methane (DBBT)					○	Insulation oil, lubricants
25	Di-u-oxo-di-n-butyl-stanniohydroxyborane (DBB)					○	Insulation oil, lubricants
26	Monomethyl-tetrahalorodiphenyl-methane					○	Insulation oil, lubricants
27	Monomethyl-dichloro-diphenyl-methane					○	Insulation oil, lubricants
28	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dim ethylethyl)- (UV-320)		1				Ultraviolet rays inhibitor
29	Perfluorooctane sulfonates (PFOS)		1				surface-active agent, paints
30	Dimethyl fumarate (DMF)					○	Insecticide, fungicides
31	Cobalt dichloride					○	Water indicator in desiccants
32	Formaldehyde				1		Antiseptics,
33	Dibutyltin (DBT) compounds					○	PVC stabilizer and catalysts for curing silicone
34	Diocetyl tin (DOT) compounds					○	resins and polyurethane resins.
35	Tris(2,3-dibromopropyl)phosphate (TRIS)					○	Fire retardant
36	Tris (1-aziridinyl) phosphine oxide (TEPA)					○	Fire retardant
37	Hexabromocyclododecane (HBCDD)					○	Fire retardant
38	Polycyclic aromatic hydrocarbons (PAH)					○	Antiseptics, lubricants
39	Tris(2-chloroethyl)phosphate (TCEP) *1					○	Fire retardant, lubricants
40	Tris(1-chloro-2-propyl)phosphate (TCPP) *1						Fire retardant
41	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP) *1						Fire retardant
42	PFOA, PFOA-salts, PFOA-esters		1				surface-active agent, paints
43	4,4'-isopropylidenediphenol (bisphenol A:BPA)				1	○	Epoxy resin curing agents, thermal paper
44	Pentachlorophenol and its salts and esters		1	2	1	○	Insecticide, pesticides
45	CMR substances in textile products					○	Preservatives, pigments, plasticizers
46	Phenol, isopropylated, phosphate (3:1)*2						Fire retardant
47	Pentachlorobenzenethiol*2						Organic rubbers
48	Hexachlorobutadiene (HCBd)*2		1				Agrochemicals, solvents
49	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds		1				Surface treatment agents, surfactant
50	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCa-related substances					○	Water repellent, Extinguishants

\*1 United States. Vermont State. Act 85

\*2: United States. Toxic Substances Control Act

(A) Occupational Safety and Health Law MP: Manufacture Prohibition Substances

MA: Manufacture Allowed Substances

(B) Chemical Substances Examination and Manufacture Regulations

1: Type I Special Chemical Substances

(C) Special Chemical Substances Regulations

1: Classification I Substances 2; Classification II Substances 3; Classification III Substances 3

N: Upon emissions or discharge of those substances, a disposal system is needed.

(D) PRTR Law

1: Classification 1-Designated Chemical Substances

S1: Special Classification 1-Designated Chemical Substances

2: Classification 2-Designated Chemical Substances

(E) EU Directives

○: Relevant to REACH Regulation or RoHS Directives

		(A) Occupational Safety and Health Law	(B) Chemical Substances Examination Law	(C) Regulation Special Chemical Substance	(D) PRTR Law	(E) EU Directives	
<b>Containing Prohibition Substances</b>							End Use Applications
51	Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms*3						In the printing Ink of packaging materials and printed matter
52	Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings*3						In the printing Ink of packaging materials and printed matter
53	1,6,7,8,9,14,15,16,17,17,18,18Dodecachloropentacyclo[12.2.1.1.0.0]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]		1				Fire retardant
54	2-(2H-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol (UV-328)		1				Ultraviolet rays inhibitor
55	Methoxychlor		1				Insecticide

\*3 French law

<b>Conditional containing Prohibition Substances</b>		(A)	(B)	(C)	(D)	(E)	End Use Applications
1	Cadmium / cadmium compounds			2	S1	○	Pigments, stabilizers, contact materials
2	Hexavalent chromium compounds				S1	○	Pigments, ink
3	Mercury / Mercury compounds			2	1	○	Electrodes
4	Lead / Lead compounds				1	○	Pigments, stabilizers, rubber stiffening agents
5	Bis (2-ethylhexyl)phthalate (DEHP)				1	○	PVC plasticizer
6	Benzyl butyl phthalate (BBP)				1	○	Plasticizer
7	Dibutyl phthalate (DBP)				1	○	Plasticizer
8	Diisobutyl phthalate (DIBP)					○	Plasticizer
9	Polyvinyl chloride (PVC) *4						Cable coating, plastic resins

\*4 :Polyvinyl chloride is a substance that has been independently classified by SII into conditional containing prohibition.

