

Chemical Substances Control List Ver.2.98-b

August 2025

The Chemical Substances Control List (The substance list) is aimed at the control of the chemical substances contained in all products of Yokogawa group.

The substances listed in this list are chosen based on the main product-related regulations and industrial standards, but don't cover all of the regulations and industrial standards. In case that the product contains any substances regulated by specific convention, law, ordinance, it must comply with these specific regulations.

The detailed substances (typical example) with CAS Registry Number® are described in Appendix. We ask you for reporting those substances which are not listed in the detailed substance list, but if they are targeted substances.

Prohibited-substances 1: Table 1 Control No. A1-* Global common Prohibited substances

Prohibited-substances 2: Table 2 Control No. A2-* 10 substances banned under RoHS

Table 3 Control No. A3-* Prohibited substances by concentration/
threshold, etc.

Prohibited-substances 3: Table 4 Control No. A4-* Prohibited substances by applications

Controlled substances: Table 5 Control No. B1-* REACH SVHC

Table 6 Control No. B2-* Substances whose contents must be identified

* If you must deliver parts that contain substance controlled by this list, you contact us.
We will respond individually.

Table 1 Global common Prohibited substances

Regulations or industrial rules				
A-1: CSCL (Japan) Class I Specified Chemical Substances G: REACH Annex XVII restricted substances J-A: Stockholm Convention Annex A substances (EU POPs Regulation) K: Montreal Protocol L: Ship recycling convention M: EU ship recycling regulation T: Prohibition of Certain Toxic Substances Regulations, 2012 U: US TSCA (Toxic Substance Control Act)				
Control No.	Substances	CAS Registry Number®	Regulations or industrial rules	
			Basis	Relevance
A1-1	Hexachloro-1,3-butadiene; HCBd	87-68-3	J-A	A-1,T,U
A1-2	Naphthalene, chloro derivatives	70776-03-3	J-A (Note 1)	A-1,L,M,T
A1-3	Hexachlorocyclohexanes	Appendix 1-1	J-A	A-1
A1-4	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-exo-1,4-end-5,8-dimethanonaphthalene (Synonym: Aldrin)	309-00-2		
A1-5	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-end-1,4-end-5,8-dimethanonaphthalene (Synonym: Endrin)	72-20-8		
A1-6	Decachloropentacyclo[5.2.1.0 ^{2,6} .0 ^{3,9} .0 ^{5,8}]decan-4-one; Chlordecone; Kepone	143-50-0		
A1-7	Chlordane, pur	57-74-9		
A1-8	Heptachlor	76-44-8		
A1-9	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4-end-5,8-dimethanonaphthalene (Synonym: Dieldrin)	60-57-1		
A1-10	PBDE (excluding RoHS banned substances)	Appendix 1-2 (Note 2)		A-1,T
A1-11	Polychloro-2,2-dimethyl-3-methylidenebicyclo[2.2.1]heptane (Synonym: Toxaphene)	8001-35-2		A-1
A1-12	Hexachlorobenzene	118-74-1		A-1,T
A1-13	Hexabromobiphenyl	36355-01-8		A-1
	2,2',4,4',5,5'-Hexabromobiphenyl; PBB-153	59080-40-9		
A1-14	Pentachlorobenzene	608-93-5		A-1,T
A1-15	Dodecachloropentacyclo[5.3.0.0(2,6).0(3,9).0(4,8)]decane (Synonym: Mirex); Dodecachloropentacyclo 1, 3, 4-Metheno-1H-cyclobuta(cd)pentalene, Mirex	2385-85-5		A-1
	alpha-Benzoepin	959-98-8		
	beta-Benzoepin	33213-65-9		
A1-16	Endosulfan	115-29-7		A-1,L,M
A1-17	Polychlorinated biphenyl (PCB)	Appendix 1-3		
A1-18	Ozone Depleting Substances (Montreal Protocol Annex A-I,A-II,B-I,B-II,B-III,C-II,C-III,E-I)	Appendix 1-4	K	L,M
A1-19	Hexabromocyclododecane; HBCDD; Cyclododecane, hexabromo-	25637-99-4	J-A	A-1, M,T
	1,2,5,6,9,10-hexabromocyclododecane	3194-55-6		
	Alpha-hexabromocyclododecane	134237-50-6		
	Beta-hexabromocyclododecane	134237-51-7		
	Gamma-hexabromocyclododecane	134237-52-8		
A1-20	Alkanes, C10-13, chloro (Short-chain chlorinated paraffins) (SCCP)	85535-84-8, etc.	J-A	A-1,L,M,T
A1-21	Salts or esters of pentachlorophenol	Appendix 1-5		A-1,G
A1-22	Perfluorooctanoic acid (PFOA), its salts, and PFOA related substances	Appendix 1-6		A-1, G, T
A1-23	Perfluorohexane sulfonic acid (PFHxS), its salts, and PFHxS related substances	Appendix 1-7		A-1, G
A1-24	1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-1,4:7,10-dimethanodibenzo[a,e][8]annulene ("Dechlorane Plus"™)	13560-89-9	J-A	A-1
		135821-74-8		
		135821-03-3		
A1-25	2-(2H-1,2,3-benzotriazol-2-yl)-4,6-bis (2-methylbutan-2-yl)phenol (UV-328)	25973-55-1	J-A	A-1

(Note 1) J-A: limited to those containing one or more chlorine atoms (A-1: "two" or more chlorine atoms)

(Note 2) Decabromodiphenyl ether (CAS Registry Number®: 1163-19-5) in Appendix 1-2 is subject to U.

Table 2 Prohibited substances 2 (Contained substances do not exceed threshold of RoHS)

Regulations or industrial rules												
D-E: RoHS D-C: China RoHS E: ELV F: CLP G: REACH Annex XVII restricted substances L: Ship recycling convention M: EU ship recycling regulation N: EU Packaging directive P: U.S. state laws based on the Model Toxics in Packaging Legislation Q: Battery directive T: Prohibition of Certain Toxic Substances Regulations, 2012												
Control No.	Substances	CAS Registry Number®	Regulations or industrial rules									
			Group 1		Group 2		Group 3	Group 4				
			(Note 1)	threshold	(Note 2)		(Note 3)	(Note 4)				
A2-1	Cadmium and its compounds	Appendix 2-1	D-E,D-C,E, (L,M)	100ppm (0.01wt%)	G	F	N,P	Q				
A2-2	Lead and its compounds	Appendix 2-2		1000ppm (0.1wt%)								
A2-3	Mercury and its compounds	Appendix 2-3										
A2-4	Chromium(VI) compounds	Appendix 2-4	D-E,D-C,E, (L,M)	1000ppm (0.1wt%)	T	-	-	-				
A2-5	PBB	Appendix 2-5	D-E,D-C, (L,M)						50ppm (0.005wt%)			
A2-6	PBDE	Appendix 2-6	D-E,D-C, (L,M)	1000ppm (0.1wt%)					-	-	-	
A2-7	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	D-E	1000ppm (0.1wt%)	G	F	P	-				
A2-8	Butyl benzyl phthalate (BBP)	85-68-7										
A2-9	Dibutyl phthalate (DBP)	84-74-2										
A2-10	Diisobutyl phthalate (DIBP)	84-69-5										

