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# GREEN PROCUREMENT GUIDELINE

## 7<sup>TH</sup> EDITION



## 1. Purpose

In this guideline, We, Star Micronics Co., Ltd. (hereinafter referred to as “Star”) are pleased to notify you of concrete requirements, and procedures based on Star’s principles toward the “Green Procurement”.

The Green procurement is to affirmatively procure products, parts, assembled units, components and so forth, which is environment-friendly designed, manufactured and supplied to us, by our supplier. In addition, the main purpose of this guideline is to prevent the inclusion of environment loading substances, which are restricted by laws, regulations, etc. at the destination of our customer, into Star products.

## 2. Scope

This document applies to all the following procured parts, materials, and complete products, that are to be delivered to Star.

Raw Material:	Material which is to be processed for the purpose to be a part of a product.¥ (For example: metal plate, plastic pellet)
Purchased Part:	Part which is to be assembled as a part into a product, without any process (For example: motor, PCB, IC parts)
Process Part:	Part which is processed as designed by Star for the purpose to be a part of a product (For example: metal frame, plastic case)
Auxiliary Part:	Part which is to be assembled as an auxiliary part into a product, without any process
Purchased Product:	Product which is purchased from another company for the purpose to be sold as itself (For example: external power supply)
Packing Material:	Materials which is required to pack a product (For example: paper box, plastic bag, cushion)
Auxiliary Material:	Materials which is required additionally to pack or produce a product (For example: solder, glue)

Please indicate whether any environment loading substances are contained in deliverables, whether prohibited substances (ozone layer depleting substances, and so on) are being used in production processes, and also to describe the constituent substances in terms of content amount and rate, contained locations, and purpose for their inclusions, by filling out “Environment Loading Substance Survey” and “Survey for SVHC/PFOS” which are provided separately.

Please notify the Star section in charge if any prohibited substance is contained more than its tolerance in deliverables or is being used, and whenever a change in the submitted survey data occurs due to material change, and so on.

If there is no inclusion of prohibited substances in deliverables, please submit “Declaration of non-conclusion of restricted substances in Star Micronics Green Procurement Guideline” which is also provided separately.

## 3. Definition of terms

### 1) Inclusion

The term means a substance is added, mixed, adhered to a material that is used for procured parts either on purpose or accidentally. It may occur in manufacturing process.

### 2) Intentional Addition

The term means that a substance is used to get better performance or change the characteristic of the procured parts.

### 3) Inclusion except Intentional Addition

The term means that a substance is already included in natural material, and unable to get removed completely, otherwise, mixed or adhered at manufacturing process not on purpose.

#### 4) Inclusion Tolerance

The term means the value of substance inclusion or the maximum tolerance. When the procured parts include more than two materials, the denominator is not to be the whole part, but to be mixed material that contains defined substance.

### 4. Control Standard for Chemical Substance

Star has self-standard to control the substance included in procured parts, such as plastic, rubber, plating/coat/conversion treatment of metal material, paper, printing ink, etc.), by dividing into the following three criteria.

#### 1) Criteria 1 – R (Regulated)

Substances that are subject to enacted legislation that (a) prohibits their use; or (b) restricts their use; or (c) requires reporting or results in other regulatory effects (e.g. labeling) and where the substance-specific effective date is currently in effect or scheduled to go into effect within the next 24 months.

#### 2) Criteria 2 – A (For Assessment Only)

Substances those are likely to be subject to enacted legislation where the substance-specific effective dates of the regulatory requirements are uncertain.

#### 3) Criteria 3 – I (For Information Only)

Substances that are not regulated but where there is a recognized market requirement for reporting their content in electrotechnical products. Reporting is used to facilitate company assessment regarding widely adopted industry environmental agreements or standards.

### 4. Control Standards for Chemical Substance

Substances that should be controlled are selected by the following regulations.

Please refer to the details for the above substances to Table 2 to 18.

#### 1) Joint Industry Guideline (JIG)

These substances are selected subject to report in Joint Industry Guideline (JIG-101) that was issued by former JGPSSI. These substances are included in IEC 62474.

JIG-101 includes 6 substances which are restricted by EU RoHS Directive, and other restricted substances by major regulations.

#### 2) Substances of Very High Concern (SVHC)

EU Commission has been issuing the list of SVHC, which is defined by EU REACH Regulation. In this guideline, the subject is the latest 173 substances that are in the 1<sup>st</sup> list to the 16<sup>th</sup> list by January, 2017. SVHC includes additional 4 substances which are restricted by amended EU RoHS Directive, and BPA (Bisphenol A).

#### 3) Perfluoro-octyl sulphonates (PFOS)

It was banned by EU by the Regulation (2006/122/EC) since 2008.

#### 4) Banned substances by Japanese Chemical substances Control Law

These substances may be hazardous to human body, and prohibited to use or manufacture in Japan.

#### 5) Banned substances by Japanese Industrial Safety and Health Law

These substances may be hazardous to workers who handle the deliverables, and prohibited to use or manufacture in Japan.

Table 1. Environment Loading Substances List Including Tolerance

Lines colored in grey (half tone) are NOT restricted substances

The same sheet is attached to “Environment Loading Substance Survey” and “Survey for SVHC/PFOS”

Substance Group	Control Classification				Tolerance	Exemption
	Regulated	Major law, industrial standard, agreement	For assessment only	For information only		
Metal compounds ※1	A01	Antimony and Antimony Compounds				
	A02	Arsenic and Arsenic Compounds (other than Arsenic pentoxide and arsenic trioxide)				
	A03	Beryllium and Beryllium Compounds (other than Beryllium Oxide)				
	A04	Bismuth and Bismuth Compounds				
	A05	Cadmium and Cadmium Compounds ※1, 2	EU RoHS EU Directive on Packaging and Packaging Waste			75ppm of homogeneous material 100ppm for the total sum of Cadmium, Hexavalent Chromium, Lead, and Mercury for packaging material
	A07	Hexavalent Chromium Compounds ※1	EU RoHS EU Directive on Packaging and Packaging Waste			1000ppm of homogeneous material 100ppm for the total sum of Cadmium, Hexavalent Chromium, Lead, and Mercury for packaging material
	A08	Lead and Lead Compounds ※1	EU RoHS EU Directive on Packaging and Packaging Waste			1000ppm of homogeneous material 100ppm for the total sum of Cadmium, Hexavalent Chromium, Lead, and Mercury for packaging material
	A09					-The following alloys that contain lead as an additive Steel: Less than 3500ppm Aluminum: Less than 40000ppm Copper: Less than 40000ppm -High-melting point solder for internal connections used for parts and devices (the leaded solder whose lead content is at least 850000ppm. -Glass materials used for electrical parts include sealing materials, resistor elements, conductive pastes, adhesives, and glass frit. Glass materials used for electrical parts, cathode-ray tubes, or vacuum fluorescent displays
	A10	Mercury and Mercury Compounds ※1	EU RoHS EU Directive on packaging and packaging waste			1000ppm of homogeneous material 100ppm for the total sum of Cadmium, Hexavalent Chromium, Lead, and Mercury for packaging material
	A11	Nickel ※3, 4	EU Regulation			500ppm where prolonged skin contact is expected
	A13	Selenium and Selenium Compounds				
A16	Tri-substituted organostannic compounds	EU REACH			1000ppm of tin in a material	
A19	Beryllium Oxide (BeO)	EU REACH			1000ppm in a whole product	
A23	Dibutyltin (DBT) compounds	EU REACH			1000ppm of tin in a material	
A24	Diocytlin (DOT) compounds	EU REACH			1000ppm of tin in a material	
Halogenorganic compounds	B02	Polybrominated Biphenyls (PBBs)	EU RoHS			1000ppm of homogeneous material
	B03	Polybrominated Diphenyl ethers (PBDEs)	EU RoHS			1000ppm of homogeneous material
	B05	Polychlorinated Biphenyls (PCBs)	Japanese Chemical Substances Control Law, EU REACH, US TSCA			intentionally added
	B06	Polychloronaphthalenes (C1=3)	Japanese Chemical Substances Control Law, EU REACH, US TSCA			intentionally added
	B07	Vinyl Chloride Polymer (PVC)	IEEE1680(Voluntary EPEAT)			1000ppm of homogeneous material
	B08	Brominated Flame Retardants (other than PBBs, PBDEs, or HBCCD)	DIGITALEUROPE Guidance			1000ppm of plastic material 900ppm of PCB
	B10	Fluorinated greenhouse gases (PFC, SF6, HFC)	EU and Australian Regulation			intentionally added
	B12	Perchlorates	California DTSC regulation			0.006ppm of a whole product
	B14	Polychlorinated Terphenyls (PCTs)	EU REACH			intentionally added
	B15	Polychlorinated Terphenyls (PCTs)	Japanese Chemical Substances Control Law			intentionally added
	C01	Asbestos	REACH, U.S.TSCA, Swiss regulation			intentionally added
	C02	Accolorants and azo dyes which form certain aromatic amines ※5	EU REACH			30ppm of the finished leather/leather product
	C04	Ozone Depleting Substances/Isomers ※6	Montreal protocol, Clean Air Act of 1963, etc.			intentionally added
	C06	Radioactive Substances	US NRC, etc.			intentionally added
	C07	Formaldehyde	California CARB regulation			intentionally added to composite wood or 75ppm of textile product
Others	C08	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	Japanese Chemical Substances Control Law			intentionally added
	C09	Selected Phthalates Group 1 (DEHP, DBP, BBP)	EU RoHS (also included in SVHC) EU REACH			1000ppm of homogeneous material
	C10	Selected Phthalates Group 2 (DINP, DIBP, DNOP)	California Proposition65 (DINP) EU REACH			When exposing to human body and has a risk for cancer(DINP)
	C11	Dimethyl Fumarate	Decision of European Committee			0.1ppm of homogeneous material
		- dibutyl phthalate	ECHA Registry of Intentions			1000ppm in a whole product
		- 1,2-Benzenedicarboxylic acid, -6-(2-(1,1-branch) and linear alkyl esters (DHNUP)	ECHA Registry of Intentions			1000ppm in a whole product
		- C.I.Basic Violet	ECHA Registry of Intentions			1000ppm in a whole product
		- Ardin	Japanese Chemical Substances Control Law			intentionally added
		- Endrin				
		- Chlordane				
		- dieldrin				
		- hexachlorobenzene				
		- DDT				
		- N,N-dito(4-p-phenylenediamine				
		- N,N,N',N'-tetra(4-p-phenylenediamine				
		- N,N-dio(4-p-phenylenediamine				
		- 2,4,6-tri-tert-butylphenol				
		- Toxaphene				
		- Mirex				
		- dicofol				
		- Hexachloro-1,3-butadiene				
		- Pentachlorobenzene				
		- t-Hexachlorocyclohexane				
		- s-Hexachlorocyclohexane				
		- γ-Hexachlorocyclohexane or isomers				
	- Chlorobenzene					
	- bis(chloromethyl) ether	Japanese Industrial Safety and Health Law			intentionally added	
	- 4-nitrodiphenyl and its chlorides					
	- 1 (yellow) phosphorus match					
	- Rubber glue which contains benzene (something contained more than 5%)					
Noble metals	D01	Copper and Copper Compounds	Conflict mineral (Not applied to Star Micronics)			
	D02	Gold and Gold Compounds				
	D03	Palladium and Palladium Compounds				
	D04	Silver and Silver Compounds				
SVHC	S01	SVHC ※7	EU REACH (EU RoHS partially)			1000ppm in a whole product EXCEPT -4 phthalic esters (DEHP, BBP, DBP, DIBP) which are included in EU RoHS. 1000ppm of homogeneous material -BPA (bisphenol A): 200ppm in thermal paper (since January, 2020)
	P01	Perfluoro-octyl-sulphonates (PFOS) ※8	EU REACH			1000ppm of homogeneous material

Note:

- ※1 100ppm for the total sum of Cadmium, Hexavalent Chromium, Lead, and Mercury for packaging material including ink or painting.
- ※2 Since free-cutting brass bar contains cadmium as its impure substance, please specify material manufacturer to use the material that is certified to contain less than 100ppm of its content.
- ※3 Electroless nickel plating uses lead compounds intentionally in order to control leaching reaction of nickel. When electroless nickel plating is chosen, please use lead-free liquid for electroless nickel plating.
- ※4 Where prolonged skin contact is expected
- ※5 Azo dyes pigment forming certain amines. The subjected applications are limited to parts that may come into direct contact with human skin for a long time. (Certain amines are the substances listed 76/769/EEC, the 19th Amendment, refer to Table 2 below.)
- ※6 Regarding the Class II substances, although they are not prohibited substances, the survey for them should be carried out.
- ※7 The Substances of Very High Concern (SVHC) includes substances which are defined by REACH regulation, and Cyclododecane is added since it was once a candidate of SVHC at the early stage. Please refer to attached table for the SVHC list.
- ※8 Please refer to the attached table for the list of Perfluoro-octyl sulphonates(PFOS).