<b>Containing Avoidance Substances</b>		(A)	(B)	(C)	(D)	(E)	End Use Applications
1	Arsenic / arsenic compounds			2	S1	○	Semiconductors, catalysts, pigments
2	Beryllium / beryllium compounds	MA		1	S1		Ceramic materials, catalysts
3	Nickel compounds				1	○	Pigments, paints
4	Phthalic ester				1	○	Plasticizer, pigments, paints
5	Radioactive material						Optical characteristic
6	Brominated flame retardants					○	Fire retardant
7	Chlorinated flame retardants						Fire retardant
8	Red phosphorus						Fire retardant
9	perchlorate *5						Lithium primary batteries
10	Anthracene					○	Material of crude carbon black, insecticides, wood preservatives, pesticides, plant growth regulators
11	4,4'-methylenedianiline					○	Epoxy resin curing agents, adhesive curing agents
12	Cobalt dichloride					○	Water indicator in desiccants, ammonia gas absorbent, gas masks
13	Diarsenic pentaoxide					○	Dye, metallurgy, industrial special glass, wood preservatives
14	Diarsenic trioxide					○	Glass and enamel bleaching, special glass cleaner and oxidizer
15	Sodium dichromate				S1	○	Used to produce chromium compounds (chromium sulfate) and inorganic chromium acid pigment
16	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)					○	Fragrance
17	Lead hydrogen arsenate				1	○	Pesticides, chemical weapons, wood preservatives
18	Triethyl arsenate					○	Pesticides, wood preservatives
19	Anthracene oil					○	Antiseptic, waterproof material. Used to produce other substances such as anthracene and carbon black
20	Anthracene oil, anthracene paste, distn. lights					○	
21	Anthracene oil, anthracene paste, anthracene fraction					○	
22	Anthracene oil, anthracene-low					○	
23	Anthracene oil, anthracene paste					○	
24	Coal tar pitch, high temperature					○	Electrode, molding material for carbon products, insulation filler, binder for briquette
25	Aluminosilicate, Refractory Ceramic Fibres					○	Substitute materials of the asbestos such as insulation materials
26	Zirconia Aluminosilicate, Refractory Ceramic Fibres					○	Substitute materials of the asbestos such as insulation materials
27	2,4-Dinitrotoluene					○	Dye, used to produce toluene diisocyanate which is a raw material of plasticized polyurethane foamed material
28	Lead chromate				1	○	Pigment, bleach

\*5: Perchlorate is regulated by the California DTSC (Department of Toxic Substances Control).

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**Containing Avoidance Substances  
(continued)**