Group 1: General (The same threshold); **Group 2:** General (Others); **Group 3:** Packaging material; **Group 4:** Batteries;

(Note 1) Notes for Group 1

- Please look at the following RoHS Exemption List for D-E.
Yokogawa's Web page
Home> About Yokogawa> Procurement Information> Green Procurement Surveys
[RoHS Exemption List]
- The more information of D-C, see China RoHS (Management Methods for Controlling Pollution by Electronic Information Products)

(Note 2) Notes for Group 2

- There is no threshold for F.
- The more information of G, see the following items of REACH AnnexXVII.
A2-1: "23. Cadmium and its compounds"
A2-2: "63. Lead and its compounds"
A2-3: "18. Mercury compounds" and "18a. Mercury"
A2-4: "47. Chromium VI compounds"
A2-5: "8. Polybromobiphenyls; Polybrominatedbiphenyls (PBB)"
A2-7,8,9,10: "51.The following phthalates"

(Note 3) P applies to packaging materials. Please confirm the following.

Intentional use of A2-1 to 4 and A2-7 to 10 is prohibited for each component that constitutes the packaging. The sum of the concentration levels of A2-1 to 4 incidentally present shall not exceed 100 ppm (0.01 wt%). The sum of the concentration levels of phthalates (A2-7 to 10, A4-26 to 28, A4-38) incidentally present shall not exceed 100 ppm (0.01 wt%).

(Note 4) All battery products must be in line with EU Battery Directive (2006/66/EC)

Table 3 Prohibited substances 2 (Prohibited substances by concentration/threshold, etc.)

Regulations or industrial rules					
A-1: CSCL (Japan) Class I Specified Chemical Substances B: Industrial Safety and Health Act Prohibited substances in manufacturing C: Specified poisonous substances prescribed in Poisonous and Deleterious Substances Control Act G: REACH Annex XVII restricted substances J-B: Stockholm Convention Annex B substances (EU POPs Regulation) K: Montreal Protocol L: Ship recycling convention M: EU ship recycling regulation T: Prohibition of Certain Toxic Substances Regulations, 2012 U: US TSCA (Toxic Substance Control Act) Z: Other					
Control No.	Substances	CAS Registry Number®	Threshold level & obligations	Regulations or industrial rules	
				Basis	Relevance
A3-1	Schradan	152-16-9	-	C	
A3-2	O,O-Diethyl O-(4-nitrophenyl) phosphorothioate	56-38-2			
A3-3	Phosphamidon	13171-21-6			
A3-4	Demeton-methyl	8022-00-2			
A3-5	Parathion, methyl-	298-00-0			
A3-6	TEPP	107-49-3			
A3-7	Acetic acid, fluoro-	144-49-0			
A3-8	2-fluoroacetamide	640-19-7			
A3-9	Sodium fluoroacetate	62-74-8			
A3-10	Aluminum phosphide	20859-73-8			
A3-11	Tetraalkyl lead	-		A-1	
	Tetraethyl lead	78-00-2			
	Tetramethyl lead	75-74-1			
A3-12	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-	3846-71-7		A-1	
A3-13	Phenol, 2,4,6-tris(1,1-dimethylethyl)-	732-26-3		A-1, U	
A3-14	1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane (Synonym: DDT)	50-29-3		A-1	J-B,T
A3-15	N,N'-ditolyl-p-phenylenediamine	27417-40-9			
	N,N'-dixyl-p-phenylenediamine	28726-30-9			
	N-tolyl-N'-xyl-p-phenylenediamine	70290-05-0			
A3-16	2,2,2-trichloro-1,1-bis(4-chlorophenyl)ethanol (synonym: kelthane or dicofol)	115-32-2		A-1,M	J-B,T
A3-17	Bis(tributyltin)oxide	56-35-9			
A3-18	Perfluorooctane sulfonic acid and its salts(PFOS)	Appendix 3-1(Note 1)			
	1-Octanesulphonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluoro-(PFOS); Perfluoro-1-octanesulfonyl fluoride; PFOSF	307-35-7(Note 1)			
A3-19	Asbestos	Appendix 3-2		B,L,M	
A3-20	Ozone Depleting Substances (Montreal Protocol Annex C-I)	Appendix 3-3		K(Note 2), L,M	
A3-21	Yellow phosphorus matches	12185-10-3	Article: 0.1wt%(prohibited)(B)	B	
A3-22	Radioactive Substances	Appendix 3-4	-	Z (Note 3)	Z (Note 4), L,M
A3-23	4-nitrobiphenyl	92-93-3	Substances & mixtures:0.1wt% (prohibited)(G) Article: 0.1wt% (prohibited)(B)	B	G
A3-24	Bis (chloromethyl) ether; oxybis(chloromethane)	542-88-1	-	B,T	
A3-25	Benzene	71-43-2		B,T	G

A3-26	Polychlorinated terphenyls(PCTs); Terphenyl, chlorinated	61788-33-8	Intentional addition (prohibited) for Canada	T	G
A3-27	Chloromethyl methyl ether (CMME)	107-30-2			
A3-28	(4-Chlorophenyl)cyclopropylmethanone,O-[(4-nitrophenyl)methyl]oxime that has themolecular formula C17H15ClN2O3 (NCCether)	94097-88-8			
A3-29	Dimethylnitrosoamine; N-nitrosodimethylamineMethanamine, N-methyl-N-nitroso-	62-75-9			
A3-30	Hexane, 1,6-diisocyanato-, homopolymer, reaction products with alpha-fluoro-omega-2- hydroxyethyl-poly(difluoromethylene), C16-20-branched alcohols and 1-octadecanol	496-03-7			
A3-31	2-Propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl methacrylate, gamma-omega-perfluoro-C10-16-alkyl acrylate and stearyl methacrylate	203743-03-7			
A3-32	2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with butyl 2-propenoate and 2,5 furandione, gamma-omega-perfluoro-C8-14-alkyl esters, tert-Bu benzenecarbo peroate-initiated	459415-06-6			
A3-33	2-Propen-1-ol, reaction products with pentafluoroiodoethane tetrafluoroethylene telomer, dehydroiodinated, reaction products with epichlorohydrin and triethylenetetramine	464178-90-3			
A3-34	Phenol, isopropylated phosphate (3:1) (PIP(3:1))	68937-41-7	-	U	
A3-35	Pentachlorothiophenol (PCTP)	133-49-3	Article: 1wt%(prohibited)		

(Note 1) Perfluorooctane sulfonates (PFOS)

- Exemption
 - (a) Resists for semiconductors
 - (b) Photographic films for professional use

(Note 2) Developed countries are required to freeze their production and consumption of these substances under the Montreal Protocol.