## 5. Method of filling in submitted documents

Please select one of the following 2 documents.

1) Declaration of non-conclusion of restricted substances in Star Micronics Green Procurement (1 page)

If the part does not contain any restricted substance more than its tolerance which is defined by Star Micronics, please submit this file.

2) Environment Loading Substances Survey and Survey for PFOS/SVHC (7 pages)

If the part contains any restricted substance, which is defined by Star Micronics, more than its tolerance, please submit this file.

Please input data to the electronic Excel file provided separately from Star, and submit the electronic Excel file.

(Please consult our person in charge about a difficult customer to submit with the electronic file.)

Please fill in each part for the investigation, and submit it according to electronic data.

There is an obstacle in the taking summary in our company when the batch description of two or more parts is done, and we appreciate your cooperation. The method to fill the survey is attached to the original Survey file.

1. Star part number
2. Weight of part with the unit of *g*.
3. Contained chemical by a total content with the unit of *mg*. and by two significant digit digits with the treble is rounded off.
4. Intention to use the chemical easily on the use usage and the purpose.
5. The content part means the part that contains the chemical for the investigation in the composition parts. Please fill in how in the name and procurement destinations of the description to call and general names on specifications and the drawing about the name of the content part. Moreover, please add the line when the same chemical is contained in two or more parts and describe by one part a line.
6. The weight of the content part with the unit of *mg*.
7. Content rate to a homogeneous material of the content part of the content chemical with *ppm*.
8. Content prohibition exclusion reason etc. on supplements concerning the content chemical.

Table 2. Typical Examples of Substances List (JIG-101)

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
Metal compounds					
A01	Antimony and its Compounds	A01001	Antimony	1.000	7440-36-0
		A01002	Antimony trichloride	0.534	10025-91-9
		A01003	Antimony trioxide	0.835	1309-64-4
		A01004	Antimony pentoxide	0.753	1314-60-9
		A01005	Sodium antimonate	0.632	15432-85-6
		A01997~9	Other antimony compounds	-	-
A02	Arsenic and its Compounds	A02001	Arsenic	1.000	7440-38-2
		A02002	Gallium arsenide	0.518	1303-00-0
		A02997~9	Other arsenic compounds	-	-
A03	Beryllium and its Compounds	A03001	Beryllium	1.000	7440-41-7
		A03997~9	Other beryllium compounds	-	-
A04	Bismuth and its Compounds	A04001	Bismuth	1.000	7440-69-9
		A04002	Bismuth trioxide	0.897	1304-76-3
		A04003	Bismuth nitrate	0.529	10361-44-1
		A04997~9	Other bismuth compounds	-	-
A05	Cadmium and its compounds	A05001	Cadmium	1.000	7440-43-9
		A05002	Cadmium oxide	0.875	1306-19-0
		A05003	Cadmium sulfide	0.778	1306-23-6
		A05004	Cadmium chloride	0.613	10108-64-2
		A05005	Cadmium sulfate	0.539	10124-36-4
		A05990~9	Other cadmium compounds	-	-
A07	Hexavalent Chromium compounds	A07001	Sodium dichromate	0.397	10588-01-9
		A07002	Chromium (VI) oxide	0.520	1333-82-0
		A07002	Chromium trioxide	0.520	1333-82-0
		A07003	Calcium chromate	0.333	13765-19-0
		A07004	Lead (II) chromate	0.161	7758-97-6
		A07005	Potassium dichromate	0.353	7778-50-9
		A07007	Barium chromate	0.205	10294-40-3
		A07009	Strontium chromate	0.255	7789-06-2
		A07010	Zinc chromate	0.287	13530-65-9
		A07990~9	Other hexavalent chromium compounds	-	-
A09	Lead and its Compounds	A09001	Lead	1.000	7439-92-1
		A09002	Lead (II) carbonate	0.775	598-63-0
		A09003	Lead (IV) oxide	0.866	1309-60-0
		A09004	Lead (II, IV) oxide	0.907	1314-41-6
		A09005	Lead (II) sulfide	0.866	1314-87-0
		A09006	Lead (II) oxide	0.928	1317-36-8
		A09007	Lead (II) carbonate basic	0.801	1319-46-6
		A09008	Lead hydroxidcarbonate	0.801	1344-36-1
		A09009	Lead (II) sulfate	0.683	7446-14-2
		A09010	Lead (II) phosphate	0.766	7446-27-7
		A09011	Lead (II) chromate	0.641	7758-97-6
		A09012	Lead (II) titanate	0.686	12060-00-3
		A09013	Lead sulfate, sulphuric acid, lead salt	1.000	15739-80-7
		A09014	Lead sulphate, tribasic	0.850	12202-17-4
		A09015	Lead stearate	0.268	1072-35-1
		A09016	Lead stearate, dibasic	0.410	56189-09-4
		A09017	Lead acetate	0.637	301-04-2
		A09018	Lead (II) acetate, trihydrate	0.546	6080-56-4
		A09019	Lead selenide	0.724	12069-00-0
A09990~9	Other lead compounds	-	-		

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
A10	Mercury and its Compounds	A10001	Mercury	1.000	7439-97-6
		A10002	Mercury (II) chloride	0.739	7487-94-7
		A10003	Mercury (II) oxide	0.926	21908-53-2
		A10004	Mercuric chloride	-	33631-63-9
		A10005	Mercuric sulfate	0.676	7783-35-9
		A10006	Mercuric nitrate	0.618	10045-94-0
		A10007	Mercuric sulfide	0.862	1344-48-5
		A10990~9	Other mercury compounds	-	-
A11	Nickel	A11004	Nickel	1.000	7440-02-0
A13	Selenium and its Compounds	A13001	Selenium	1.000	7782-49-2
		A13002	Selenous acid	0.612	7783-00-8
		A13997~9	Other selenium compounds	-	-
A18	Tri-substituted organostannic compounds	A18001	Triphenyltin N,N' - dimethyldithiocarbamate	-	1803-12-9
		A18002	Triphenyltin fluoride	-	379-52-2
		A18003	Triphenyltin acetate	-	900-95-8
		A18004	Triphenyltin chloride	-	639-58-7
		A18005	Triphenyltin hydroxide	-	76-87-9
		A18006	Triphenyltin fatty acid salts (C=9-11)	-	18380-71-7 18380-72-8 47672-31-1 94850-90-5
		A18007	Triphenyltin chloroacetate	-	7094-94-2
		A18008	Tributyltin methacrylate	-	2155-70-6
		A18009	Bis (tributyltin) fumarate	-	6454-35-9
		A18010	Tributyltin fluoride	-	1983-10-4
		A18011	Bis (tributyltin) 2,3-dibromosuccinate	-	31732-71-5
		A18012	Tributyltin acetate	-	56-36-0
		A18013	Tributyltin laurate	-	3090-36-6
		A18014	Bis (tributyltin)	-	4782-29-0
		A18015	Copolymer of alkyl (c=8) acrylate, methyl methacrylate and tributyltin methacrylate	-	67772-01-4
		A18016	Tributyltin sulfamate	-	6517-25-5
		A18017	Bis (tributyltin) maleate	-	14275-57-1
		A18018	Tributyltin chloride	-	1461-22-9
		A18019	Tributyltin cyclopentane carbonate=mixture -	-	85409-17-2
		A18020	Tributyltin-1, 2, 3, 4, 4a, 4b, 5, 6, 10, 10a-decahydro-7-isopropyl-1, 4a-dimethyl-1-phenanthrenecarboxylatemix	-	26239-64-5
	Other tri-substituted organostannic compounds	-	-		
A19	Beryllium Oxide (BeO)	A03002	Beryllium oxide	-	1304-56-9
A23	Dibutyltin (DBT) compounds		Dibutyltin oxide	-	818-08-6
			Dibutyltin diacetate	-	1067-33-0
			Dibutyltin dilaurate	-	77-58-7
			Dibutyltin maleate	-	78-04-6
			Other dibutyltin compounds	-	-
A24	Diocetyl tin (DOT) compounds		Diocetyl tin oxide	-	870-08-6
			Diocetyl tin dilaurate	-	3648-18-8
			Other diocetyl tin compounds	-	-



No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
Halogen-organic compounds					
B02	Polybrominated Biphenyls (PBBs)	B02001	Polybrominated biphenyls	-	59536-65-1
		B02002	Dibromobiphenyl	-	92-86-4
		B02003	2-Bromobiphenyl	-	2052-07-5
		B02004	3-Bromobiphenyl	-	2113-57-7
		B02005	4-Bromobiphenyl	-	92-66-0
		B02006	Tribromobiphenyl	-	59080-34-1
		B02007	Tetrabromobiphenyl	-	40088-45-7
		B02008	Pentabromobiphenyl	-	56307-79-0
		B02009	Hexabromobiphenyl	-	59080-40-9
		B02010	hexabromo-1,1-biphenyl	-	36355-01-8
		B02011	Firemaster FF-1	-	67774-32-7
		B02012	Heptabromobiphenyl	-	35194-78-6
		B02013	Octabromobiphenyl	-	61288-13-9
		B02014	Nonabiphenyl	-	27753-52-2
		B02015	Decabromobiphenyl	-	13654-09-6
B03	Polybrominated Diphenyl ethers (PBDEs)	B03001	Bromodiphenyl ether	-	101-55-3
		B03002	Dibromodiphenyl ethers	-	2050-47-7
		B03003	Tribromodiphenyl ether	-	49690-94-0
		B03004	Tetrabromodiphenyl ethers	-	40088-47-9
		B03005	Pentabromodiphenyl ether (note: Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated	-	32534-81-9 (商用銘柄のPeBDPOに使用されるCAS No.)
		B03006	Hexabromodiphenyl ether	-	36483-60-0
		B03007	Heptabromodiphenyl ether	-	68928-80-3
		B03008	Octabromodiphenyl ether	-	32536-52-0
		B03009	Nonabromodiphenyl ether	-	63936-56-1
		B03010	Decabromodiphenyl ether	-	1163-19-5
B05	Polychlorinated Biphenyls (PCBs)	B05001	Polychlorinated biphenyls	-	1336-36-3
		B05008	Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	-	76253-60-6
		B05009	Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	-	81161-70-8
		B05010	Monomethyl-dibromo-diphenyl	-	99688-47-8
B06	Polychlorinated naphthalenes (Cl $\geq$ 3)	B06001	Polychlorinated naphthalenes	-	70776-03-3
		B06997~9	Other polychlorinated naphthalenes	-	-
B07	Vinyl Chloride Polymer (PVC)	B07001	Poly vinyl chloride (PVC)	-	9002-86-2

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
B08	Brominated Flame Retardants (other than PBBs, PBDEs, or HBCCD)	B80001	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-	-
		B80002	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-	-
		B80003	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-	-
		B80004	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls] in combination with antimony compounds]	-	-
		B80005	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-	-
		B80006	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-	-
		B08007	Poly (2,6-dibromophenylene oxide)	-	69882-11-7
		B08008	Tetra-decabromo-diphenoxybenzene	-	58965-66-5
		B08009	1,2-Bis (2,4,6-tribromophenoxy) ethane	-	37853-59-1
		B08010	3,5,3',5'-tetrabromobisphenol A (TBBA)	-	79-94-7
		B08011	TBBA, unspecified	-	30496-13-0
		B08012	TBBA-epichlorhydrin oligomer	-	40039-93-8
		B08013	TBBA-TBBA-diglycidyl-ether oligomer	-	70682-74-5
		B08014	TBBA carbonate oligomer	-	28906-13-0
		B08015	TBBA carbonate oligomer, phenoxy end capped	-	94334-64-2
		B08016	TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	-	71342-77-3
		B08017	TBBA-bisphenol A-phosgene polymer	-	32844-27-2
		B08018	Brominated epoxy resin end-capped with tribromophenol	-	139638-58-7
		B08019	Brominated epoxy resin end-capped with tribromophenol	-	135229-48-0
		B08020	TBBA-(2,3-dibromo-propyl-ether)	-	21850-44-2
		B08021	TBBA bis-(2-hydroxy-ethyl-ether)	-	4162-45-2
		B08022	TBBA-bis-(allyl-ether)	-	25327-89-3
		B08023	TBBA-dimethyl-ether	-	37853-61-5
		B08024	Tetrabromo-bisphenol S	-	39635-79-5
		B08025	TBBS-bis-(2,3-dibromo-propyl-ether)	-	42757-55-1
		B08026	2,4-dibromo-phenol	-	615-58-7
		B08027	2,4,6-tribromo-phenol	-	118-79-6
		B08028	Pentabromo-phenol	-	608-71-9
		B08029	2,4,6-tribromo-phenyl-allyl-ether	-	3278-89-5
		B08030	Tribromo-phenyl-allyl-ether, unspecified	-	26762-91-4
		B08032	Tetrabromo-chyclo-octane	-	31454-48-5
		B08033	1,2-Dibromo-4-(1,2-dibromo-methyl)-cyclo-	-	3322-93-8
		B08034	TBPA Na salt	-	25357-79-3
		B08035	Tetrabromo phthalic anhydride	-	632-79-1