		(A) Occupational Safety and Health Law	(B) Chemical Substance Examination Law	(C) Special Chemical Substance Regulation	(D) PRTR Law	(E) EU Directives	End Use Applications
29	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)				1	○	Additive plasticizers and viscosity regulator which provide flameproofness to acrylic resin, polyurethane, polyvinyl chloride and other polymer, lubricant additives
30	C.I. Pigment Yellow 34				1	○	Raw material for synthetic resin paints, inks, rubber
31	Acrylamide					○	Paper strengthening agents, fiber processing agents, processing agents for increasing adhesiveness, acrylamide thermosetting paint synthesis materials, coagulants, and soil improving agents
32	Trichloroethylene					○	Metal part cleaning and removal, solvents in adhesives, etc.
33	Boric acid					○	Pesticides, personal care products, food additives, glass, ceramic, rubber, flame retardants, etc.
34	Disodium tetraborate, anhydrous					○	Glass, glass fiber, ceramic, detergents, cleaners, personal care products, industrial fluids, adhesives, etc.
35	Tetraboron disodium heptaoxide, hydrate					○	Laboratories (chemical reagents) and other chrome compound manufacturing
36	Sodium chromate				S1	○	Leather product tanning, metal processing and coating, pigment/ink manufacturing, etc.
37	Potassium chromate				S1	○	Leather product tanning, oxidants, photo sensitive screen (CRT) manufacturing, etc.
38	Ammonium dichromate				S1	○	Leather tanning, metal processing and coating, and photolithography
39	Potassium dichromate				S1	○	Surface treatment agents, anticorrosives, pigments
40	Cobalt(II) sulphate					○	Surface treatment agents, catalysts
41	Cobalt(II) dinitrate					○	Adhesives, pigments
42	Cobalt(II) carbonate					○	Surface treatment agents, dyes, rubber adhesion
43	Cobalt(II) diacetate					○	Solvents, fuel additive
44	2-Methoxyethanol					○	Solvents
45	2-Ethoxyethanol					○	Metal surface treating agents, antiseptics
46	Chromium trioxide				S1	○	Acids generated from chromium trioxide and their oligomers: • Chromic acid • Dichromic acid • Oligomers of chromic acid and dichromic acid
47	2-ethoxyethyl acetate				S1	○	Metal surface treating agents, antiseptics
48	Strontium chromate					○	Solvents
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)					○	Anticorrosives
50	Hydrazine					○	PVC plasticizers
51	1-methyl-2-pyrrolidone					○	Fire retardant,
52	1,2,3-trichloropropane					○	Solvents for paint dried at high temperature and washing agents
53	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)					○	Intermediates for insecticides and intermediates for chlorinated solvents
54	Dichromium tris(chromate)				S1	○	PVC plasticizers, bulking agents, and ink plasticizers
55	Potassium hydroxy-octa-oxo-dizincatedichromate				S1	○	Metal surface treatment chemical
56	Pentazinc chromate octahydroxide				S1	○	Coating films and sealants
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)					○	Coating films and paints
58	Bis(2-methoxyethyl) phthalate(DMEP)					○	Epoxy resin curing agents
59	2-Methoxyaniline;o-Anisidine					○	Plasticizers for paint and varnish
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)					○	Colored paper and dye
61	1,2-Dichloroethane					○	Mainly used in the manufacture of polymer preparations and of ethoxylates.
62	Bis(2-methoxyethyl) ether					○	Solvents
63	Arsenic acid					○	Solvents for chemical reaction and battery electrolytes
64	Calcium arsenate					○	Fining agents to disperse air bubbles in glass
65	Trilead diarsenate				1	○	Chemical for separation of nickel from molten copper
66	N,N-dimethylacetamide (DMAC)					○	Product from refining and smelting of non-ferrous metals
67	4,4'-methylene-bis-(2-chloroaniline)					○	Solvents, paints, and ink remover
68	Phenolphthalein					○	Curing agents for polyurethane resins
69	Lead azide Lead diazide				1	○	Indicator in medical use and pH indicator
70	Lead styphnate				1	○	Detonator
71	Lead dipicrate				1	○	Explosive and detonator
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)					○	Detonator
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)					○	Solvents and auxiliary agents in processing
74	Diboron trioxide					○	Solvents and electrolytes for lithium ion battery
75						○	Glass, ceramics, and fire retardant

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Containing Avoidance Substances (continued)		(A)	(B)	(C)	(D)	(E)	
		Occupational Safety and Health Law	Chemical Substance Examination Law	Special Chemical Substance Regulation	PRTR Law	EU Directives	End Use Applications
76	Formamide					<input type="radio"/>	Solvents, reagents, and plasticizers
77	Lead(II) bis(methanesulfonate)				1	<input type="radio"/>	Chemicals for plating of electronic parts
78	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)					<input type="radio"/>	Resin curing agents and ink for printed-circuit board
79	β-TGIC (1,3,5-tris [(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)					<input type="radio"/>	Resin curing agents and ink for printed-circuit board
80	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)					<input type="radio"/>	Dyes, pigments
81	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)					<input type="radio"/>	Dyes
82	C.I. Basic Violet 3					<input type="radio"/>	Chemicals for dyeing of paper and ink for jet printing and ballpoint pen
83	[4-[[4-anilino-1-naphthyl][4-(dimethylamino) phenyl] methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I.Basic Blue 26)					<input type="radio"/>	Chemicals for dyeing of paper, packaging material, and fabric and coloring of resin
84	α,α-Bis[4-(dimethylamino) phenyl]-4 (phenylamino) naphthalene-1- methanol (C.I.Solvent Blue 4)					<input type="radio"/>	Dyes, inks
85	4,4'-bis(dimethylamino)- 4''-(methylamino)trityl alcohol					<input type="radio"/>	Dyes, inks
86	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues					<input type="radio"/>	Water paint
87	4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof					<input type="radio"/>	Antioxidants,plasticizer,paints,printing ink
88	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))					<input type="radio"/>	Synthetic resin rubber blowing agent, bleach catalysts, cement fillers, colorants, bleach photo
89	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)					<input type="radio"/>	Plasticizer for the thermoplastic resin, curing agent for epoxy resins, insecticides, anticorrosives
90	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride					<input type="radio"/>	Plasticizer for the thermoplastic resin, curing agent for epoxy resins, insecticides, anticorrosives
91	Methoxy acetic acid					<input type="radio"/>	Synthetic intermediates,anticorrosives
92	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear					<input type="radio"/>	Laboratories (chemical reagents)
93	Diisopentylphthalate (DIPP)					<input type="radio"/>	PVC plasticizers,pesticides
94	N-pentyl-isopentylphthalate					<input type="radio"/>	Plasticizer
95	1,2-Diethoxyethane					<input type="radio"/>	Paint solvent,inks
96	N,N-dimethylformamide; dimethyl formamide					<input type="radio"/>	Solvents, washing agents
97	Dibutyltin dichloride (DBT)					<input type="radio"/>	Rubber additive,pvc stabilizers
98	Acetic acid, lead salt, basic				1	<input type="radio"/>	Anticorrosive pigment
99	Lead (II) carbonate basic				1	<input type="radio"/>	Pigments, paints,pvc stabilizers
100	Lead oxide sulfate (basic lead sulfate)				1	<input type="radio"/>	Battery electrode materials,phosphor
101	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)				1	<input type="radio"/>	PVC stabilizers
102	Dioxobis(stearato)trilead				1	<input type="radio"/>	PVC stabilizers
103	Fatty acids, C16-18, lead salts				1	<input type="radio"/>	PVC stabilizers
104	Lead bis(tetrafluoroborate)				1	<input type="radio"/>	Solder plating, alloy plating, electroplating electrolyte
105	Lead cyanamide				1	<input type="radio"/>	Anticorrosive pigment
106	Lead dinitrate				1	<input type="radio"/>	Pigments
107	Lead oxide (lead monoxide)				1	<input type="radio"/>	PVC stabilizers,optical glass, pigments, paints, storage battery plates, vulcanization accelerator, pottery, enamel, glass general
108	Lead tetroxide (orange lead)				1	<input type="radio"/>	Paints, optical glass, general glass, ceramics, enamel, battery, pigments, rubber, pharmaceutical, plastics, electronic materials
109	Lead titanium trioxide				1	<input type="radio"/>	Electronic ceramic material
110	Lead Titanium Zirconium Oxide				1	<input type="radio"/>	Electronic ceramic material,Piezoelectric devices,Piezoelectric buzzers
111	Pentalead tetraoxide sulphate				1	<input type="radio"/>	PVC stabilizers
112	C.I. Pigment Yellow 41				1	<input type="radio"/>	Pigments
113	Silicic acid, barium salt, lead-doped					<input type="radio"/>	Lamp fluorescent material
114	Silicic acid, lead salt				1	<input type="radio"/>	Glass materials
115	Sulfurous acid, lead salt, dibasic				1	<input type="radio"/>	PVC stabilizers