(Note 3) “L,M” are only to be reported.

(Note 4) Regulations of “Radioactive Substances”, there are the following.

- Laws for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986
- Japan Law Concerning Prevention from Radiation Hazards
- EU-D 96/29/Euratom

Table 4 Prohibited substances 3 (Prohibited substances by applications)

Regulations or industrial rules					
A-2: CSCL (Japan) Class II Specified Chemical Substances B: Industrial Safety and Health Act Prohibited substances in manufacturing G: REACH Annex XVII restricted substances L: Ship recycling convention M: EU ship recycling regulation P: U.S. state laws based on the Model Toxics in Packaging Legislation S: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof : Class 1 and 2 Designated Chemical Substances T: Prohibition of Certain Toxic Substances Regulations, 2012					
Control No.	Substances	CAS Registry Number®	Threshold level & obligations		Regulations or industrial rules
			Substances & mixtures	Articles	

A4-1	4-aminobiphenyl	92-67-1	Prohibited substances 3 (listed in A4-20 Annex 4-4)		(B,G)
	Salts of 4-Aminobiphenyl (xenylamine) [group]	SN0044	0.1wt%(prohibited)	-	G
A4-2	Benzidine and its salts	Appendix 4-1	0.1wt%(prohibited)	-	G
			-	-	T (Note 1)
A4-3	Arsenic compounds	Appendix 4-2	The use in wood preservative is prohibited		G
A4-4	Organostannic compounds	Appendix 4-3	Controlled substances 2500ppm (prohibited)		L,M
			Controlled substances		A-2
	TBTs (organostannic)		-	-	T
	TPTs (organostannic)			0.1wt%(prohibited)	
	Dibutyltin compounds; DBT		0.1wt%(prohibited)	0.1wt%(prohibited)	
	Diocetyl tin compounds; DOT		-	Products for general use: 0.1wt% (prohibited)	
A4-5	Anthracene oil	90640-80-5	The use in wood preservative is prohibited		G
	Creosote	8001-58-9			
	Creosote, wood	8021-39-4			
	Creosote oil	61789-28-4			
	Creosote oil, acenaphthene fraction	90640-84-9			
	Tar acids, coal, crude	65996-85-2			
	Low temperature tar oil, alkaline	122384-78-5			
	Distillates (coal tar), upper	65996-91-0			
	Distillates (coal tar), naphthalene oils	84650-04-4			
A4-6	Nickel Nickel compounds [group]	7440-02-0 SN0027	-	Shall not be used: direct and prolonged contact with the skin.	G
A4-7	Chloroform	67-66-3	0.1 wt% (prohibited)	Exemptions: Medical products (2001/83/EC)	G
A4-8	1,1,2-trichloroethane	79-00-5			
A4-9	Pentachloroethane	76-01-7			
A4-10	1,1,2,2 Tetrachloroethane	79-34-5			
A4-11	1,1,1,2-tetrachloroethane	630-20-6			
A4-12	1,1-dichloroethylene	75-35-4			
A4-13	Nonylphenol	25154-52-3			
A4-14	Nonylphenol polyethylene glycol ether	27177-01-1			
A4-15	Methylenediphenyl diisocyanate; MDI	26447-40-5			
A4-16	1,2,4-trichlorobenzene	120-82-1	-		T
A4-17	2-Methoxyethanol	109-86-4			
A4-18	Tetrachlorobenzene	12408-10-5			
		84713-12-2			
		634-90-2			
		634-66-2			
		95-94-3			
A4-19	perfluorocarboxylic acids, their salts, and their precursors (LC-PFCAs);	375-95-1			
		4149-60-4			
		65530-63-4			
A4-20	Azocolourants and Azodyes	Annex 4-4	0.003wt% of the aromatic amines listed in Annex4-4 in textile and leather articles (prohibited)(G)		G,T(Note2)
A4-21	Dichloromethane	75-09-2	0.1wt% in paint strippers (prohibited)		G
A4-22	Dimethylfumarate (DMF)	624-49-7	0.00001 wt% (prohibited)		

A4-23	O-nitrobenzaldehyde	552-89-6	0.1wt% (reporting requirement)	G
	Soap bark powder (Quillaja saponaria) and its derivatives containing saponines	68990-67-0		
A4-24	2-(2-butoxyethoxy)ethanol; DEGBE	112-34-5		
A4-25	Ethanol, 2-(2-methoxyethoxy)-;2-(2-methoxyethoxy) ethanol; DEGME	111-77-3	0.1wt% (reporting requirement) In package or packaging components, intentional addition is prohibited and the total incidental concentration of phthalates shall not exceed 0.01 wt%.(P)	G,P
A4-26	Di-isodecyl phthalate (DIDP)	26761-40-0		
	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1		
A4-27	Di-isononyl phthalate (DINP)	28553-12-0		
	1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich; DINP	68515-48-0		
A4-28	Diocetyl phthalate	117-84-0	0.1wt% (reporting requirement)	G
A4-29	Cyclohexane	110-82-7		
A4-30	Volatile esters of bromoacetic acids	Annex 4-5		
A4-31	Ammonium nitrate; AN	6484-52-2		
A4-32	Ammonium polysulphide	9080-17-5		
A4-33	Ammonium sulphide	12135-76-1		
A4-34	Ammonium hydrogensulphide	12124-99-1		
A4-35	Tris-aziridinyolphosphin oxide; Tris-(1-aziridiny) phosphine oxide	545-55-1		
A4-36	Tris(2,3-dibromopropyl) phosphate [TRIS]	126-72-7		
A4-37	Hexachloroethane	67-72-1	In package or packaging components, intentional addition is prohibited and the total incidental concentration of phthalates shall not exceed 0.01 wt%.	P
A4-38	Phthalates	(Note 3)		

About chemical substances in which "-" (hyphen) is written in column "Threshold level & obligations":

- > If you intentionally add these substances, you should report their inclusion.
- > Even if these substances are unintentionally contained, if these substances contain more than 0.1 wt%, you should report their inclusion.

(Note 1) The substance subject to the regulation of "Prohibition of Certain Toxic Substances Regulations, 2012" is [1,1'-Biphenyl]-4,4'-diamine, dihydrochloride (CAS Registry Number®: 531-85-1). Permitted Uses are staining for microscopic examination, such as immunoperoxidase staining, histochemical staining or cytochemical staining, reagent for detecting blood in biological fluids, Niacin test to detect certain micro-organisms, and reagent for detecting chloralhydrate in biological fluids.

(Note 2) The substance subject to the regulation of "Prohibition of Certain Toxic Substances Regulations, 2012" is Benzidine (CAS Registry Number®: 92-87-5).