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
B08	Brominated Flame Retardants (other than PBBs, PBDEs, or HBCCD)	B08036	Bis(methyl) tetrabromophthalate	-	55481-60-2
		B08037	Bis(2-ethylhexyl) tetrabromophthalate	-	26040-51-7
		B08038	2-hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	-	20566-35-2
		B08039	TBPA, glycol- and propylene-oxide esters	-	75790-69-1
		B08040	N,N'-ethylene-bis-(tetrabromo-phthalimide)	-	32588-76-4
		B08041	Ethylene-bis(5,6-dibromonorborene-2,3-dicarboximide)	-	52907-07-0
		B08042	2,3-dibromo-2-butene-1,4-diol	-	3234/2/4
		B08043	Dibromo-neopentyl-glycol	-	3296-90-0
		B08044	Dibromo-propanol	-	96-13-9
		B08045	Tribromo-neopentyl-alcohol	-	36483-57-5
		B08046	Poly tribromo-styrene	-	57137-10-7
		B08047	Tribromo-styrene	-	61368-34-1
		B08048	Dibromo-styrene grafted PP	-	171091-06-8
		B08049	Poly-dibromo-styrene	-	31780-26-4
		B08050	Bromo-/Chloro-paraffins	-	68955-41-9
		B08051	Bromo-/Chloro-alpha-olefin	-	82600-56-4
		B08052	Vinylbromide	-	593-60-2
		B08053	Tris-(2,3-dibromo-propyl)-isocyanurate	-	52434-90-9
		B08054	Tris (2,4-Dibromo-phenyl) phosphate	-	49690-63-3
		B08055	Tris (tribromo-neopentyl) phosphate	-	19186-97-1
		B08056	Chlorinated and brominated phosphate ester	-	125997-20-8
		B08057	Pentabromo-toluene	-	87-83-2
		B08058	Pentabromo-benzyl bromide	-	38521-51-6
		B08059	1,3-Butadiene homopolymer, brominated	-	68441-46-3
		B08060	Pentabromo-benzyl-acrylate, monomer	-	59447-55-1
		B08061	Pentabromo-benzyl-acrylate, polymer	-	59447-57-3
		B08062	Decabromo-diphenyl-ethane	-	61262-53-1
		B08063	Tribromo-bisphenyl-maleinimide	-	59789-51-4
		B08064	Brominated trimethylphenyl-lindane	-	59789-51-4
		B08997~	Other Brominated Flame Retardants	-	-

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
B10	Fluorinated greenhouse gases (PFC, SF6, HFC)	B10001	Carbon tetrafluoride (Perfluoromethane)	-	75-73-0
		B10002	Perfluoroethane (Hexafluoroethane)	-	76-16-4
		B10003	Perfluoropropane (Octafluoropropane)	-	76-19-7
		B10004	Perfluorobutane (Decafluorobutane)	-	355-25-9
		B10005	Perfluoropentane (Dodecafluoropentane)	-	678-26-2
		B10006	Perfluorohexane (Tetradecafluorohexane)	-	355-42-0
		B10007	Perfluorocyclobutane	-	115-25-3
		B10008	Sulfur Hexafluoride (SF6)	-	2551-62-4
		B10009	Trifluoromethane - (HFC)	-	75-46-7
		B10010	Difluoromethane - (HFC-32)	-	75-10-5
		B10011	Methyl fluoride - (HFC-41)	-	593-53-3
		B10012	2H, 3H-Decafluoropentane (HFC-43-10mee)	-	138495-42-8
		B10013	Pentafluoroethane (HFC)	-	354-33-6
		B10014	1, 1, 2, 2-Tetrafluoroethane - (HFC-134)	-	359-35-3
		B10015	1, 1, 1, 2-Tetrafluoroethane - (HFC-134a)	-	811-97-2
		B10016	1, 1-Difluoroethane - (HFC-152a)	-	75-37-6
		B10017	1, 1, 2-Trifluoroethane- (HFC-143 )	-	430-66-0
		B10018	1, 1, 1-Trifluoroethane (HFC-143a)	-	420-46-2
		B10019	2H-Heptafluoropropane- (HFC-227ea)	-	431-89-0
		B10020	1, 1, 1, 2, 2, 3-hexafluoropropane (HFC-236cb)	-	677-56-5
		B10021	1, 1, 1, 2, 3, 3-Hexafluoropropane - (HFC-236ea)	-	431-63-0
		B10022	HFC-1, 1, 1, 3, 3, 3-Hexafluoropropane - (HFC 236fa)	-	690-39-1
		B10023	1, 1, 2, 2, 3-Pentafluoropropane - (HFC-245ca)	-	679-86-7
		B10024	1, 1, 1, 3, 3-Pentafluoropropane - (HFC-245fa)	-	460-73-1
		B10025	1, 1, 1, 3, 3-Pentafluorobutane - (HFC-	-	406-58-6
B12	Perchlorates	B12001	Lithium perchlorate	-	7791-03-9
		B12997~9	Other perchlorate compounds	-	-
B15	Polychlorinated Terphenyls (PCTs)	B05002	Polychlorinated terphenyls	-	61788-33-8

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
Others					
C01	Asbestos	C01001	Actinolite	-	77536-66-4
		C01002	Amosite (Grunerite)	-	12172-73-5
		C01003	Anthophyllite	-	77536-67-5
		C01004	Chrysotile	-	12001-29-5
		C01005	Crocidolite	-	12001-28-4
		C01006	Tremolite	-	77536-68-6
		C01007	Asbestos	-	1332-21-4
C02	Azocolorants and azodyes which form certain aromatic amines  (Indicated 22 substances are certain aromatic amines)	-	biphenyl-4-ylamine	-	92-67-1
		-	Benzidine	-	92-87-5
		-	4-chloro-o-toluidine	-	95-69-2
		-	2-naphthylamine	-	91-59-8
		-	o-aminoazotoluene	-	97-56-3
		-	5-nitro-o-toluidine	-	99-55-8
		-	4-chloroaniline	-	106-47-8
		-	4-methoxy-m-phenylenediamine	-	615-05-4
		-	4,4'-methylenedianiline	-	101-77-9
		-	3,3'-dichlorobenzidine	-	91-94-1
		-	3,3'-dimethoxybenzidine	-	119-90-4
		-	3,3'-dimethylbenzidine	-	119-93-7
		-	4,4'-methylenedi-o-toluidine	-	838-88-0
		-	6-methoxy-m-toluidine	-	120-71-8
		-	4,4'-methylene-bis(2-chloroaniline)	-	101-14-4
		-	4,4'-oxydianiline	-	101-80-4
		-	4,4'-thiodianiline	-	139-65-1
		-	o-toluidine	-	95-53-4
-	4-methyl-m-	-	95-80-7		
-	2,4,5-trimethylaniline	-	137-17-7		
-	o-anisidine	-	90-04-0		
-	4-amino azobenzene	-	60-09-3		
C04	Ozone Depleting Substances/Isomers	C04097	CFCs (Annex A Group I substances in the Montreal Protocol)	-	-
		C04098	Halons (Annex A Group II substances in the Montreal Protocol)	-	-
		C04099	CFCs (Annex B Group I substances in the Montreal Protocol)	-	-
		C04100	Carbon tetrachloride (Annex B Group II substances in the Montreal Protocol)	-	-
		C04101	1,1,1-trichloroethane (Annex B Group III substances in the Montreal Protocol)	-	-
		C04102	Bromochloromethane (Annex C Group III substances in the Montreal Protocol)	-	-
		C04103	Methyl bromide (Annex E substances in the Montreal Protocol)	-	-
		C04104	HBFCs (Annex C Group II substances in the Montreal Protocol)	-	-
C04105	HCFCs (Annex C Group I substances in the Montreal Protocol)	-	-		

No.	Substance Group	No.	Substance name	Metal Conversion Factor	CAS No.
C06	Radioactive Substances	C06001	Uranium-238	-	7440-61-1
		C06002	Plutonium	-	-
		C06003	Radon	-	10043-92-2
		C06004	Americium-241	-	14596-10-2
		C06005	Thorium-232	-	7440-29-1
		C06006	Cesium (Radioactive Isotopes only)	-	7440-46-2 (Cs-137 010045-97-3)
		C06007	Strontium (Radioactive Isotopes only)	-	(elemental 7440-24-6) (Sr-90 10098-97-2)
		C06997~9	Other radioactive substances	-	-
C07	Formaldehyde	C07001	Formaldehyhde	-	50-00-0
C08	Phenol, 2-(2H-benzotriazol-2-yl)-4, 6-bis(1, 1-dimethylethyl)	C08001	Phenol, 2-(2H-benzotriazol-2-yl)-4, 6-bis(1, 1-dimethylethyl)	-	3846-71-7
C09	Selected Phthalates Group 1 (DEHP, DBP, BBP)	C05001	Dibutylphthalate (DBP)	-	84-74-2
		C05002	Di(2-ethylhexyl) phthalate (DEHP)	-	117-81-7
		C05005	Butyl benzyl	-	85-68-7
C10	Selected Phthalates Group 2 (DINP, DIDP, DNOP)	C05007	Diisononyl phthalate (DINP)	-	28553-12-0
		C05008	1, 2-Benzenedicarboxylic acid diisodecyl ester (DIDP)	-	26761-40-0 68515-49-1
		C05010	Di-n-octyl phthalate	-	117-84-0
C11	Dimethyl fumarate		Dimethyl fumarate	-	624-49-7
D01	Copper and its Compounds	D01001	Copper	1.000	7440-50-8
		D01997~9	Other copper compounds	-	-
D02	Gold and its Compounds	D02001	Gold	1.000	7440-57-5
		D02997~9	Other gold compounds	-	-
D03	Palladium and its Compounds	D03001	Palladium	1.000	7440/5/3
		D03997~9	Other palladium compounds	-	-
D04	Silver and its Compounds	D04001	Silver	1.000	7440-22-4
		D04997~9	Other silver compounds	-	-