**Containing Avoidance Substances  
(continued)**

		(A) Occupational Safety and Health Law	(B) Chemical Substances Examination Law	(C) Special Chemical Substances Regulation	(D) PRTR Law	(E) EU Directives	End Use Applications
116	Tetraethyllead				1	○	Gasoline additive
117	Tetralead trioxide sulphate				1	○	Battery electrode material, PVC stabilizer
118	Trilead dioxide phosphonate				1	○	PVC stabilizer
119	Furan					○	Solvent
120	Propylene oxide; 1,2-epoxypropane; methyloxirane					○	Pigments, pharmaceuticals, fungicides
121	Diethyl sulphate					○	Dyes, pharmaceuticals, agrochemicals, fine chemicals
122	Dimethyl sulphate					○	Manufacture of dyes and methylcellulose, stabilizer
123	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine					○	-
124	Dinoseb					○	Polymer material
125	4,4'-methylenedi-o-toluidine					○	Curing agent for epoxy resin and urethane resin
126	4,4'-oxydianiline and its salts					○	Polyimide, polyamide imide, polyamide material. Cross-linking agent and polymer stock epoxy, urethane
127	4-Aminoazobenzene; 4-Phenylazoaniline					○	Dye, reagent
128	4-methyl-m-phenylenediamine (2,4-toluene-diamine)					○	Polyurethane resin raw materials, dye intermediates
129	6-methoxy-m-toluidine (p-cresidine)					○	Dye intermediate
130	Biphenyl-4-ylamine					○	Dyes, pesticide intermediate
131	o-aminoazotoluene					○	Dyes, pharmaceutical intermediates
132	o-Toluidine; 2-Aminotoluene					○	Reagent, dye intermediate
133	N-methylacetamide					○	Solvent, organic synthetic raw material
134	1-bromopropane; n-propyl bromide					○	Pharmaceuticals, pesticide intermediates, cleaning solvent
135	Cadmium			2	S1	○	Ni-Cd batteries, pigments, plating, stabilizers, alloys
136	Cadmium oxide			2	S1	○	Ni-Cd batteries, plating, alloys
137	Dipentyl phthalate(DPP)					○	Plasticizer
138	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or					○	Paints, Emulsifier
139	Cadmium sulphide			2	S1	○	Pigments
140	Diethyl phthalat					○	Plasticizer
141	Disodium 3,3'-[[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)					○	Dye for e.g. textile and paper
142	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)					○	Dye leather, plastics, vegetable-ivory buttons and wood flour used as a resin filler; produce aqueous inks
143	Imidazolidine-2-thione; 2-imidazoline-2-thiol					○	Vulcanisation agent
144	Lead di(acetate)				1	○	Paints, waterproof material
145	Trixylyl phosphate					○	Fire-resistant hydraulic oil material as flame retardant in the production of plastics
146	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear(DIHP)					○	Plasticizer, Jointing agents
147	Cadmium chloride			2	S1	○	Electroplating, component for production of photovoltaic modules
148	Sodium perborate; perboric acid, sodium salt					○	Bleaching agent in laundry detergent and machine dishwashing products
149	Sodium peroxometaborate					○	
150	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)		1			○	UV-stabilisers
151	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)					○	Heat stabiliser in the production of rigid and to a minor extent of plasticised PVC.
152	Cadmium fluoride				S1	○	Electric brushes, high-temperature dry-film lubricant, optical applications, and as starting material for crystals for laser. Cadmium fluoride was used as an active component in fluxes for soldering of aluminium and its alloys .
153	Cadmium sulphate				S1	○	Intermediate for industrial production of inorganic cadmium compounds. Metal surface coating.
154	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)					○	The production of PVC as heat stabiliser.