(Note 3) Phthalates excluding DEHP, BBP, DBP, DIBP, DIDP, DINP, and Dioctyl phthalate.

Table 5 Controlled substances REACH SVHC List

The contents provided as Table 5 have been moved to the attachment. For the contents of Table 5, see "REACH SVHC List" in the attachment.

Table 6 Controlled substances Substances whose contents must be identified

Regulations or industrial rules				
A-2: CSCL (Japan) Class II Specified Chemical Substances A-3: CSCL (Japan) Monitoring Chemical Substances B-N: Industrial Safety and Health Act Chemical Substances requiring Labeling and Deliver of Documents, etc. C-P: Poisonous Substances and Deleterious Substances prescribed in Poisonous and Deleterious Substances Control Act F: CLP K: Montreal Protocol R: WEEE S: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof : Class 1 and 2 Designated Chemical Substances Z: Other				
Control No.	Substances	CAS Registry Number®	Threshold level& obligations	Regulations or industrial rules
B2-1	Components containing refractory ceramic fibres as described in Commission Directive 97/69/EC	-	Reporting requirements in unit of product parts (no threshold)	R
	Aluminosilicate, Refractory Ceramic Fibres (with conditions of SVHC)	SN0007		
	Mineral fibres (Natural or Synthetic) except Continuous Filament Fibres [group]	SN0063		
B2-2	Hydrocarbon (HC)	-		
B2-3	Hydrofluorocarbons (HFCs)	(Note 1)		
B2-4	Brominated flame	Appendix 6-1		
B2-5	Hydrochlorofluorocarbons (HCFCs)	(Note 1)	When contains following, to report: adhesives, paints and cleaning	A-2
B2-6	Trichloroethylene; trichloroethene	79-01-6		
B2-7	Tetrachloroethylene	127-18-4		
B2-8	Perchlorates [group]	SN0034	—	Z (Note 2)
	Lithium Perchlorate	7791-03-9		
B2-9	CLP Regulation: substances in carcinogenic or mutagenic or toxic for reproduction category	Annex 6-2	(Note 3)	F
B2-10	Alternative Substances (Montreal Protocol Annex F)	Annex 6-3	—	K(Note 4)
B2-11	Fluorinated greenhouse gases (PFC, SF6, HFC)	Annex 6-4		Z(Note 5)
B2-12	Formaldehyde	50-00-0		B-N,Z (Note 6)
B2-13	Industrial Safety and Health Act Chemical Substances requiring Labeling and Deliver of Documents, etc.	Attached file 1(Note 7)	See Attached file1.	B-N
B2-14	Poisonous Substances and Deleterious Substances prescribed in Poisonous and Deleterious Substances Control Act	Attached file 2(Note 7)	—	C-P
B2-15	Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof : Class 1 and 2 Designated Chemical Substances	Attached file 3(Note 7)		S
	Sulphuric acid	7664-93-9		Z(Note 8)
	Thionyl chloride	7719-09-7		
B2-18	CSCL (Japan) Monitoring Chemical Substances	Attached file 4 (Note 3)	—	A-3
Others	chemSHERPA Declarable Substances of latest version	—	—	(Note 10)

About chemical substances in which "-" (hyphen) is written in column "Threshold level & obligations":

- > If you intentionally add these substances, you should report their inclusion.
- > Even if these substances are unintentionally contained, if these substances contain more than 0.1 wt%, you should report their inclusion.

(Note 1) Hydrofluorocarbons (HFCs) are contained in Appendix 6-3 Control No. B2-10 "Alternative Substances Hydrofluorocarbons (HFCs)" or Appendix 6-4 Control No. B2-11 "Detailed substance list of Fluorinated greenhouse gases (PFC, SF6, HFC)".

Hydrochlorofluorocarbons (HCFCs) are contained Appendix 3-3 Control No.A3-20 "Detailed substance list of Ozone Depleting Substances (Appendix C-I)".

(Note 2) If Perchlorates contained in product, it must be declared without concentration in line with Perchlorate Contamination Prevention Act of California

(Note3) Threshold: Conform to CLP regulation Annex VI CLP part 3
Regulations: Prohibited to placed on the market for sale to the general public
Restricted to professional users only

(Note 4) Advanced countries have to reduce "Alternative Substances Hydrofluorocarbons (HFCs)".
*HFCs production/consumption reduction schedule. (Average HFC for 2011–2013 + 15% of HCFC baseline)
10 per cent reduction: January 1, 2019, 40 per cent reduction: January 1, 2024,
70 per cent reduction: January 1, 2029, 80 per cent reduction: January 1, 2034,
85 per cent reduction: January 1, 2036

(Note 5) Regulations of “Fluorinated greenhouse gases (PFC, SF6, HFC)”, there are the following.
- Regulation (EC) No 842/2006 on certain fluorinated greenhouse

(Note 6) Regulations of “Formaldehyde”, there are the following.
- Act on Control of Household Products Containing Harmful Substances

(Note 7) The detailed substances (typical example) are described in the attached files below. If substances subject to regulation are found, it is necessary to comply with regulations.



“Attached file 1” B2-13: Industrial Safety and Health Act Chemical Substances requiring Labeling and Deliver of Documents, etc.

Note: This file contains sections that have not been translated into English.

Source: Created by editing the list name as “物質一覧”

(=Substance list (As of Apr. 1, 2024, 896 substances))

(“職場のあんぜんサイト” in the website of Ministry of Health, Labor and Welfare)

(<http://anzeninfo.mhlw.go.jp/> (Japanese only site))

- **home** > “化学物質” > “GHS 対応モデルラベル・モデル SDS 情報”
> “ラベル S D S 対象 8 9 6 物質一覧・検索”
> “物質一覧”

“Attached file 2” B2-14: Poisonous Substances and Deleterious Substances prescribed in Poisonous and Deleterious Substances Control Act

Source: Created by editing the search result (“Poisonous Substances” and “Deleterious Substances”)

“Poisonous and Deleterious Substances Control Law” in the website of National Institute of Health Sciences. (<http://www.nihs.go.jp/english/index.html>)

- **home** > Chemicals - Legislation in Japan (in English)
> Poisonous and Deleterious Substances Control Law
Database Search
➤ **Poisonous Substances**
➤ **Deleterious Substances**

“Attached file 3” B2-15: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof : Class 1 and 2 Designated Chemical Substances

Source: Created by editing the “(参考)第一種指定化学物質リスト【英語版】”

and “(参考)第二種指定化学物質リスト【英語版】” (in English)

Ministry of Economy, Trade and Industry (in Japanese) (<http://www.meti.go.jp/>)

- **home** > “政策について” (=Policies)
> “政策一覧” (=Policy Index)

- > “安全・安心” (=Safety and Security)
 - “化学物質管理” (=Chemical Management)
 - > “化学物質排出把握管理推進法（化管法）”
 - > “化管法 SDS 制度” – “対象化学物質とは”
 - “化管法 SDS 制度 対象化学物質”
 - “（参考）第一種指定化学物質リスト【英語版】”
 - “（参考）第二種指定化学物質リスト【英語版】”
- (These lists are described in English.)