Table 2 Substances of Very High Concern (SVHC) Ver.1: S01 to S16 (15 + 1 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 0 1	Anthracene	204-371-1	120-12-7		・アントラセン	Corrosion inhibitors for the productions of anthraquinone, blackcarbon and dyes	腐食抑制剤、(アンスラキノン原料、(組製)カーボンブラック原料、染料原料)	
S 0 2	4,4'-Diaminodiphenylmethane	202-974-4	101-77-9	4,4'-Diaminodiphenylmethane Salts 4,4'-methylenedianiline	・4,4'-メチレンジアニリン ・4,4'-ジアミノジフェニルメタン ・ベンジジン ・4,4'-ジアミノビフェニル	processed to methylenediphenyl diisocyanate (MDI) : hardener for epoxy resins, high-performance polymers, and polyurethane : Paints, laquers and varnishes : Adhesives, binding agents : Construction materials : Vulcanizing agents	塗料・ラッカー・ニス、粘着剤・接着剤、建築資材添加物、加硫剤、中間体：エポキシ樹脂硬化剤：4,4'-メチレンジアニリン (MDI)・ポリメリック MDIの合成原料、エポキシ樹脂・ポリウレタン樹脂の硬化剤	金属組立、輸送機器・電気機器製造
S 0 3	Dibutyl phthalate	201-557-4	84-74-2	Dibutylphthalate	・フタル酸ジ-n-ブチル ・フタル酸ジブチル	Softener (plasticizer in PVC) : Softeners : Adhesives, binding agents : Paints, laquers and varnishes : Colouring agents : Construction materials : Solvents (Odour agents) : Daring agents : Polishing agents	合成レザー・塩化ビニル樹脂可塑剤、柔軟剤、粘着剤・接着剤、塗料・ラッカー・ニス、着色剤、建築資材添加物、香料の溶剤、織物用潤滑剤、ゴム練り加工剤、農業の補助剤	輸送機器・プラスチック・家具・化学など各種製造業、燃料
S 0 4	Cobalt dichloride	231-589-4	7646-79-9		・塩化コバルト	Colouring agents : Surface treatment : Process regulators : chemical removing of oxygen (metal industry, rubber manufacturing)	着色剤、表面処理剤、プロセス制御剤、還元剤 (金属工業・ゴム工業)	化学・プラスチック製造
S 0 5	Diarsenio pentaoxide	215-116-9	1303-28-2		・五酸化二ヒ素 ・五酸化二砒素 ・五酸化砒素 ・酸化ヒ素	Impregnation materials : Wood preservative coatings : Fillers : harden copper, lead or gold in alloys : special glass	塗和剤、木材処理剤、フィラー、銅・鉛・合金金、特殊ガラス	
S 0 6	Diarsenic trioxide	215-481-4	1327-53-3		・三酸化二ヒ素 (亜ヒ酸) ・三酸化砒素 ・三酸化ヒ素	Intermediates (catalytic agents, Pigments, agricultural chemicals) : Flame retardants and extinguishing agents : wood preservative	難燃剤・防火剤、中間体 (触媒原料、農業原料、顔料原料、ヒ素化合物原料)、殺菌剤、木材防腐剤	化学・プラスチック・ガラス・非金属製造
S 0 7	Sodium dichromate, dihydrate	234-190-3	7789-12-0		・ニクロム酸二ナトリウム二水和物 ・重クロム酸ナトリウム 2水和物 ・ナトリウムジクロメート	Surface treatment : Oxidizing agents : Electroplating agents : Metal surface coating agents : inorganic chromate pigments	表面処理剤、酸化剤、電気メッキ添加剤、金属表面コーティング剤、クロム顔料	化学・金属製品組立・機械製造
S 0 8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2		・2,4,6-トリニトロ-5-tert-ブチル-1,3-キシレン ・ムスクキシレン	Cleaning/washing agents : Absorbents and Adsorbents : Surface treatment : Odour agents	洗浄剤、吸収剤・吸着材、表面処理剤、芳香剤・防臭剤	輸送機器販売・ホテル、健康・社会福祉関連
S 0 9	Bis (2-ethyl (hexyl) phthalate) (DEHP)	204-211-0	117-81-7		・ベンゼン-1,2-ジカルボン酸ジ-n-ヘキシル ・フタル酸ジ(2-エチルヘキシル) ・フタル酸ビス(2-エチルヘキシル) ・フタル酸ジ-2-エチルヘキシル ・フタル酸ジアルキル	Plasticizer in polymers, mainly flexible PVC : Softeners : Construction materials : Fillers : Paints, laquers and varnishes : Colouring agents : Adhesives, binding agents	塩化ビニル樹脂可塑剤、柔軟剤、塗料・ラッカー・ニス、着色剤、フィラー、粘着剤・接着剤、建築資材添加物、	化学・プラスチック・木材加工、金属加工・機械組立、印刷・製本、輸送機器販売・修理
S 1 0	Hexabromocyclododecane (HBCDD) and all major diastereoisomers  $\alpha$ -Hexabromocyclododecane $\beta$ -Hexabromocyclododecane $\gamma$ -Hexabromocyclododecane	247-148-4 221-695-9	25637-99-4 3194-55-6	Cyclododecane, hexabromo-	・ヘキサブロモシクロドデカンおよびすべての主要ジアステレオ異性体	Flame retardant (electronic and electrical equipment, textiles) : Stabilizer	難燃剤 (電子・電気機器、繊維)、安定剤	
S 1 1	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-04-8		・クロロパラフィン (C10-13) ・塩素化パラフィン (短鎖) ・クロロアルカン類 または短鎖塩素化パラフィン	Cooling agents for metal processing : Sealants:Paints, laquers and varnishes : Fillers : Softeners : Fixing agents : Cutting fluids	プロセス制御剤 (金属加工冷却)、シーラント、塗料・ラッカー・ニス、フィラー、柔軟剤、定着剤、切削油剤	化学・プラスチック・金属製品組立・機械製造、輸送機器販売・修理
S 1 2	Bis(tributyltin)oxide	200-268-0	56-35-9	Hexa-n-butyl distannoxan Bis(tri-n-butylzinn)oxid Tri-nbutylzinnoxid	・ビス(トリブチルスズ)オキサイド ・トリブチルスズオキサイド	Paints, laquers and varnishes : Impregnation materials : biocides (ship craft, cages, floats, fishing nets) : Non-agricultural pesticides and preservatives	塗料・ラッカー・ニス、塗和剤、船底塗料、漁網用防汚剤、殺菌・防カビ剤、非農業用農薬、木材防腐剤	輸送機器・プラスチック・木加工・化学
S 1 3	Lead hydrogen arsenate	232-064-2	7784-40-9	Lead arsenate lead hydrogen arsenate	・ヒ酸鉛 ・ヒ酸水素鉛	Insecticide : Herbicide : Wood preservative	殺虫剤、除草剤、木材処理剤	
S 1 4	Triethyl arsenate	427-700-2	15606-95-8		・ヒ酸トリエチル	Insecticide : Wood preservative	殺虫剤、木材処理剤	
S 1 5	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7		・フタル酸n-ブチルベンジル ・フタル酸ブチルベンジル ・ブチルベンジルフタレート ・フタル酸アルキル (C=4~8) ベンジル	Motor vehicle painters : Paints, laquers and varnishes : Fillers : Adhesives, binding agents : Softeners : plasticizer (softener) of PVC : Construction materials : Sealants (polyurethane based, polyurethane based, acrylic-based)	自動車用塗料、柔軟剤、塗料・ラッカー・ニス、フィラー、粘着剤・接着剤、可塑剤 (塩ビ)、建築資材添加物、ポリサルファイド、ポリウレタン、アクリル用可塑剤 (建築シーリング剤・窓枠シーリング剤)、塗料用可塑剤、	自動車販売・修理、プラスチック・木加工
S 1 6	Cyclododecane	206-33-9	294-62-2		・シクロドデカン	intermediate (production of hexabromo-isomers of cyclododecane, polyamides, polyesters, synthetic lubricating oils, nylon and high purity solvents, 1-ethoxymethoxy-cyclododecane, methoxy-cyclododecane)	中間体 (難燃剤・ポリアミド・ポリエステル・ナイロン etc)	化学法1種監視製造届出無し

Table 3. Substances of Very High Concern (SVHC) Ver.2: S17 to S31 (15 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 17	Anthracene oil	292-602-7	90640-00-5		・アントラセンオイル			
S 18	Anthracene oil, anthracene pasta, distn. Lights	295-278-5	91995-17-4		・アントラセンオイル、アントラセンペースト、軽質分	The substances are mainly used in the manufacture of other substances such as anthracene and carbon black. They may also be used as reducing agents in blast furnaces, as components in bunker fuel, for impregnating, sealing and corrosion protection.	タールオイルの構成物、化学物質生成物、含浸剤、タール特殊塗料の構成物	
S 19	Anthracene oil, anthracene pasta, anthracene fraction	295-275-9	91995-15-2		・アントラセンオイル、アントラセンペースト、アントラセン曹分			
S 20	Anthracene oil, anthracene-low	292-604-8	90640-82-7		・アントラセンオイル、低濃曹分			
S 21	Anthracene oil, anthracene pasta	292-603-2	90640-81-6		・アントラセンオイル、アントラセンペースト			
S 22	Coal tar pitch, high temperature	266-028-2	65996-93-2		・高温コールタールピッチ	Pitch, coal tar, high temp. is mainly used in the production of electrodes for industrial applications. Smaller volumes are dedicated to specific uses such as heavy duty corrosion protection, special purpose sealing, manufacture of other substances and the	電極、炭素、その他黒鉛製品、塗料やコーティング剤	
S 23	Aluminosilicate, Refractory Ceramic Fibres	-	-		・アルミノケイ酸、耐火性セラミック繊維 ・アルミノシリケート、耐火性セラミック繊維	Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (Guld)	絶縁材	
S 24	Zirconia Aluminosilicate, Refractory Ceramic Fibres	-	-		・ジルコニアアルミノケイ酸、耐火性セラミック繊維 ・ジルコニアアルミノシリケート、耐火性セラミック繊維	Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (Guld)	絶縁材	
S 25	2,4-Dinitrotoluene	204-450-0	121-14-2		・2,4-ジニトロトルエン	2,4-dinitrotoluene is used in the production of toluene diisocyanate, which is used for the manufacture of flexible polyurethane foams. The substance is also used as a gelatinizing-plasticizing agent for the manufacture of explosives.	化学中間産物	
S 26	Diisobutyl phthalate [DIBP]	201-553-2	84-69-5		・フタル酸ジイソブチル ・ジイソブチルフタレート	Diisobutyl phthalate is used as plasticizer for nitrocellulose, cellulose ether, polyacrylate and polyacetate dispersions, and as a gelling aid in combination with other plasticizers, which are widely used for plastic, lacquers, adhesives, explosive mats	可塑剤	
S 27	Lead chromate	231-846-0	7758-97-6		・クロム酸鉛	Lead chromate is used for manufacturing pigments and dyes, and as a pigment or coating agent in industrial and marine paint products or varnishes. Further potential uses may be associated with the formulation of detergents and bleaches, photosensitive m	塗料・顔料、塗料・ワニス の顔料	
S 28	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	235-759-9	12656-85-8		・硫酸モリブデン酸クロム酸鉛、モリブデン赤、C.I.ピグメントレッド104	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries. Applications comprise the production of agricultural equip	塗料・コーティング剤の顔料、プラスチックの着色剤、印刷	
S 29	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2		・黄鉛、C.I.ピグメントイエロー34	Lead sulfochromate yellow (C.I. Pigment Yellow 34) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries. Applications comprise the production of agricultural equip	塗料・コーティング剤の顔料、プラスチックの着色剤、印刷	
S 30	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8		・リン酸トリス(2-クロロエチル) ・トリス(2クロロエチル)ホスフェート	Tris(2-chloroethyl)phosphate is mainly used as an additive plasticizer and viscosity regulator with flame-retarding properties for acrylic resins, polyurethane, polyvinyl chloride and other polymers. Other fields of application are adhesives, coatings, fi	可塑剤、難燃剤	
S 31	Acrylamide	201-173-7	70-06-1		・アクリルアミド	Acrylamide is almost exclusively used for the synthesis of polyacrylamides, which are used in various applications, in particular in waste water treatment and paper processing. Minor uses of acrylamide comprise the preparation of polyacrylamide gels for r	ポリアクリルアミドゲル、化粧品のアクリルアミド	