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**Containing Avoidance Substances  
(continued)**

		(A) Occupational Safety and Health Law	(B) Chemical Substances Examination Law	(C) Special Chemical Substance Regulation	(D) PRTR Law	(E) EU Directives	End Use Applications
155	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5, CAS No. 84-75-3)					○	Adhesives, plasticizer, lubricants
156	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]					○	Fragrance ingredient
157	1,3-propanesultone					○	Solvents and electrolytes for lithium ion battery, raw material for synthetic resin and fiber, paint
158	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)					○	UV-protection agents in coatings, plastics, rubber, polyurethanes and cosmetics
159	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)					○	UV-protection agents in coatings, plastics, rubber, polyurethanes and cosmetics
160	Nitrobenzene				1	○	Production of chemicals and intermediate for further chemical processing
161	Benzo[def]chrysene (Benzo[a]pyrene)					○	Formulation / end use of adhesives, paints, waterproof material
162	4,4'-isopropylidenediphenol (bisphenol A:BPA)				1	○	Antioxidant for processing PVC, epoxy resin hardeners, manufacture of polycarbonate, thermal paper
163	4-heptylphenol, branched and linear					○	Lubricant additives
164	p-(1,1-dimethylpropyl)phenol					○	Adhesive, paints, varnishes
165	chrysene					○	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
166	benz[a]anthracene					○	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
167	cadmium nitrate			2	S1	○	Used for the manufacture of glass, porcelain and ceramic products and in laboratory chemicals.
168	cadmium hydroxide			2	S1	○	Used for the manufacture of electrical, electronic and optical equipment and in laboratory chemicals.
169	cadmium carbonate			2	S1	○	Used as a pH regulator and in water treatment products, laboratory chemicals, cosmetics and personal care products.
170	1,6,7,8,9,14,15,16,17,17,18,18Dodecachloropentacyclo[12.2.1.1.0.0]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]					○	Used as a non-plasticising flame retardant, used in adhesives and sealants and in binding agents.
171	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]					○	Used as a lubricant additive in lubricants and greases.
172	Octamethylcyclotetrasiloxane (D4)					○	Used in washing and cleaning products, polishes and waxes and cosmetics and personal care products.
173	Decamethylcyclopentasiloxane (D5)					○	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products, textile treatment products and dyes.
174	Dodecamethylcyclohexasiloxane (D6)					○	Used in washing and cleaning products, polishes and waxes, cosmetics and personal care products.
175	Lead				1	○	Used in metals, welding and soldering products, metal surface treatment products, and polymers.
176	Disodium octaborate					○	Used in anti-freeze products, heat transfer fluids, lubricants and greases, and washing and cleaning products.
177	Benzo[ghi]perylene					○	Normally not produced intentionally but rather occurs as a constituent or impurity in other substances.
178	Terphenyl hydrogenated				1	○	Used as a plastic additive, solvent, in coatings/inks, in adhesives and sealants, and heat transfer fluids.
179	Ethylenediamine (EDA)				1	○	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, pH regulators and water treatment products.
180	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)					○	Used in the manufacture of esters and polymers.
181	Dicyclohexyl phthalate (DCHP)				2	○	Used in plastisol, PVC, rubber and plastic articles. A further use is also as a phlegmatizer and dispersing agent for formulations of organic peroxides.