【Reference】 You can search detail information for Attached file 1,2 and 3.

link destination: “Chemical Risk Information Platform (CHRIIP)” in the website of National Institute of Technology and Evaluation.
http://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop

You can search target substance of each regulation.

> Total Search > Check each box on the list & Search

The check boxes you should choose are as follows.

【Attached file 1】 Industrial Safety and Health Act (ISHA) - ISHA: Chemical Substances requiring Labeling and Deliver of Documents, etc.

【Attached file 2】 Poisonous and Deleterious Substances Control Act

【Attached file 3】 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

(Note 8) RA 9165 (Comprehensive Dangerous Drugs Act of 2002) (This is the Philippine law.)

(Note 9) The detailed substances (typical example) are described in the attached files below. If substances subject to regulation are found, it is necessary to comply with regulations.



“Attached file 4” B3-22: CSCL (Japan) Monitoring Chemical Substances

Source: Created by editing the “監視化学物質一覧” (in Japanese)

Ministry of Economy, Trade and Industry (in Japanese) (<http://www.meti.go.jp/>)

- [home](#)
 - > “政策について” (=Policies)
 - > “政策一覧” (=Policy Index)
 - > “安全・安心” (=Safety and Security)
 - “化学物質管理” (=Chemical Management)
 - > “化学物質審査規制法（化審法）”
 - > “化審法とは” – “対象物質一覧”
 - “対象物質等一覧”
 - “監視化学物質一覧”

【Reference】 You can search detail information for Attached file 4.

link destination: “J-CHECK (Japan CHEMicals Collaborative Knowledge database)” in the website of National Institute of Technology and Evaluation.
http://www.safe.nite.go.jp/jcheck/top.action?request_locale=en

You can search target substance of this regulation.

> Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (after amendment) - Monitoring Chemical Substances

When you select “Registration No.” of the list, you can confirm the chemical substance details.

(Note 10) Substances listed below should be reported as "chemSHERPA Declarable Substances". For the target substance, see the latest "chemSHERPA_Declarable_substance_Ref_list" published by JAMP.

- GADSL,
- IEC62474

Detailed substance list with CAS Registry Number® (Typical specific substances)

Appendix 1-1 Control No.A1-3 “Detailed substance list of Hexachlorocyclohexane”

Substances	CAS Registry Number®
(1alpha,2alpha,3beta,4alpha,5beta,6beta)-1,2,3,4,5,6-hexachlorocyclohexane	319-84-6
(1alpha,2beta,3alpha,4beta,5alpha,6beta)-1,2,3,4,5,6-hexachlorocyclohexane; Beta-HCH	319-85-7
Hexachlorocyclohexane ;Gamma-HCH; Lindane	58-89-9

Appendix 1-2 Control No.A1-10 “Detailed substance list of PBDE”

Substances	CAS Registry Number®
Tetrabromodiphenyl ethers; BDE-47; 2,2',4,4'-tetrabromodiphenyl ether	40088-47-9
Hexabromodiphenyl ether	36483-60-0
Heptabromodiphenylether	68928-80-3
Diphenyl ether, pentabromo derivative; 2,2',4,4',5-pentabromodiphenyl ether; BDE-99; Pentabromodiphenyl ether ('Penta')	32534-81-9
Decabromodiphenyl ether	1163-19-5

※Other than the above, the PBDE is in Prohibited substances 2.

Appendix 1-3 Control No.A1-17 “Detailed substance list of Polychlorinated biphenyl (PCB)”

Substances	CAS Registry Number®
Polychlorobiphenyl; Polychlorinated biphenyls	1336-36-3
Aroclor	12767-79-2
Aroclor 1260	11096-82-5
Chlorobiphenyl	27323-18-8
PCB 1254; AROCLOR 1254	11097-69-1
Monomethyl-tetrachlorodiphenyl methane Trade name: Ugilec 141	76253-60-6
Monomethyl-dichloro-diphenyl methane; Trade name: Ugilec 121, Ugilec 21;; Monomethyldichlorodiphenylmethane	81161-70-8
Monomethyl-dibromo-diphenyl methane Trade name: DBBT	99688-47-8

※Coplanar-PCB, a type of Dioxins, is included in Polychlorinated biphenyl (PCB).

Appendix 1-4 Control No.A1-18 “Detailed substance list of Ozone Depleting Substances

(Montreal Protocol Annex A-I,A-II,B-I,B-II,B-III,C-II,C-III,E-I) ” Montreal Protocol

Substances	CAS Registry Number®
Trichlorofluoromethane(CFC11)	75-69-4
Dichlorodifluoromethane (CFC12)	75-71-8
1,1,2 Trichloro-1,2,2 trifluoroethane(CFC113)	76-13-1
Dichlorotetrafluoroethane (CFC 114); Cryofluorane	76-14-2
Monochloropentafluoroethane (CFC 115)	76-15-3
Bromochlorodifluoromethane (Halon 1211)	353-59-3
Bromotrifluoromethane (Halon 1301)	75-63-8
Dibromotetrafluoroethane (Halon 2402); 1,2-Dibromotetrafluoroethane	124-73-2
Chlorotrifluoromethane (CFC 13)	75-72-9
Pentachlorofluoroethane (CFC 111)	354-56-3
Tetrachlorodifluoroethane (CFC 112); 1,2-Difluorotetrachloroethane	76-12-0
Heptachlorofluoropropane (CFC 211)	422-78-6
	135401-87-5
Hexachlorodifluoropropane (CFC 212); 1,1,1,3,3,3-Hexachlor-2,2-difluoropropane	3182-26-1