Table 4. Substances of Very High Concern (SVHC) Ver.3: S32 to S39 (8 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 3 2	Trichloroethylene	201-167-4	79-01-6		・トリクロロエチレン ・トリクレン	Cleaning and degreasing of metal parts. Solvent in adhesives, Intermediate in the manufacture of chlorinated and fluorinated organic compounds	・金属部品の洗浄と脱脂 ・接着剤溶剤 ・塩素・フッ素有機化合物製品の中間体	
S 3 3	Boric acid	233-139-2 234-343-4	10043-35-3 11113-50-1		・ホウ酸	Uses include a multitude of applications, e.g. in biocides and preservatives, personal care products, food additives, glass, ceramics, rubber, fertilisers, flame retardants, paints, industrial fluids, brake fluids, soldering products, film developers.	・様々な利用方法を含む用途 (例: 殺生物剤および防菌剤、パーソナルケア製品、食品添加剤、ガラス、セラミック、ゴム、化学肥料、難燃剤、塗料、工業用流体、ブレーキ液、はんだ付け製品、フィルム現像液)	
S 3 4	Disodium tetraborate, anhydrous	215-540-4	1330-43-4 12179-04-3 1303-96-4		・ホウ砂 ・四ホウ酸ナトリウム (無水物) ・無水ホウ砂 ・四ホウ酸ナトリウム五水和物 ・四ホウ酸ナトリウム十水和物	Uses include a multitude of applications, e.g. in glass and glass fibres, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides, fertilizers.	・様々な利用方法を含む用途 (例: ガラスおよびガラス繊維、セラミック、洗剤および洗浄剤、パーソナルケア製品、工業用流体、冶金、接着剤、難燃剤、殺生物剤、化学肥料)	
S 3 5	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1		・四ホウ酸二ナトリウム、水和物	Uses include a multitude of applications, e.g. in glass and glass fibres, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides, fertilizers.	・様々な利用方法を含む用途 (例: ガラスおよびガラス繊維、セラミック、洗剤および洗浄剤、パーソナルケア製品、工業用流体、冶金、接着剤、難燃剤、殺生物剤、化学肥料)	
S 3 6	Sodium chromate	231-889-5	7775-11-3		・クロム酸ナトリウム	Laboratory (analytical agent) Manufacture of other chromium compounds	・研究所 (分析機関) ・その他クロム化合物の製造	
S 3 7	Potassium chromate	232-140-5	7789-00-6		・クロム酸カリウム	Treatment and coating of metals Manufacture of reagents and chemicals Manufacture of textiles Colouring agent in ceramics Tanning and dressing of leather Manufacture of pigments/inks Laboratory (analytical)	・金属の処理およびコーティング ・試薬および化学物質の製造 ・繊維の製造 ・セラミックの着色剤 ・皮革のなめしおよび手入れ ・顔料・インクの製造 ・研究所 (分析機関) ・花火製造	
S 3 8	Ammonium dichromate	232-143-1	7789-09-5		・ニクロム酸アンモニウム ・重クロム酸アンモニウム	Oxidizing agent Laboratory (analytical agent) Tanning of leather Manufacture of textiles Manufacture of photosensitive screens (cathode ray tubes) Metal treatment	・酸化剤 ・研究所 (分析機関) ・皮革のなめし ・繊維の製造 ・感光性スクリーンの製造 (陰極線管) ・金属の処理	
S 3 9	Potassium dichromate	231-906-6	7778-50-9		・ニクロム酸カリウム ・重クロム酸カリウム	Chrome metal manufacturing Treatment and coating of metals Manufacture of reagents and chemicals Laboratory (analytical agent) Cleaning of laboratory glassware Tanning of leather Manufacture of textiles Photolithography Wood treatment Corrosion inhibitor	・クロム金属の製造 ・金属の処理およびコーティング ・試薬および化学物質の製造 ・研究所 (分析機関) ・実験用ガラス器具の洗浄 ・皮革のなめし ・繊維の製造 ・フォトリソグラフィ ・木材処理 ・冷却装置の防錆剤	

Table 5. Substances of Very High Concern (SVHC) Ver.4: S40 to S47 (8 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 4 0	Cobalt(II) sulphate	233-334-2	10124-43-3		・硫酸コバルト(II)	Mainly used in the production of other chemicals. Further applications may include manufacture of catalysts and driers, surface treatments (such as electroplating), corrosion prevention, production of pigments, decolourising (in glass, pottery), batteries, animal food supplement, soil fertilizer, and others.	主に、他の化学物質の製造で使用される。触媒、乾燥剤、電気めっきなどの表面処理、腐食防止剤、顔料の製造、ガラス陶磁器の脱色、電池、飼料添加剤、肥料など 硫酸コバルトは、触媒、磁性粉（磁気テープの原料）、蓄電池、ペイント・インキの乾燥剤、陶磁器の顔料やメッキなどの表面処理薬剤などに使われているほか、食欲不振などを防ぐために家畜などの飼料にも添加されています。	
S 4 1	Cobalt(II) dinitrate	233-402-1	10141-05-6		・硝酸コバルト(II)	Mainly used in the production of other chemicals and the manufacture of catalysts. Further applications may include surface treatment and batteries.	主に、他の化学物質の製造、触媒の製造で使用される。他に表面処理、電池。硝酸コバルトは、石油化学触媒、各種コバルト触媒原料、電池材料などに使われています。	
S 4 2	Cobalt(II) carbonate	208-169-4	513-79-1		・炭酸コバルト(II)	Mainly used in the manufacture of catalysts. Minor uses may include feed additive, production of other chemicals, production of pigments, and adhesion (in ground coat frit).	主な用途は触媒の製造。まれに食品添加物、他の化学物質の製造、顔料製造、覆土材の粘着剤 炭酸コバルトは、永久磁石やVTRテープなどの磁性材料、パソコン・携帯電話や電気自動車などの蓄電池、重油脱硫用などの触媒などに使われています。	
S 4 3	Cobalt(II) diacetate	200-755-8	71-48-7		・酢酸コバルト(II)	Mainly used in the manufacture of catalysts. Minor uses may include production of other chemicals, surface treatment, alloys, production of pigments, dyes, rubber adhesion, and feed additive.	主な用途は触媒の製造。まれに他の化学物質の製造、表面処理、合金、顔料、染料の製造。ゴムの粘着剤、食品添加物 酢酸コバルトは、ペイント・ワニスと量の乾燥剤、ワニス原料、陶器の顔料、液相酸化触媒、アルミニウム表面処理添加剤、医薬中間体などに使われています。	
S 4 4	2-Methoxyethanol	203-713-7	109-86-4		・2-メトキシエタノール ・メチルセロソルブ	Mainly used as solvent, chemical intermediate and additive for fuels.	主な用途は溶剤、中間体、燃料添加剤	
S 4 5	2-Ethoxyethanol	203-804-1	110-80-5		・2-エトキシエタノール ・セロソルブ	Mainly used as solvent and chemical intermediate.	主な用途は溶剤、中間体、燃料添加剤	
S 4 6	Chromium trioxide	215-607-8	1333-82-0		・三酸化クロム ・無水クロム酸(VI)	Used for metal finishing and as fixing agent in waterborne wood preservatives.	用途は金属の表面仕上げ、水中利用の木材保存剤の固定化	
S 4 7	acids generated from chromium trioxide and their oligomers ・ Chromic acid ・ Dichromic acid ・ Oligomers of chromic acid and dichromic acid	231-801-5 - 236-881-5 -	7738-94-5 13530-68-2 -		三酸化クロムおよびそのオリゴマーから生成される酸 ・クロム酸 ・ニクロム酸 ・重クロム酸 ・クロム酸、ニクロム酸のオリゴマー	Used for metal finishing and as fixing agent in waterborne wood preservatives.	用途は金属の表面仕上げ、水中利用の木材保存剤の固定化	

Table 6. Substances of Very High Concern (SVHC) Ver.5: S48 to S54 (7 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 4 8	2-ethoxyethyl acetate	203-839-2	111-15-9		・酢酸2-エトキシエチル	As solvent and for the formulation of paints, lacquers and varnishes for professional use exclusively	金属製品や家具用の塗料、インキの溶剤	
S 4 9	strontium chromate	232-142-6	7789-06-2		・クロム酸ストロンチウム	coatings such as paints, varnishes, oil-colors, sealants, etc.	さび止め顔料	
S 5 0	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4	フタル酸ヘプテルノニルウンデシル	・1,2-ベンゼンジカルボン酸、炭素数7~11の分岐および直鎖アルキルエステル類	plasticization of electrical and communication wire insulation in polyvinyl chlorides (PVC) and foam	可塑剤	
S 5 1	Hydrazine	206-114-9	7803-57-8, 302-01-2		・ヒドラジン 一水和物 ・無水 ヒドラジン	Use in synthesis and as a monomer in polymerizations reactions. Corrosion inhibitors, metal reduction, refining of chemicals	無水ヒドラジンはロケット燃料、水加ヒドラジンはプラスチック発泡剤製造用、清缶剤（脱酸素）、還元剤、重合触媒および各種誘導体、試薬、農薬（植物成長抑制剤、除草剤製造用）、水処理剤、エアバッグ用起爆剤	
S 5 2	1-methyl-2-pyrrolidone	212-828-1	872-50-4		・1-メチル-2-ピロリドン ・N-メチル-2-ピロリドン	Coatings High temperature coating, urethane dispersions, acrylic and styrene latexes. Paint removers, floor strippers, graffiti remover, industrial degreasing, injection head and cast-molding equipment cleaning. Agricultural chemicals Solvent for herbicide, pesticide and fungicide formulations. Electronics Cleaning, defluxing, edge bead removal, photoresist	化学・・・抽出剤（アセチレン、BTX、ブタジエン）、合成樹脂の表面コーティング溶剤、反応溶媒（PPS、ポリイミドなど） 電子・・・ワックス、フラックス、バリ除去 光学・・・洗浄 医薬・・・水溶性溶媒、金属洗浄 金属加工・・・金属（部品）洗浄 自動車・・・成形金型洗浄、PPバンパー塗料剥離、塗装ラインハンガー	
S 5 3	1,2,3-trichloropropane	202-486-1	96-18-4		・1,2,3-トリクロロプロパン	Used primarily as a building block for the synthesis of other products, such as: Pesticides, Chlorinated solvents, Polysulfide elastomers (cross-linking agent), Hexafluoropropylene (cross-linking agent)	閉鎖系において殺虫剤等の他の化学物質の合成中間体、ポリマー製造の際の架橋剤	
S 5 4	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6		・1,2-ベンゼンジカルボン酸、炭素数7の側鎖炭化水素を主成分とする炭素数6~8のフタル酸エステル類	The main reported uses of DIHP were: ・ Plasticiser in PVC; ・ Plasticiser in sealants and printing inks.	可塑剤	