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182	2,2-bis(4'-hydroxyphenyl)-4-methylpentane					○	Surface coatings, inks, adhesives
183	Benzo[k]fluoranthene					○	Adhesives, cleaning agents
184	Fluoranthene					○	Adhesives, cleaning agents
185	Phenanthrene					○	Paints, release agents, lubricants, cleaning agents
186	Pyrene					○	Release agents, cleaning agents
187	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one					○	Sunscreens, cosmetics, UV-protective textiles
188	2-methoxyethyl acetate				1	○	Paints, solvent for adhesive, solvent for printing ink
189	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)					○	Primarily used as an antioxidant to stabilise polymers.
190	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)					○	Processing aid in the production of fluorinated polymers.
191	4-tert-butylphenol				1	○	Used in coating products, polymers, adhesives, sealants and for the synthesis of other substances.
192	Perfluorobutane sulfonic acid (PFBS) and its salts					○	Used as a catalyst/ additive/reactant in polymer manufacture and in chemical synthesis. It is also used as a flame retardant in polycarbonate (for electronic equipment).
193	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one					○	Polymer production
194	2-benzyl-2-dimethylamino-4'-morpholinobutylphenone					○	Polymer production
195	Diisohexyl phthalate					○	Plasticizer
196	Butyl 4-hydroxybenzoate					○	Cosmetics, personal care products, pharmaceuticals
197	Dibutylbis(pentane-2,4-dionato-O,O')tin					○	Catalyst and additive applications in the manufacture of plastic products.
198	1-vinylimidazole					○	In preparations and monomer applications in polymer production.
199	2-methylimidazole					○	Catalytic applications in the manufacture of coated products.
200	Bis(2-(2-methoxyethoxy)ethyl)ether					○	Solvent or extractant in inks and toners
201	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety					○	Additive in the production of plastics and rubber tyres
202	Medium-chain chlorinated paraffins (MCCP)					○	Flame retardants, plasticising additives in plastics, sealants, rubber and textiles
203	Orthoboric acid, sodium salt				1	○	Solvents and corrosion inhibitors
204	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)					○	Preparation of lubricant additive materials and of fuel system cleaners
205	4,4'-(1-methylpropylidene)bisphenol					○	Manufacture of phenolic and polycarbonate resin
206	2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)					○	BMP: manufacture of polymer resins and in one component foam (OCPF) application. TBNPA: polymer production manufacture of plastics products, including compounding and conversion and as an intermediate. DBPA: registered as an intermediate.
207	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers					○	Cleaning agents, cosmetics, in scented articles, polishes and wax blends
208	1,4-dioxane			2		○	Solvent
209	Glutaral					○	Biocides, leather tanning, x-ray film processing, cosmetics
210	S-(tricyclo(5.2.1.0 <sup>2,6</sup> )deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate					○	Lubricants, grease

- (A) Occupational Safety and Health Law    MP: Manufacture Prohibition Substances  
MA: Manufacture Allowed Substances
- (B) Chemical Substances Examination and Manufacture Regulations  
1: Type I Special Chemical Substances
- (C) Special Chemical Substances Regulations  
1: Classification I Substances 2: Classification II Substances 3: Classification III Substances 3  
N: Upon emissions or discharge of those substances, a disposal system is needed.
- (D) PRTR Law  
1: Classification 1-Designated Chemical Substances  
S1: Special Classification 1-Designated Chemical Substances  
2: Classification 2-Designated Chemical Substances
- (E) EU Directives  
○: Relevant to REACH Regulation or RoHS Directives