Pentachlorotrifluoropropane (CFC 213)	2354-06-5
Tetrachlorotetrafluoropropane (CFC 214)	29255-31-0
Trichloropentafluoropropane (CFC 215); 1,2,2-Trichloropentafluoropropane	1599-41-3
Dichlorohexafluoropropane (CFC 216); 1,2-Dichloro-1,1,2,3,3,3-hexafluoropropane	661-97-2
Monochloroheptafluoropropane (CFC 217); Heptafluoropropyl chloride	422-86-6
Chloro-fluoro-carbons (CFC) and other Ozone depleting substances [group]	SN0058
Carbon tetrachloride; Tetrachloromethane (Tetrachlorocarbon)	56-23-5
1,1,1-trichloroethane	71-55-6
Dibromofluoromethane	1868-53-7
Bromodifluoromethane and isomers (HBFCs)	1511-62-2
Bromofluoromethane	373-52-4
Tetrabromofluoroethane; C ₂ HFB ₄	306-80-9
C ₂ H ₂ F ₂ Br ₃	353-97-9
Dibromotrifluoroethane; 1,2-Dibromo-1,1,2-trifluoroethane	354-04-1
Bromotetrafluoroethane	124-72-1
Dibromodifluoroethane; 1,2-Dibromo-1,1-difluoroethane	172912-75-3
Bromotrifluoroethane; 2-Bromo-1,1,1-trifluoroethane	75-82-1
Dibromofluoroethane; 1,2-Dibromo-1-fluoroethane	421-06-7
Bromodifluoroethane; 1-Bromo-1,1-difluoroethane	358-97-4
Bromofluoroethane; 1-Bromo-2-fluoroethane	420-47-3
Dibromodifluoroethane; 1,2-Dibromo-1,1-difluoroethane	762-49-2
Hydrobromofluorocarbons (HBFC's) [group]	SN0060
Pentabromodifluoropropane (HBFC-222 B5)	
Tetrabromotrifluoropropane (HBFC-223 B4)	
C ₃ H ₂ F ₄ Br ₃ ; 1,2,3-Tribromo-1,1,3,3-tetrafluoropropane	666-48-8
Dibromopentafluoropropane	431-78-7
Bromohexafluoropropane; 1-Bromo-1,1,2,3,3,3-hexafluoropropane	2252-78-0
Hydrobromofluorocarbons (HBFC's) [group]	SN0060
C ₃ H ₂ F ₂ Br ₄	148875-98-3
Tribromofluoroethane (HBFC-233 B3)	431-48-1
1,3-Dibromo-1,1,3,3-tetrafluoropropane	460-86-6
Bromopentafluoropropane; C ₃ H ₂ F ₅ Br	460-88-8
C ₃ H ₃ FBr ₄	148875-95-0
Tribromodifluoropropane	70192-80-2
Dibromotrifluoropropane; 2,3-Dibromo-1,1,1-trifluoropropane	431-21-0
Bromotetrafluoropropane; C ₃ H ₃ F ₄ Br	679-84-5
Tribromofluoropropane	75372-14-4
Dibromodifluoropropane; 1,3-Dibromo-1,1-difluoropropane	460-25-3
Bromotrifluoropropane	421-46-5
Dibromofluoropropane; C ₃ H ₅ FBr ₂	51584-26-0
C ₃ H ₅ F ₂ Br	2195-05-3
Bromofluoropropane; Propane, 1-bromo-2-fluoro-	1871-72-3
Hydrobromofluorocarbons (HBFC's) [group]	SN0060
Bromochloromethane; Chlorobromomethane	74-97-5
Bromomethane (Methyl Bromide)	74-83-9

Appendix 1-5 Control No.A1-21 “Detailed substance list of Salts or esters of pentachlorophenol”

Substances	CAS Registry Number®
Pentachlorophenol	87-86-5
Sodium pentachlorophenolate	131-52-2
Potassium pentachlorophenolate	7778-73-6
Salts or esters of pentachlorophenol [group]	SN0052

Appendix 1-6 Control No.A1-22 “Detailed substance list of Perfluorooctanoic acid (PFOA), its salts, and PFOA related substances”

Substances	CAS Registry Number®
Pentadecafluorooctanoic acid (PFOA)	335-67-1
2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, ammonium salt	3825-26-1
2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, sodium salt	335-95-5
2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, potassium salt	2395-00-8
Hexanoic acid, 2,2,3,4,5,5,6,6,6-nonafluoro-3,4-bis(trifluoromethyl)-	1882109-81-0
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-Heptadecafluorodecan-1-ol	678-39-7
1-Iodoheptadecafluorooctane	507-63-1

Appendix 1-7 Control No.A1-23 “Detailed substance list of Perfluorohexane sulfonic acid (PFHxS), its salts, and PFHxS related substances”

Substances	CAS Registry Number®
Perfluorohexane sulfonic acid (PFHxS)	355-46-4
Potassium perfluorohexane-1-sulphonate	3871-99-6
Ammonium tridecafluorohexane-1-sulfonate	68259-08-5
Sodium perfluorohexane-1-sulphonate	82382-12-5
Sulfonic acids, C6-12-alkane, perfluoro, potassium salts	68391-09-3

Appendix 2-1 Control No.A2-1 “Detailed substance list of Cadmium and its compounds”

Substances	CAS Registry Number®
Cadmium (non-pyrophoric)	7440-43-9
Cadmium oxide (non-pyrophoric)	1306-19-0
Cadmium sulphide	1306-23-6
Cadmium chloride	10108-64-2
Cadmium sulphate	10124-36-4
Cadmium compounds [group]	SN0016

Appendix 2-2 Control No.A2-2 “Detailed substance list of Lead and its compounds”

Substance	CAS Registry Number®
Lead	7439-92-1
Lead sulphate	7446-14-2
Sulphuric acid, lead salt; Lead sulfate	15739-80-7
Lead carbonate	598-63-0
Trilead bis(carbonate) dihydroxide; Lead carbonate hydroxide	1319-46-6
Lead(II) hydroxycarbonate; Lead, bis(carbonato(2-))dihydroxytri	1344-36-1
Lead di(acetate)	301-04-2
Lead(II) acetate trihydrate	6080-56-4
Trilead bis(orthophosphate); Lead phosphate	7446-27-7
Lead selenide	12069-00-0
Lead(IV) oxide; Lead peroxide	1309-60-0
Trilead tetraoxide; Lead tetraoxide	1314-41-6
Lead(II) sulfide; Lead sulfide (PbS)	1314-87-0
Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monoxide; Lead(2+) oxide; Lead monoxide	1317-36-8
Lead titanate; Lead titanium oxide (PbTiO3)	12060-00-3
Tetralead trioxide sulphate; Lead oxide sulfate (Pb4O3(SO4))	12202-17-4
Lead(II) stearate; Stearic acid, lead (2+) salt	1072-35-1
Lead hydrogen arsenate; Lead arsenate	7784-40-9
Lead arsenate; Trilead diarsenate	3687-31-8

Lead arsenate (Pb ₃ (AsO ₄) ₂)	10102-48-4
Arsenic acid (H ₃ AsO ₄), lead salt; Lead arsenate, unspecified	7645-25-2
Lead compounds [group]	SN0023

Appendix 2-3 Control No.A2-3 “Detailed substance list of Mercury and its compounds”

Substances	CAS Registry Number®
Mercury	7439-97-6
Mercuric Chloride	33631-63-9
Mercury dichloride; Mercuric chloride	7487-94-7
Mercury sulphate	7783-35-9
Mercury (II) nitrate; Mercuric nitrate	10045-94-0
Mercury (II) oxide; Mercuric oxide	21908-53-2
Mercury(II) sulfide; Mercury sulfide (HgS)	1344-48-5
Mercury compounds [group]	SN0024