Table 7. Substances of Very High Concern (SVHC) Ver.6: S55 to S72 (18 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 55	Dichromium tris(chromate)	246-356-2	24613-89-6		・トリス (クロメート) ニクロム ・クロム酸/クロムⅢ	Dichromium tris(chromate) is mainly used in mixtures for metal surface treatment in the aeronautic/aerospace, steel and aluminium coating sectors.	金属表面処理剤	
S 56	Potassium hydroxyoctaoxidizincatedichromate	234-329-8	11103-86-9		・ヒドロキシオクタオキソニ亜鉛酸ニクロム酸カリウム	hydroxyoctaoxidizincatedichromate is mainly used in coatings in the aeronautic/aerospace, steel and aluminium coil coating and vehicle coating sectors.	防蝕剤	
S 57	Pentazine chromate octahydroxide	256-418-0	49663-84-5		・クロム酸八水酸化五亜鉛	Pentazine chromate octahydroxide is mainly used in coatings in the vehicle coating and aeronautic / aerospace sectors.	防蝕剤	
S 58	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4		ホルムアルデヒド、アニリンによるオリゴマー反応生成物 (工業的なMDA)	Technical MDA is mainly used for manufacture of other substances. Minor uses are as ion exchange resins in nuclear power plants, as hardener for epoxy resins, e.g. for the production of rolls, pipes and moulds, and as well for adhesives.	合成原料。エポキシの硬化剤	
S 59	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8		・フタル酸 ビス (2-メトキシエチル)	No registration for bis(2-methoxyethyl) phthalate has been submitted to ECHA. Hence, the substance seems not to be manufactured in or imported to the EU in quantities above 1 t/y. Main uses in the past were as plasticizer in polymeric materials and paints, lacquers and varnishes, including printing inks.	ポリマー、ペンキ、インクの可塑剤に使用	
S 60	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0		・2-メトキシアニリン; オアニジン	2-Methoxyaniline is mainly used in the manufacture of dyes for tattooing and coloration of paper, polymers and aluminium foil.	染料原料	
S 61	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	205-426-2	140-66-9		・4-(1,1,3,3-テトラメチルブチル)フェノール ・4-tert-オクチルフェノール	4-(1,1,3,3-Tetramethylbutyl)phenol is mainly used in the manufacture of polymer preparations and of ethoxylate surfactants. It is further used as a component in adhesives, coatings, inks and rubber articles.	ポリマー原料。接着剤、コーティング材、インク、ゴム成形品成分。	
S 62	1,2-Dichloroethane	203-458-1	107-06-2		・1,2-ジクロロエタン	1,2-Dichloroethane is mainly used for manufacture of other substances. Minor uses as solvent in the chemical and pharmaceutical industry, as well as in laboratories.	合成原料。溶剤	
S 63	Bis(2-methoxyethyl) ether	203-924-4	111-96-6		・ジエチレングリコールジメチルエーテル、ビス (2-メトキシエチル) エーテル	Bis(2-methoxyethyl) ether is used primarily as a reaction solvent or process chemical in a wide variety of applications. It is also used as solvent for battery electrolytes, and possibly in other products such as sealants, adhesives, fuels and automotive care products.	反応用溶剤。電解質用溶剤。その他用途の溶剤	
S 64	Arsenic acid	231-901-9	7778-39-4		・ヒ酸	Arsenic acid is mainly used to remove gas bubbles from ceramic glass melt (fining agent) and in the production of laminated printed circuit boards. To lesser extent the substance is also used in the manufacture of semiconductors and as laboratory agent.	セラミックガラス溶融体からの脱泡剤。多層回路基板の製造	
S 65	Calcium arsenate	231-904-5	7778-44-1		・ヒ酸カルシウム	Calcium arsenate is present in complex raw materials (which themselves are by-products from metallurgical processes) that are used mainly for copper and lead refining. The substance is used to precipitate nickel from the molten metal and to manufacture diarsenic trioxide. However, most of the substance seems to be disposed of as waste.	銅、鉛、貴金属製造用輸入原料に存在。精錬工程中にヒ酸カルシウムと酸化ヒ素に変換し。ヒ酸カルシウムは廃棄、酸化ヒ素はさらに使用される。	
S 66	Trilead diarsenate	222-979-5	3687-31-8		・ヒ酸鉛	Trilead diarsenate is present in complex raw materials for manufacture of copper, lead and a range of precious metals. The trilead diarsenate contained in the raw materials is in the metallurgical refinement process transformed to calcium arsenate and diarsenic trioxide. Whereas most of the calcium arsenate appears to be disposed of as waste the diarsenic trioxide is used further.	銅、鉛、貴金属製造用輸入原料に存在。精錬工程中にヒ酸カルシウムと酸化ヒ素に変換し。ヒ酸カルシウムは廃棄、酸化ヒ素はさらに使用される。	
S 67	N,N-dimethylacetamide [DMAC]	204-826-4	127-19-5		・N,N-ジメチルアセトアミド	N,N-dimethylacetamide is used as solvent, mainly in the manufacture of various substances and in the production of fibres for clothing and other applications. Also used as reagent, and in products such as industrial coatings, insulation paper, polyimide films, paint strippers and ink removers.	工業的溶剤	
S 68	2,2'-dichloro-4,4'-methylenedianiline [MOCA]	202-918-9	101-14-4		・2,2'-ジクロロ-4,4'-メチレンジアニリン	2,2'-Dichloro-4,4'-methylenedianiline is mainly used as curing agent in resins and in the production of polymer articles and also for manufacture of other substances. The substance may further be used in construction and arts.	ポリマー架橋剤。他の物質原料。建設、芸術用途	
S 69	Phenolphthalein	201-004-7	77-09-8		・フェノールフタレイン	Phenolphthalein is mainly used as laboratory agent (pH indicator solutions). Minor uses are in pharmaceutical preparations and in some special applications (e.g. pH-indicator paper, disappearing inks).	実験室用、及び医用指示薬	
S 70	Lead azide Lead diazide	236-542-1	13424-46-9		・アジ化鉛、ジアジド鉛 (Ⅱ)	Lead diazide is mainly used as initiator or booster in detonators for both civilian and military uses and as initiator in pyrotechnic devices.	起爆剤、発火装置の開始剤	
S 71	Lead styphnate	239-290-0	15245-44-0		・ステフエン酸鉛 ・トリシネート ・鉛 (Ⅱ) 2,4,6-トリニトロベンゼン-1,3-ジオラート	Lead styphnate is mainly used as a primer for small calibre and rifle ammunition. Other common uses are in ammunition pyrotechnics, powder actuated devices and detonators for civilian use.	小口径とライフルの弾薬のプライマー、民生用火火、粉体作動装置と起爆装置	
S 72	Lead dipicrate	229-335-2	6477-64-1		・ニピクリン酸鉛 ・ビスピクリン酸鉛 (Ⅱ) ・鉛 (Ⅱ) 2,4,6-トリニトロベンゼン-1-オラート	No registration for lead dipicrate has been submitted to ECHA. The substance is an explosive like lead diazide and lead styphnate. It may be used in low amounts in detonator mixtures together with the two other mentioned lead compounds.	アジ化鉛、ステフエン酸鉛と同様爆発性。同様用途	

Table 8 Substances of Very High Concern (SVHC) Ver.7: S73 to S85 (18 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 7 3	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3(EC)			トリエチレングリコールジメチルエーテル, 1,2-ビス(2-メトキシエトキシ)エタン(TEGDME), トリグリム			
S 7 4	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4		1,2-ジメトキシエタン; エチレングリコールジメチルエーテル (EGDME), ジメチルセロソルブ			
S 7 5	Diboron trioxide	215-125-8	1303-86-2		酸化ホウ素, 無水ホウ酸, 三酸化ニホウ素			
S 7 6	Formamide	200-842-0	27735		ホルムアミド			
S 7 7	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2		メタンスルホン酸鉛(II)			
S 7 8	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	219-514-3	2451-62-9		イソシアヌル酸1,3,5-トリグリシジル, トリグリシジルイソシアヌラート(TGIC)			
S 7 9	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione ( $\beta$ -TGIC)	423-400-0	59653-74-6		$\beta$ -TGIC, 1,3,5-トリス-[(2Sおよび2R)-2,3-エポキシプロピル]-1,3,5-トリアジン-2,4,6-(1H,3H,5H)-トリオン ( $\beta$ -TGIC)			
S 8 0	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8		4,4'-ビス(ジメチルアミノ)ベンゾフェノン (ミヒラーケトン)			
S 8 1	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1		N,N,N',N'-テトラメチル-4,4'-メチレンジアニリン, 4,4'-メチレンビス(N,N'-ジメチルアニリン), ビス[4-(ジメチルアミノ)フェニル]メタン (ミヒラーベース)			
S 8 2	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]※	219-943-6	2580-56-5		[4-[[4-アニリノ-1-ナフチル][4-(ジメチルアミノ)フェニル]メチレン]シクロヘキサ-2,5-ジエン-1-イリデン]ジメチルアンモニウムクロリド (C.I. ベーシックブルー-26)			
S 8 3	[4-[4,4'-bis(dimethylamino)benzhydrylidene] cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]※	208-953-6	548-62-9		[4-[4,4'-ビス(ジメチルアミノ)ベンズヒドリリデン]シクロヘキサ-2,5-ジエン-1-イリデン]ジメチルアンモニウムクロリド (C.I. ベーシックバイオレット3), 塩化メチルローザニリン			
S 8 4	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]※	209-218-2	561-41-1		ビス(4-ジメチルアミノフェニル)(4-メチルアミノフェニル)メタノール, C.I. ソルベントバイオレット8			
S 8 5	$\alpha, \alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]※	229-851-8	6786-83-0		$\alpha, \alpha$ -ビス[4-(ジメチルアミノ)フェニル]-4-(フェニルアミノ)-1-ナフタレンメタノール (C.I. ソルベントブルー-4)			

Table 9 Substances of Very High Concern (SVHC) Ver.8: S86 to S139 (54 substances)

No.	Substances	EC number	CAS number	その他名称 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 8 6	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5		デカブロモジフェニルエーテル (デカBDE)			
S 8 7	Pentacosafuorotridecanoic acid	276-745-2	72629-94-8		ペンタコサフルオロトリデカン酸、パーフルオロトリデカン酸、ペルフルオロトリデカン酸			
S 8 8	Tricosafuorodecanoic acid	206-203-2	307-55-1		トリコサフルオロドデカン酸、パーフルオロドデカン酸、ペルフルオロドデカン酸			
S 8 9	Henicosafuoroundecanoic acid	218-165-4	2058-94-8		ヘニコサフルオロウンデカン酸、パーフルオロウンデカン酸、ペルフルオロウンデカン酸			
S 9 0	Heptacosafuorotetradecanoic acid	206-803-4	376-06-7		ヘプタコサフルオロテトラデカン酸、パーフルオロテトラデカン酸、ペルフルオロテトラデカン酸			
S 9 1	Diazene-1, 2-dicarboxamide (C, C'-azodi (formamide))	204-650-8	123-77-3		アゾジカルボンアミド、アゾビスカルボンアミド、ジアゼン-1,2-ビスカルボンアミド			
S 9 2	Cyclohexane-1, 2-dicarboxylic anhydride [1], cis-cyclohexane-1, 2-dicarboxylic anhydride [2], trans-cyclohexane-1, 2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]. ※1	201-604-9 236-086-3 238-009-9	85-42-7, 13149-00-9, 14166-21-3		[1]シクロヘキサ-1,2-ジカルボン酸無水物 [2]シス-シクロヘキサ-1,2-ジカルボン酸無水物 [3]トランス-シクロヘキサ-1,2-ジカルボン酸無水物 [シス型[2]とトランス型[3]の個々の異性体およびシス型・トランス型異性体の全ての可能な組合せ[1]。このエントリーによって異性体の全てがカバーされる。]			
S 9 3	Hexahydro-1,2,3,4,5,6-hexahydrophthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry] ※2	247-094-1, 243-072-0, 256-356-4, 260-566-1	25550-51-0, 19438-60-9, 48122-14-1, 1, 57110-29-9		[1]メチルヘキサヒドロフタル酸無水物、 [2]ヘキサヒドロ-4-メチルフタル酸無水物、 [3]ヘキサヒドロ-1-メチルフタル酸無水物、 [4]ヘキサヒドロ-3-メチルフタル酸無水物 [2]、[3]と[4]の個々の異性体（これらのシス型とトランス型の立体的異性体を含む）および異性体の全ての可能な組合せ[1]。このエントリーによって異性体の全てがカバーされる。			
S 9 4	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 UVB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-		4-ノニルフェノール、分岐および直線 [フェノールの4位で炭素数9の直鎖および/または分岐したアルキル鎖が共有結合している物質、個々の異性体またはその混合物のいずれも含むUVB物質およびwell-defined物質（組成等が分かっている物質）]			
S 9 5	4-(1,1,3,3-tetraethylbutyl)phenol, ethoxylated [covering well-defined substances and UVB substances, polymers and homologues]	-	-		4-(1,1,3,3-テトラメチルブチル)フェノール、エトキシレート [well-defined物質（組成等が分かっている物質）およびUVB物質、ポリマーおよびその同族体]			
S 9 6	Methoxyacetic acid	210-094-6	625-45-9		メトキシ酢酸			
S 9 7	N,N-dimethylformamide	200-679-5	28114		N,N-ジメチルホルムアミド			
S 9 8	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1		ジブチルスズジクロリド、ジクロロジブチルスズ (DBTC)			
S 9 9	Lead monoxide (lead oxide)	215-267-0	1317-36-8		酸化鉛 (鉛酸)			
S 1 0 0	Orange lead (lead tetroxide)	215-235-6	1314-41-6		オレンジレッド (四酸化鉛)			
S 1 0 1	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5		ビステトラフルオロボラート、テトラフルオロボラート			
S 1 0 2	Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6		鉛(炭酸)二酸化三鉛、塩基性炭酸鉛、炭酸鉛水酸化鉛、炭酸鉛			
S 1 0 3	Lead titanium trioxide	235-038-9	12060-00-3		三酸化チタン鉛、チタン酸鉛			
S 1 0 4	Lead titanium zirconium oxide	235-727-4	12626-81-2		チタン酸鉛ジルコニウム酸鉛、ジルコニウム酸鉛			
S 1 0 5	Silicic acid, lead salt	234-363-3	11120-22-2		ケイ酸鉛、塩基性ケイ酸鉛			
S 1 0 6	Silicic acid (HS(205), Darim salt (I)), lead-salt (with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (GLP) or category 1 (SDS)), the substance is a member of the group entry of lead compounds, with index number 082-001-00-9 in Regulation (EC) No 1272/2008] ※4	272-271-5	68784-75-8		ケイ酸 (HS(205))バリウム塩 (I)、鉛をトープ (生殖毒性物質のRepr. 1A (GLP) またはcategory 1 (SDS) の一般的な濃度限界を超えて含有する鉛: この物質は規制 (EC) No 1272/2008 中の index number 082-001-00-9 の鉛化合物としてエントリーされている]			
S 1 0 7	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5		1-ブロモプロパン (n-プロピルブロマイド)			
S 1 0 8	Methyloxirane (Propylene oxide)	200-879-2	75-56-9		メチルオキシラン (プロピレンオキシド)			
S 1 0 9	1,2-Benzenedicarboxylic acid, diisobutyl ester, branched and linear	284-032-2	84777-06-0		1,2-ベンゼンジカルボン酸、ジイソブチルエステル、分岐および直線			
S 1 1 0	Diisopentylphthalate (DIPP)	210-088-4	605-50-5		フタル酸ジイソペンチル (DIPP)			
S 1 1 1	N-pentyl-isopentylphthalate	776297-69-9 ※5			フタル酸n-ペンチルイソペンチル、n-ペンチルイソペンチルジエステル			
S 1 1 2	1,2-dioxethane	211-076-1	629-14-1		1,2-ジオキサン、ジエチルグリコール、ジエチルセロソルフ			
S 1 1 3	Acetic acid, lead salt, basic	257-175-3	51404-69-4		塩基性酢酸鉛			
S 1 1 4	Lead oxide sulfate	234-853-7	12036-76-9		オキシ硫酸鉛			
S 1 1 5	[Phthalato(2-)]dioxotrilead ※6	273-688-5	69011-06-9		フタル酸ジオキソ三鉛			
S 1 1 6	Dioxis(stearate)trilead	235-702-8	12578-12-0		ジオキソステアリン酸三鉛、ジオキソステアリン酸三鉛			
S 1 1 7	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8		脂肪酸鉛塩 (炭素数16~18)			
S 1 1 8	Lead cyanidate	244-073-9	20837-86-9		シアナミド鉛			
S 1 1 9	Lead dinitrate	233-245-9	10099-74-2		二硝酸鉛、硝酸鉛 (II)			
S 1 2 0	Pentalead tetraoxide sulphate	235-067-7	12065-90-6		四塩基性硫酸鉛			
S 1 2 1	Pyrochloro, antimony lead yellow	232-382-1	8012-00-8		パイロクロア、C.I. ピグメントイエロー41			
S 1 2 2	Sulfurous acid, lead salt, diisoleic	263-467-1	62229-08-7		塩基性亜硫酸鉛			
S 1 2 3	Tetraethyllead	201-075-4	78-00-2		四エチル鉛、テトラエチル鉛			
S 1 2 4	Tetralead trioxide sulphate	235-380-9	12202-17-4		三塩基性硫酸鉛			
S 1 2 5	Trilead dioxide phosphonate	235-252-2	12141-20-7		二塩基性リン酸鉛、二塩基性亜リン酸鉛			
S 1 2 6	Furan	203-727-3	110-00-9		フラン			
S 1 2 7	Diethyl sulphate	200-580-6	64-67-5		ジエチル硫酸			
S 1 2 8	Dimethyl sulphate	201-958-1	77-78-1		ジメチル硫酸			
S 1 2 9	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2		3-エチル-2-メチル-2-(3-メチルブチル)-1,3-オキサゾリジン			
S 1 3 0	Dinoseb (4-sec-butyl-2,4-dinitrophenol)	201-861-7	88-88-7		ジノセブ (4-sec-ブチル-2,4-ジニトロフェノール)			
S 1 3 1	4,4'-methylene-di-o-toluidine	212-658-8	838-98-0		4,4'-メチレンジ-ortho-トルイジン、4,4'-ジ-ortho-トルイジン、メチレンジフェニルメタン			
S 1 3 2	4,4'-oxydianiline and its salts	202-977-0	101-80-4		4,4'-オキシジアニリンおよびその塩			
S 1 3 3	4-aminooazobenzene	200-453-6	1960/9/3		4-アミノアゾベンゼン			
S 1 3 4	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7		4-メチル-m-フェニレンジアミン (トルエン-2,4-ジアミン)			
S 1 3 5	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8		6-メトキシ-m-トルイジン (p-クレシジン)			
S 1 3 6	Di-phenyl-4-amine	202-171-1	92-67-1		ジフェニルアミン			
S 1 3 7	p-aminoozotoluene [4-o-tolylazo-o-toluidine]	202-591-2	97-56-3		o-アミノアゾトルイジン [4-ortho-トルイリアゾ-ortho-トルイジン]			
S 1 3 8	o-toluidine	202-429-0	95-53-4		ortho-トルイジン			
S 1 3 9	N-methylacetamide	201-182-6	79-16-3		N-メチルアセトアミド、メチルアセトアミド			