- |  |   | (A)                                | (B)                                | (C)                                   | (D)      | (E)           |  |
|--|---|------------------------------------|------------------------------------|---------------------------------------|----------|---------------|--|
|  |   | Occupational Safety and Health Law | Chemical Substance Examination Law | Special Chemical Substance Regulation | PRTR Law | EU Directives |  |
| <b>Containing Avoidance Substances (continued)</b> |   |                                    |                                    |                                       |          |               | End Use Applications   |
| 211  | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol  |                                    |                                    |                                       |          | ○             | Rubbers, lubricants, adhesives, inks, fuels  |
| 212  | tris(2-methoxyethoxy)vinylsilane  |                                    |                                    |                                       |          | ○             | Rubbers, plastics, sealants  |
| 213  | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof                  |                                    |                                    |                                       |          | ○             | Cosmetics  |
| 214  | N-(hydroxymethyl)acrylamide   |                                    |                                    |                                       |          | ○             | As a monomer for polymerisation, as a fluoroalkyl acrylate copolymer, and in paints and coatings.                                    |
| 215  | Isobutyl 4-hydroxybenzoate  |                                    |                                    |                                       |          | ○             | Anti-mold agent for cosmetics, pharmaceuticals, foods, etc. Preservatives  |
| 216  | 1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]  |                                    |                                    |                                       |          | ○             | Fire retardant   |
| 217  | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol  |                                    |                                    |                                       |          | ○             | Fire retardant   |
| 218  | 4,4'-sulphonyldiphenol  |                                    |                                    |                                       |          | ○             | In the manufacture of: pulp, paper and paper products, textile, leather or fur and chemicals   |
| 219  | Barium diboron tetraoxide   |                                    |                                    |                                       | 1        | ○             | Anti-mold agent, anti-corrosion paint, flame retardant   |
| 220  | bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof  |                                    |                                    |                                       |          | ○             | Fire retardant, PVC plasticizer  |
| 221  | Melamine  |                                    |                                    |                                       |          | ○             | In polymers and resins, coating products, adhesives and sealants, leather treatment products, laboratory chemicals.                  |
| 222  | Perfluoroheptanoic acid and its salts   |                                    |                                    |                                       |          | ○             | Water repellent, raw material for stain-repellent agent for paper and cloth  |
| 223  | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine |                                    |                                    |                                       |          | ○             | Food, drug, pesticide or biocidal product use  |
| 224  | bis(4-chlorophenyl) sulphone  |                                    |                                    |                                       |          | ○             | Manufacture of chemicals, plastic products and rubber products   |
| 225  | diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide   |                                    |                                    |                                       |          | ○             | Inks and toners, coating products, photo-chemicals, polymers, adhesives and sealants and fillers, putties, plasters, modelling clay. |
| 226  | per- and polyfluoroalkyl substances (PFAS)*8  |                                    |                                    |                                       |          |               | Water repellents, surface treatment agents, fire extinguishing agents.   |

# Form 1

## ENVIRONMENTAL CONTROL SYSTEM QUESTIONNAIRE

Date of preparation: \_\_\_\_\_

Company name: \_\_\_\_\_

Name of the place of business: \_\_\_\_\_

Department: \_\_\_\_\_

Name and title of the person who completes this format: \_\_\_\_\_

(Signature)

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Please check "Yes" or "No" column.

If not applicable, enter "N.A."

### Inquiries about [Environmental Control System]

No.	Item	Question	Answer		
			Yes	No	Remarks
1	Certification of environmental ISO	Have you obtained certification under ISO-14001 or other equivalent programs? If Yes, date of certification: _____ If no, check either of the following: _____ a. Have a plan to obtain certification by (date) _____ b. Have no plan to obtain certification _____ If you answer "Yes", proceed to No. 8.2. If you answer "no", proceed to No. 2.			
2	Environmental policy	Do you have any environmental policy on environmental preservation?			
3	Environmental goal	Do you have goals for environmental preservation?			
4	Action plan	Do you have an action plan to achieve the goals?			
5	Organization	Do you have a special organization to promote environmental control?			
6	Education & training	Do you provide employees with any educational or training program?			
7	Internal audit	Do you have a system to carry out an internal environmental audit?			
8.1	Control system	(1) Do you have a system to supervise legislative and voluntary control schemes?			
8.2		(2) Do you comply with all laws relating to environment? (Do you know and follow the applicable laws listed in Annex 1 (page 4)?)			
8.3		(3) Do you have a system to control energy consumption?			
8.4		(4) Do you take actions to reduce wastes?			
8.5		(5) Do you take actions to control and reduce chemical substances?			
8.6		(6) Do you introduce or try a product assessment scheme?			
8.7		(7) Do you have a system to collect and recycle used products and packaging materials?			
9	Information disclosure *1	Do you disclose information about environmental issues? (For example, by Internet, environmental pamphlet, report, etc.)			
10	Biodiversity *2	Are you actively involved in (or support) biodiversity conservation movement?			

\*1: If you check "Yes" in the information disclosure column, and have an Internet home page, please enter your URL in the box below. If you publish environmental literature, please attach to this sheet.

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\*2: "10. Biodiversity" is not the subject for a survey of environmental management system, but we ask you how your organization is working on this issue.

## Form 2

### PRODUCTION GOODS PROCUREMENT QUESTIONNAIRE

Date of preparation: \_\_\_\_\_

Company name: \_\_\_\_\_

Name of the place of business: \_\_\_\_\_

Department: \_\_\_\_\_

Name and title of the person who completes this format: \_\_\_\_\_

(Signature)

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Item name: \_\_\_\_\_

Model, Item No: \_\_\_\_\_

Weight (g): \_\_\_\_\_

#### Inquiries about [Goods being or to be procured for production] (Products, Parts, Packaging)]

Please check "Yes" or "No" column.  
If not applicable, enter "N.A."