Appendix 2-4 Control No.A2-4 “Detailed substance list of Chromium(VI) compounds”

Substances	CAS Registry Number®
Chromium (VI) trioxide, Chromium trioxide; Chromium trioxide (CrO ₃)	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Sodium chromate	7775-11-3
Sodium dichromate anhydrate; Sodium dichromate	10588-01-9
Strontium chromate	7789-06-2
Potassium dichromate	7778-50-9
Potassium chromate	7789-00-6
Zinc chromate	13530-65-9
Sodium dichromate, dihydrate	7789-12-0
Ammonium dichromate; Ammonium bichromate	7789-09-5
Chromic acid	7738-94-5
Dichromic acid; Chromic acid (H ₂ Cr ₂ O ₇)	13530-68-2
Oligomers of chromic acid and dichromic acid	SN0071
Chromium (VI) compounds	SN0019

Appendix 2-5 Control No.A2-5 “Detailed substance list of PBB”

Substances	CAS Registry Number®
Polybromobiphenyls(PBB); Firemaster BP-6	59536-65-1
2-Bromobiphenyl	2052-07-5
3-Bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
1,1'-Biphenyl, 4,4'-dibromo-	92-86-4
1,1'-Biphenyl, 2,2',5-tribromo-	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
Heptabromobiphenyl	35194-78-6
Octabromobiphenyl; Bromkal 80	61288-13-9
Nonabiphenyl	27753-52-2
Decabromobiphenyl	13654-09-6
Firemaster FF-1	67774-32-7
Polybrominated biphenyls (PBB) [group]	SN0065

※Polybromobiphenyls(PBB); Firemaster BP-6 is listed in Prohibited substances 1.

Appendix 2-6 No.A2-6 “Detailed substance list of PBDE”

Substances	CAS Registry Number®
Bromodiphenyl ether	101-55-3
Dibromodiphenyl ethers	2050-47-7
Tribromodiphenyl ether	49690-94-0

Diphenyl ether, octabromo derivative; Octabromodiphenyl ether ('Octa')	32536-52-0
Nonabromodiphenylether	63936-56-1

※5 prohibited substances of PBDE are in Appendix 1-2.

Appendix 3-1 Control No.A3-18 “Detailed substance list of Perfluorooctane sulfonic acid and its salts(PFOS)”

Substances	CAS Registry Number®
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-(PFOS); Perfluorooctane sulfonate acid	1763-23-1
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-octanesulphonic acid (1:1)(PFOS)	251099-16-8
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt(PFOS); Perfluorooctane sulfonate potassium salt	2795-39-3
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt(PFOS); Perfluorooctane sulfonate ammonium salt	29081-56-9
1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, lithium salt(PFOS); Perfluorooctane sulfonate lithium salt	29457-72-5
Sodium perfluorooctanesulfonate	4021-47-0
Perfluorooctane sulfonate anion(PFOS)	45298-90-6
Ethanaminium, N,N',N''-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulphonic acid (1:1)(PFOS); Tetraethylammoniumheptadecafluorooctanesulfonate	56773-42-3
Bis(2-hydroxyethyl)ammonium perfluorooctanesulfonate	70225-14-8
1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with piperidine (1:1)	71463-74-6
Magnesium bis[heptadecafluorooctanesulphonate]	91036-71-4

Appendix 3-2 Control No.A3-19 “Detailed substance list of Asbestos”

Substances	CAS Registry Number®
Actinolite asbestos	77536-66-4
Asbestos, amosite	12172-73-5
Anthophyllite asbestos	77536-67-5
Chrysotile; Asbestos, chrysotile	12001-29-5
Chrysotile	132207-32-0
Crocidolite; Asbestos, crocidolite	12001-28-4
Tremolite asbestos	77536-68-6
Asbestos fibres	1332-21-4

Appendix 3-3 Control No.A1-20 “Detailed substance list of Ozone Depleting Substances

(Montreal Protocol Annex C-I) ” Montreal Protocol

Dichlorofluoromethane (HCFC 21)	75-43-4
Chlorodifluoromethane (HCFC 22)	75-45-6
Chlorofluoromethane (HCFC 31)	593-70-4
Tetrachlorofluoroethane (HCFC 121)	134237-32-4
Trichlorodifluoroethane (HCFC 122)	41834-16-6
Dichlorotrifluoroethane(HCFC 123)	34077-87-7
2,2-dichloro-1,1,1-trifluoroethane; Ethane, 2,2-dichloro-1,1,1-trifluoro-	306-83-2
Chlorotetrafluoroethane (HCFC 124)	63938-10-3
2-chloro-1,1,1,2-tetrafluoroethane; Ethane, 2-chloro-1,1,1,2-tetrafluoro-	2837-89-0
Trichlorofluoroethane (HCFC 131)	27154-33-2
	134237-34-6
Dichlorodifluoroethane (HCFC 132)	25915-78-0
Chlorotrifluoroethane (HCFC 133)	1330-45-6
Dichlorofluoroethane (HCFC 141)	25167-88-8
1,1-dichloro-1-fluoroethane (HCFC-141b); Ethane, 1,1-dichloro-1-fluoro-	1717-00-6
Chlorodifluoroethane (HCFC 142)	25497-29-4

Ethane, monochlorodifluoro-	338-65-8
1-chloro-1,1-difluoroethane (HCFC142b)	75-68-3
HCFC-151; chlorofluoroethane	110587-14-9
1-Chloro-2-fluoroethane (HCFC-151)	762-50-5
Hexachlorofluoropropane (HCFC 221)	134237-35-7
Hexachlorofluoropropane; HCFC-221	29470-94-8
Pentachlorodifluoropropane (HCFC 222)	134237-36-8
Tetrachlorotrifluoropropane (HCFC 223)	134237-37-9
Trichlorotetrafluoropropane (HCFC 224)	134237-38-0
Dichloropentafluoropropane, (Ethyne, fluoro-) (HCFC 225)	127564-92-5
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca)	422-56-0
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb)	507-55-1
Chlorohexafluoropropane (HCFC 226)	134308-72-8
Pentachlorofluoropropane (HCFC 231)	134190-48-0
Tetrachlorodifluoropropane (HCFC 232)	134237-39-1
Trichlorotrifluoropropane (HCFC 233)	134237-40-4
Dichlorotetrafluoropropane (HCFC 234)	127564-83-4
Chloropentafluoropropane (HCFC 235)	134237-41-5
Tetrachlorofluoropropane (HCFC 241)	134190-49-1
Trichlorodifluoropropane (HCFC 242)	134237-42-6
Dichlorotrifluoropropane (HCFC 243)	134237-43-7
Chlorotetrafluoropropane (HCFC 244)	134190-50-4
Trichlorofluoropropane (HCFC 251)	134190-51-5
Dichlorodifluoropropane (HCFC 252)	134190-52-6
Chlorotrifluoropropane (HCFC 253)	134237-44-8
Dichlorofluoropropane (HCFC 261)	134237-45-9
Chlorodifluoropropane (HCFC 262)	134190-53-7
Chlorofluoropropane (HCFC 271)	134190-54-8
Hydrochlorofluorocarbons (HCFC's) [group]	SN0061