Table 10 Substances of Very High Concern (SVHC) Ver.9: S140 to S145 (6 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 1 4 0	Cadmium	231-152-8	7440-43-9		カドミウム			
S 1 4 1	Cadmium oxide	215-146-2	1306-19-0		酸化カドミウム			
S 1 4 2	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1		ペンタデカフルオロオクタン酸アンモニウム、ペルフルオロオクタン酸アンモニウム、パーフルオロオクタン酸アンモニウム (APFO)			
S 1 4 3	Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1		ペンタデカフルオロオクタン酸、ペルフルオロオクタン酸、パーフルオロオクタン酸 (PFOA)			
S 1 4 4	Dipentyl phthalate (DPP)	205-017-9	131-18-0		フタル酸ジペンチル、フタル酸ジアミル (DPP)			
S 1 4 5	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	-		4-ノニルフェノール、分岐および直鎖のエトキシレート [フェノールの4の位置で炭素数9の直鎖および/または分岐したアルキル鎖が共有結合している物質、UVCB物質および well-defined物質 (組成等が分かっている物質)、ポリマーおよび同族体の個々の異性体やその組合せのどれでもを含んでエトキシ化されたものを含む]			

Table 11 Substances of Very High Concern (SVHC) Ver.10: S146 to S152 (6 substances)

No.	Substances	EC number	CAS number	その他英名 (Other name)	和名 (Japanese)	用途 (The purpose)	用途 (日本語)	備考
S 1 4 6	Cadmium sulphide	203-977-3	1306-23-6		硫化カドミウム、硫化カドミウム (II)、カドミウムスルフィド			
S 1 4 7	Disodium 3,3'-[[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	209-358-4	573-58-0		3,3'-[[[1,1'-ビフェニル]-4,4'-ジイルビス(アゾ)]ビス(4-アミノナフタレン-1-スルホネート)ニナトリウム、コンゴ レッド (C.I. ダイレクトレッド 28)			
S 1 4 8	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)	217-710-3	1937-37-7		4-アミノ-3-[[[4'-(2,4-ジアミノフェニル)アゾ]-[1,1'-ビフェニル]-4-イル]アゾ]-5-ヒドロキシ-6-(フェニルアゾ)ナフタレン-2,7-ジスルホネートニナトリウム、クロラゾール ブラック E (C.I. ダイレクトブラック 38)			
S 1 4 9	Dihexyl phthalate	201-559-5	84-75-3		フタル酸ジヘキシル、ジヘキシルフタレート、フタル酸ジ-n-ヘキシル			
S 1 5 0	Imidazolidine-2-thione; 2-imidazoline-2-thiol	202-506-9	96-45-7		イミダゾリン-2-チオン、2-イミダゾリンチオン、N,N'-エチレンチオ尿素; 2-イミダゾリン-2-チオール			
S 1 5 1	Lead di (acetate)	206-104-4	301-04-2		酢酸鉛 (II)、ビス酢酸鉛 (II)、二酢酸鉛 (II)			
S 1 5 2	Trixylyl phosphate	246-677-8	25155-23-1		リン酸トリキシレニル、トリ(ジメチルフェニル)ホスフェート、リン酸トリス(ジメチルフェニル)			

Table 12 Substances of Very High Concern (SVHC) Ver.11: S153 to S156 (4 substances)

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S153	Cadmium chloride	233-296-7	10108-64-2		ジクロロカドミウム			
S154	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4		1,2-ベンゼンジカルボン酸、ジヘキシルエステル、分岐および直鎖			
S155	Sodium peroxometaborate	231-556-4	7632-02-4		ペルオキシホウ酸ナトリウム、過ホウ酸ナトリウム			
S156	Sodium perborate; perboric acid, sodium salt	-	-		過ホウ酸ナトリウム; 過ホウ酸、ナトリウム塩			



Table 13 Substances of Very High Concern (SVHC) Ver.12: S157 to S162 (6 substances)

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S157	Cadmium fluoride	232-222-0	7790-79-6		フッ化カドミウム、カドミウムジフルオリド			
S158	Cadmium sulphate	233-331-6	10124-36-4, 31119-53-6		硫酸カドミウム (II)、硫酸カドミウム (II) 無水物・水和物			
S159	2-benzotriazol-2-yl-4,6-ditert-butylphenol (UV-320)	223-346-6	3846-71-7		2-ベンゾトリアゾール-2-イル-4,6-ジ-tert-ブチルフェノール (UV-320)			
S160	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1		2-(2H-ベンゾトリアゾール-2-イル)-4,6-ジ-tert-ペンチルフェノール (UV-328)			
S161	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1		10-エチル-4,4-ジオクチル-7-オキソ-8-オキサ-3,5-ジチア-4-スタナンテトラデカン酸2-エチルヘキシル (DOTE)			
S162	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)	-	-		10-エチル-4,4-ジオクチル-7-オキソ-8-オキサ-3,5-ジチア-4-スタナンテトラデカン酸2-エチルヘキシルと10-エチル-4-[[2-[(2-エチルヘキシル)オキシ]-2-オキソエチル]チオ]-4-オクチル-7-オキソ-8-オキサ-3,5-ジチア-4-スタナンテトラデカン酸2-エチルヘキシルの反応生成物 (DOTEとMOTEの反応生成物)			

Table 14 Substances of Very High Concern (SVHC) Ver.13: S163 to S164 (2 substances)

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S163	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)	-	-		1,2-ベンゼンジカルボン酸、ジ-C6~10-アルキルエステル； 1,2-ベンゼンジカルボン酸、デシル・ヘキシル・オクチルジエステルと0.3%以上のフタル酸ジヘキシル (EC No. 201-559-5) との混合物			
S164	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	-	-		5-sec-ブチル-2-(2,4-ジメチルシクロヘキサ-3-エン-1-イル)-5-メチル-1,3-ジオキササン[1]、5-sec-ブチル-2-(4,6-ジメチルシクロヘキサ-3-エン-1-イル)-5-メチル-1,3-ジオキササン[2] ([1]と[2]の個々の立体異性体、またはその組合せも含む)			

Table 15 Substances of Very High Concern (SVHC) Ver.14: S165 to S169 (5 substances)

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S165	Nitrobenzene	202-716-0	98-95-3		ニトロベンゼン			
S166	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1		2,4-ジ-tert-ブチル-6-(5-クロロ-2H-ベンゾトリアゾール-2-イル)フェノール			
S167	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3		2-(2H-ベンゾトリアゾール-2-イル)-6-sec-ブチル-4-tert-ブチルフェノール			
S168	1,3-propanesultone	214-317-9	1120-71-4		1,3-プロパンスルトン			
S169	Perfluorononan-1-oiic-acid and its sodium and ammonium salts	-	-		ペルフルオロノナン酸とそのナトリウムおよびアンモニウム塩類			

Table 16 Substances of Very High Concern (SVHC) Ver.15: S170 (1 substances)

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S170	Benzo[def]chrysene (Benzo[a]pyrene)	200-028-5	50-32-8		ベンゾ[a]ピレン			



**Table 17 Substances of Very High Concern (SVHC) Ver.16: S171 to S174 (4 substances)**

No.	Substances	EC number	CAS number	Other name	和名 (Japanese name)	Main purpose of use	主な使用用途	備考
S171	4,4'-isopropylidenediphenol (bisphenol A)	201-245-8	80-05-7		4,4'-プロパン-2,2-ジイルジフェノール (ビスフェノールA)	Plastizicer, ink, thermal paper	可塑剤、インク、感熱紙	
S172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	-	-		ノナデカフルオロデカン酸、ノナデカフルオロデカン酸アンモニウム、ノナデカフルオロデカン酸ナトリウム			
S173	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-		4-ヘプチルフェノール、分岐および直鎖			
S174	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6		4-tert-ペンチルフェノール			