No.	Item	Question	Answer		
			Yes	No	Remarks
1	Packaging materials	Containing of heavy metals Does the packaging contain heavy metals, such as cadmium, hexavalent chrome, mercury and lead? If Yes, list them in Form 4 (page 35).			
2		Use of polyvinyl chloride Do you use polyvinyl chloride in your exterior packaging and buffer materials (e.g., bags)?			
3		Resources saving (packaging material) Do you take or consider measures to reduce excessive packaging or packaging volume? (Reduced packaging compared with similar products and parts)			
4		Indication of materials (packaging material) Do you indicate materials used for plastic packaging materials?			
5		Reduction of foams Do you minimize the use of styrene foam or replace foam with other materials?			
6.1	Products, parts, packaging	Use prohibition substances <sup>*1</sup> Do you use prohibition substances in the manufacturing process of products and parts? (See Annex 2, page 4.) If Yes, list the substances in Form 3, page 34.			
6.2		Use avoidance substances <sup>*1</sup> Do you use avoidance substances in the manufacturing process of products or parts? (See Annex 3, page 4.) If Yes, list the substances in Form 3, page 34.			
7.1		Containing prohibition substances <sup>*2</sup> Do you use containing prohibition substances in products or parts? (See Annex 4, page 5-6) If Yes, list the substances in Form 4, page 35.			
7.2		Containing avoidance substances <sup>*2</sup> Do you use containing avoidance substances in products or parts? (See Annex 6, page 8 to 13.) If Yes, list the substances in Form 4, page 35.			
7.3		Conditional containing prohibition substances <sup>*3</sup> Do you use conditional containing prohibition substances in products or parts? (See Annex 5, page 7). If Yes, list the substances in Form 4, page 35. Note: Please check "Yes" even if exclusion clauses are included.			
8		Indication of materials (products, parts) Do you indicate materials used for plastic products or parts? (Preferably, molded items weighing 25 grams or over.)			
9	Products	Compliance with laws Does the product comply with applicable laws, including the Recycling Law and Energy Saving Law?			
10		Resources saving Do you use recycled resources or parts, or do you miniaturize the product? (As compared with similar products) Do you intend to take the above-mentioned measures?			
11		Energy saving Do you take measures to reduce power consumption in both operation and standby modes? (As compared with similar products). Do you intend to take the above-mentioned measures?			
12		Disposition Do you take into account the separability and degradability to ensure proper disposition of the product?			

**Note:** If any of the above has changed, immediately contact the SII operating division that requested the survey. (Please note that changes of use prohibition substances, containing prohibition substances, and conditional containing prohibition substances are especially important.)

If "No" is checked in questions 1 and 6.1-7.3, it is not necessary to submit Forms 3 and 4.

\*1: "Use" means "to use" for manufacturing, i.e. washing, products and parts that do not contain chemical substances.

\*2: "Containing" means "to contain" chemical substances that have been intentionally added to products and parts to meet their functionality and performance. Reaction-type residue like non-reaction monomer and impurities are excluded.  
If an impurity in a chemical substance for which a threshold level is specified exceeds an acceptable value, the chemical substance is judged to contain a prohibited substance.

\*3: "Conditional Containing Prohibition Substances" are chemical materials that is basically prohibited to contain and include some exemptions according to applications.  
Even if exemptions are included, please check "Yes" in 7.3 and write the name of chemical compounds present in Form 4.

## Form 3

## RESULTS OF RESEARCH ON CHEMICAL SUBSTANCES BEING USED IN THE MANUFACTURING PROCESS

Date of preparation:

Company name:

Name of the place of business:

Department:

Name and title of the person who completes this format:

(Signature)

Contact:

Phone:

Fax:

[illegible]

\*1:Prohibition/ Avoidance

Please specify Use Prohibition (UP) or Use Avoidance (UA) referring to page 4.

## Form 4

## RESULTS OF RESEARCH ON CHEMICAL SUBSTANCES CONTAINED IN GOODS

Date of preparation:

Company name: \_\_\_\_\_

Name of the place of business: \_\_\_\_\_

Department: \_\_\_\_\_

(Signature)

Phone:

Fax:

[illegible]

\*1: Prohibition/Conditional/Avoidance :

Please specify Containing Prohibition (CP), Conditional Containing Prohibition (CCP), or Containing Avoidance (CAV), referring to pages 5 to 13.

\*2: Content :

Enter the concentration of the target chemical substance by using the weight based on the threshold level column or remarks column as the denominator.

\*3: Intentional addition/ Impurities/ Exemptions

Enter as follows according to the reason.

- Intentional addition: [Intentional]

- Impurities or reaction-type residue: [Impurities]

- When exception of conditional containing prohibition applies: [Exemption]

\*4: Enter the number of exemptions.

Note: If any of the above has changed, immediately contact the SII operating division that requested the survey.