**Table 18. Perfluoro-octyl sulphonates (PFOS) 75 + 13 substances**

<ul style="list-style-type: none"> <li>• PFOS Perfluoro-octyl sulphonates (C8 chain)</li> <li>• PFOA Perfluoro-octanoic acid</li> <li>• PFAS Perfluoro-alkyl sulphonates (C4-Cn chain), in case of C4 chain:PFBS (Perfluoro-butyl sulphonate)</li> </ul>		
PFOS 75 Substances		
CAS Number	Molecular Formula	Name
307-35-7	C16H14F17NO4S	2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl methacrylate
307-51-7	C10F22O2S	perfluorodecanesulphonyl fluoride
376-14-7	C16H14F17NO4S	2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl methacrylate
383-07-3	C17H16F17NO4S	2-[butyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl acrylate
423-50-7	C6F14O2S	perfluorohexanesulphonyl fluoride
423-82-5	C15H12F17NO4S	2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl acrylate
754-91-6	C8H2F17NO2S	heptadecafluorooctanesulphonamide
1652-63-7	C14H16F17N2O2S.I	[3-[[[(heptadecafluorooctyl)sulphonyl]amino]propyl]trimethylammonium iodide
1691-99-2	C12H10F17NO3S	N-ethylheptadecafluoro-N-(2-hydroxyethyl)octanesulphonamide
1763-23-1	C8HF17O3S	heptadecafluorooctane-1-sulphonic acid
2795-39-3	C8HF17O3S.K	potassium heptadecafluorooctane-1-sulphonate
2991-51-7	C12H8F17NO4S.K	potassium N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]glycinate
4151-50-2	C10H6F17NO2S	N-ethylheptadecafluorooctanesulphonamide
14650-24-9	C15H12F17NO4S	2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl methacrylate
17202-41-4	C9HF19O3S.H3N	ammonium nonadecafluorononanesulphonate
24448-09-7	C11H8F17NO3S	heptadecafluoro-N-(2-hydroxyethyl)-N-methyloctanesulphonamide
25268-77-3	C14H10F17NO4S	2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl acrylate
29081-56-9	C8HF17O3S.H3N	ammonium heptadecafluorooctanesulphonate
29117-08-6	(C2H4O) <sub>n</sub> C12H10F17NO3S	Poly(oxy-1,2-ethanediy), alpha-[2-ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-omega-hydroxy-
29457-72-5	C8HF17O3S.Li	lithium heptadecafluorooctanesulphonate
31506-32-8	C9H4F17NO2S	heptadecafluoro-N-methyloctanesulphonamide
38006-74-5	C14H16F17N2O2S.Cl	[3-[[[(heptadecafluorooctyl)sulphonyl]amino]propyl]trimethylammonium chloride
38850-58-7	C16H23F13N2O6S2	(2-hydroxyethyl)dimethyl[3-[(3-sulphopropyl)[(tridecafluorohexyl)sulphonyl]amino]propyl]ammonium hydroxide
55120-77-9	C6HF13O3S.Li	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt
67584-42-3	C8HF15O3S.K	potassium decafluoro(pentafluoroethyl)cyclohexanesulphonate
67906-42-7	C10HF21O3S.H3N	ammonium hencosafluorodecanesulphonate
68156-01-4	C8HF15O3S.K	potassium nonafluorobis(trifluoromethyl)cyclohexanesulphonate
68298-62-4	(C17H16F17NO4S.C16H16F15NO4S.(C3H6O.C2H4O) <sub>x</sub> .(C3H6O.C2H4O) <sub>x</sub> .2C3H4O2.C3H4O2) <sub>x</sub> .C8H18S	2-Propenoic acid, 2-[butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, telomer with 2-[butyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, methyloxirane polymer with oxirane di-2-propenoate, methyloxirane polymer with oxirane mono-2-prop
68329-56-6	(C23H44O2.C21H40O2.C19H36O2.C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S) <sub>x</sub>	2-Propenoic acid, eicosyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, hexadecyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-
68541-80-0	(C21H40O2.C16H14F17NO4S.C3H4O2) <sub>x</sub>	2-Propenoic acid, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-propenoate
68555-90-8	(C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.C7H12O2) <sub>x</sub>	2-Propenoic acid, butyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tri
68555-91-9	(C22H42O2.C16H14F17NO4S.C15H14F15NO4S.C14H14F13NO4S.C13H14F11NO4S.C12H14F9NO4S) <sub>x</sub>	2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl
68555-92-0	(C22H42O2.C15H12F17NO4S.C14H12F15NO4S.C13H12F13NO4S.C12H12F11NO4S.C11H12F9NO4S) <sub>x</sub>	2-Propenoic acid, 2-methyl-, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[me
68586-14-1	(C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.(C2H4O) <sub>n</sub> C8H10O3.(C2H4O) <sub>n</sub> C4H6O2) <sub>x</sub> .C8H18S	2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, telomer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, alpha-(2-methyl-1-oxo-2-propenyl)-omega-hydroxypoly(oxy-1,2-ethanediy), alpha-(2-methyl-1-oxo-2-prope

68649-26-3	(C18H38O.C12H10F17NO3S.C11H10F15NO3S.C10H10F13NO3S.C9H10F11NO3S.C8H10F9NO3S.Unspecified)	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-, reaction products with N-ethyl-1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-1-butanefluoro-N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N
68891-96-3	C18H28Cl4Cr2F17NO9S	diaquatetrachloro[μ-[N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]glycinato-O1:O1']]-μ-hydroxybis(2-
68867-60-7	(C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.(C2H4O) <sub>n</sub> C4H6O2	2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluoroheptyl)sulf
68867-62-9	(C16H14F17NO4S.C15H14F15NO4S.C14H14F13NO4S.C13H14F11NO4S.C12H14F9NO4S.(C2H4O) <sub>n</sub> C4H6O2) <sub>x</sub> .C8H18S	2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, telomer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl
68909-15-9	(C23H44O2.C21H40O2.C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.(C2H4O) <sub>n</sub> C4H6O2.Unspecified) <sub>x</sub>	2-Propenoic acid, eicosyl ester, polymers with branched octyl acrylate, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl acrylate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl acrylate
68958-61-2	(C2H4O) <sub>n</sub> C13H12F17NO3S	Poly(oxy-1,2-ethanediyl), alpha-[2-
70225-14-8	C8HF17O3S.C4H11NO2	heptadecafluorooctanesulphonic acid, compound with 2,2'-iminodiethanol
71487-20-2	(C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.C8H8.C5H8O2.C3H4O2) <sub>x</sub>	2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl
73772-32-4	C14H19F13N2O6S2.Na	sodium 3-[[[3-(dimethylamino)propyl][(tridecafluoroheptyl)sulphonyl]amino]-2-hydroxypropanesulphonate
81190-38-7	C16H24F13N2O7S2.HO.Na	sodio(2-hydroxyethyl)[3-[(2-hydroxy-3-sulphonatopropyl][(tridecafluoroheptyl)sulphonyl]amino]propyl]dimethylammonium hydroxide
91081-99-1	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with epichlorohydrin, adipates (esters)
94133-90-1	C16H19F17N2O6S2.Na	sodium 3-[[[3-(dimethylamino)propyl][(heptadecafluorooctyl)sulphonyl]amino]-2-
98999-57-6	(C9H18NO2.C7H12O3.C7H10O3.Cl.Unspecified) <sub>x</sub>	Sulfonamides, C7-8-alkane, perfluoro, N-methyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl], polymers with 2-ethoxyethyl acrylate, glycidyl methacrylate and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride
117806-54-9	C7HF15O3S.Li	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, lithium salt
129813-71-4	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-methyl-N-(oxiranylmethyl)
148240-80-6	Unspecified	Fatty acids, C18-unsatd., trimers, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl esters
148240-82-8	Unspecified	Fatty acids, C18-unsatd., trimers, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl esters
182700-90-9	該当なし	1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-, reaction products with benzene-chlorine-sulfur chloride (S2Cl2) reaction products chlorides
(L-92-0151)		2-Propenoic acid, 2-methyl-, butylester, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-m
192662-29-6	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-[3-(dimethylamino)propyl], reaction products with acrylic acid
306973-46-6	Unspecified	Fatty acids, linseed-oil, dimers, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters
306975-56-4	Unspecified	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and N,N',2-tris(6-isocyanatohexyl)imidodicarbonic diamide, reaction products with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-
306975-57-5	Unspecified	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] and 1,2,3-propanetriol, reaction products with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-1-octanesulfonamide and

306973-47-7	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with 12-hydroxyoctadecanoic acid and 2,4-TDI, ammonium salts
306975-62-2	Unspecified	2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidene chloride
160901-25-7	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 2-ethyl-1-hexanol and polymethylenepolyphenylene isocyanate
306974-19-6	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-methyl-N-[(3-octadecyl-2-oxo-5-oxazolidinyl)methyl]
306975-84-8	Unspecified	Poly(oxy-1,2-ethanediyl), alpha-hydro-omega-hydroxy-, polymer with 1,6-diisocyanatohexane, N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides-blocked
306975-85-9	Unspecified	2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with N-(hydroxymethyl)-2-propenamide, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate, stearyl methacrylate and vinylidene chloride
306976-25-0	Unspecified	1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-propenyl)oxy]ethyl]-, bromide, polymers with Bu acrylate, Bu methacrylate and 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate
306976-55-6	Unspecified	2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2,4-diisocyanato-1-methylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2-propenoic acid, N-ethyl-N-(hydroxyethyl)perfluoro-C4-8-alkanesulfonamides-blocked
306974-28-7	Unspecified	Siloxanes and Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl group]-terminated, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and stearyl methacrylate
306980-27-8	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N,N'-[1,6-hexanediy]bis[(2-oxo-3,5-oxazolidinediyl)methylene]]bis[N-methyl-
306974-45-8	Unspecified	Sulfonic acids, C6-8-alkane, perfluoro, compds. with polyethylene-polypropylene glycol bis(2-aminopropyl) ether
306977-10-6	Unspecified	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, telomer with 2-[ethyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate and 1-octanethiol, N-oxides
179005-06-2	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-[3-(dimethyloxidoamino)propyl], potassium salts
251099-16-8	C22H48N.C8F17O3S	1-Decanaminium, N-decyl-N,N-dimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid (1:1)
306978-04-1	Unspecified	2-Propenoic acid, butyl ester, polymers with acrylamide, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidene
306977-58-2	Unspecified	2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymers with acrylic acid, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and propylene glycol monoacrylate, hydrolyzed, compds. with 2,2'-(methylimino)bis[ethanol]
306978-65-4	Unspecified	Hexane, 1,6-diisocyanato-, homopolymer, N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides- and stearyl alc.-blocked
306979-40-8	Unspecified	Poly(oxy-1,2-ethanediyl), alpha-[2-(methylamino)ethyl]-omega-[(1,1,3,3-tetramethylbutyl)phenoxy]-, N-[(perfluoro-C4-8-alkyl)sulfonyl] derivs.

## 指定13物質

CAS番号	分子式	英語名
2250-98-8	C36H27F51N3O10PS3	N,N',N''-[phosphinylidynetris(oxyethane-2,1-diyl)]tris[N-ethylheptadecafluorooctane-1-sulphonamide]
30381-98-7	C24H19F34N2O8PS2.H3N	ammonium bis[2-[N-ethyl(heptadecafluorooctane)sulphonylamino]ethyl] phosphate
57589-85-2	C22H6Cl4F17NO6S.K	potassium 2,3,4,5-tetrachloro-6-[[[3-[[[heptadecafluorooctyl)sulphonyl]oxy]phenyl]amino]carbonyl]benzoate
61660-12-6	C16H20F17NO5SSi	N-ethylheptadecafluoro-N-[3-(trimethoxysilyl)propyl]octanesulphonamide
67969-69-1	C12H11F17NO6PS.2H3N	diammonium N-ethylheptadecafluoro-N-[2-(phosphonatooxy)ethyl]octanesulphonamidate
68608-14-0	C15H10N2O2.Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 1,1'-methylenebis[4-isocyanatobenzene]
70776-36-2	(C22H42O2.C14H10F17NO4S.C13H10F15NO4S.C12H10F13NO4S.C11H10F11NO4S.C10H10F9NO4S.C4H7NO2.C2H2Cl2)x	2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 1,1-dichloroethene, 2-[[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, N-(hydroxymethyl)-2-propenamide, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pen

127133-66-8	(C <sub>16</sub> H <sub>30</sub> O <sub>2</sub> .C <sub>8</sub> H <sub>14</sub> O <sub>2</sub> .C <sub>4</sub> H <sub>6</sub> O <sub>2</sub> ) <sub>x</sub>	2-Propenoic acid, 2-methyl-, polymers with Bu methacrylate, lauryl methacrylate and 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate
148240-78-2	Unspecified	Fatty acids, C18-unsatd., trimers, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters
148684-79-1	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with 1,6-diisocyanatohexane homopolymer and ethylene glycol
178535-22-3	Unspecified	Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), polymers with 1,1'-methylenebis[4-isocyanatobenzene] and polymethylenepolyphenylene isocyanate, 2-ethylhexyl esters, Me Et ketone oxime-blocked
(P-94-2205)		Polymethylenepolyphenylenesocyanate and bis(4-NCO-phenyl)methane reaction products with 2-ethyl-1-hexanol, 2-butanone, oxime, N-ethyl-N-(2-hydroxyethyl)-1-C4-C8 perfluoroalkanesulfonamide
306974-63-0	Unspecified	Fatty acids, C18-unsatd., dimers, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl esters