Appendix 3-4 Control No.A3-22 “Detailed substance list of Radioactive Substances”

Substances	CAS Registry Number®
Uranium; U	7440-61-1
Radon; Rn	10043-92-2
Americium-241	14596-10-2
Thorium; Th	7440-29-1
Cesium-137	10045-97-3
Strontium-90	10098-97-2
Radioactive substances [group]	SN0038

Appendix 4-1 Control No.A4-2 ”Detailed substance list of Benzidine and its salts”

Substances	CAS Registry Number®
[1,1'-Biphenyl]-4,4'-diamine, dihydrochloride	531-85-1
Benzidine salt	531-86-2
Benzidine sulphate	21136-70-9
Benzidine acetate	36341-27-2
Salts or derivatives of benzidine [group]	SN0051

※Benzidine is listed in Prohibited substances 3 (Appendix 4-4 of Table 4)

Appendix 4-2 Control No.A4-3 “Detailed substance list of Arsenic compounds”

Substances	CAS Registry Number®
Arsenic, elemental	7440-38-2
Gallium arsenide	1303-00-0
Calcium arsenate	7778-44-1
Calcium arsenate	10103-62-5
Calcium arsenate(1:1)	15195-00-3
Calcium arsenite (2:3)	27152-57-4
Potassium arsenite	10124-50-2
Potassium arsenate	7784-41-0

Lead arsenate	Appendix 2-2
Arsenic compounds [group]	SN0010
Arsenic acid and its salts [group]	SN0009

※Diarsenic pentoxide and Diarsenic trioxide are listed in controlled substances (Table 5)

Appendix 4-3 Control No.A4-4 “Detailed substance list of Organostannic compounds”

Substances		CAS Registry Number®
Dibutyltin compounds (DBT)	Dibutyltin oxide	818-08-6
	Dibutyltin diacetate	1067-33-0
	Dibutyltin dilaurate	77-58-7
	Dibutyltin maleate	78-04-6
	Dibutyltin hydrogen borate (DBB)	75113-37-0
	Dibutyltin compounds [group]	SN0072
Diocetyl tin compounds (DOT)	Diocetyl tin oxide	870-08-6
	Diocetyl tin dilaurate	3648-18-8
	Diocetyl tin compounds [group]	SN0073
TPTs (organostannic)	Triphenyltin dimethyldithiocarbamate	1803-12-9
	Triphenyltin fluoride; Stannane, fluorotriphenyl-	379-52-2
	Triphenyltin acetate; Stannane, acetoxytriphenyl-	900-95-8
	Triphenyl tin chloride	639-58-7
	Stannane, triphenyl[(2,2,4,4-tetramethyl-oxopentyl)oxy]-	18380-71-7
	Stannane, [[2,3-dimethyl-2-(1-methylethyl)-oxobutyl]oxy]triphenyl-	18380-72-8
	Stannane, [(1-oxodecyl)oxy]triphenyl-	47672-31-1
	Stannane, [(1-oxoundecyl)oxy]triphenyl-	94850-90-5
TBTs (organostannic)	Triphenyltin chloroacetate; (Chloroacetoxy)triphenylstannane	7094-94-2
	Tributyltin methacrylate	2155-70-6
	(E)-5,5,12,12-tetrabutyl-7,10-dioxo-6,11-dioxo-5,12-distannahexadec-8-ene; Bis(tributan-1-ylstannyl) fumarate	6454-35-9
	Tributyltin fluoride; Stannane, tributylfluoro-	1983-10-4
	Bis(tributyltin) meso-2,3-dibromosuccinate; Bis(tributyltin) mesodibromosuccinate; (2R,3S)-rel-butanedioic acid, 2,3-dibromo-, 1,4-bis(tributylstannyl) ester	31732-71-5
	Tributyltin acetate	56-36-0
	Tributyltin laurate; Tributyl(lauroyloxy)stannane	3090-36-6
	Bis(tributyltin)phthalate	4782-29-0
	Copolymer of alkyl(c=8) acrylate, methyl methacrylate and tributyltin methacrylate	67772-01-4
	Tributyltin sulfamate	6517-25-5
	Bis(tributyltin) maleate; (8Z)- 5,5,12,12-tetrabutyl-7,10-dioxo-6,11-Dioxo-5,12-distannahexadec-8-ene; (maleoyldioxy)bis[tributylStannane]	14275-57-1
	Tributyltin chloride; tributylchlorostannane	1461-22-9
	triisobutyltin chloride; chloro(triisobutyl)stannane	7342-38-3
	Stannane, tributyl-, mono(naphthenoyloxy) derivs.; Tributyltin naphthenate	85409-17-2
	(Abietoyloxy)tributyltin; Tributyltin abietate; 4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl[carbonyl]oxy]-Stannane; Tributyltin-1-ylstannyl (1R,4aR,4bR,10aR)-7-isopropyl-1,4a-dimethyl-1,2,3,4,4a,4b,5,6,10, 10a-decahydrophenanthrene-1-carboxylate	26239-64-5
TBTs and TPTs (organostannic)	Triorganotin compounds[group]	SN0068

※Bis (tributyltin) oxide is in Prohibited substances 2

Appendix 4-4 Control No.A4-20 “Detailed substance list of Azocolourants and Azodyes”

REACH Annex XVII:-

Substances	CAS Registry Number®
4-aminobiphenyl	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine;	95-69-2
4-o-tolylazo-o-toluidine; 4-amino-2',3'-dimethylazobenzene; fast garnet GBC base; AAT; o-aminoazotoluene	97-56-3
5-Nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8

2,4-diaminoanisole; 4-methoxy-m-phenylenediamine;; 4-Methoxy-m-phenylenediamine	615-05-4
3,3'-dichlorobenzidine; 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1
3,3'-dimethoxybenzidine; o-dianisidine	119-90-4
4,4'-bi-o-toluidine; 3,3'-Dimethylbenzidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine; p-cresidine; p-Cresidine	120-71-8
2,2'-dichloro-4,4'-methylenedianiline; 4,4'-methylene bis(2-chloroaniline); 4,4'-Methylene-bis-(2-chloroaniline); 2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4
4,4'-oxydianiline and its salts; p-aminophenyl ether; 4,4'-Oxydianiline	101-80-4
4,4'-thiodianiline and its salts; 4,4'-Thiodianiline	139-65-1
O-toluidine; 2-aminotoluene	95-53-4
4-methyl-m-phenylenediamine; 2,4-toluenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
2-methoxyaniline; o-anisidine	90-04-0
4-aminoazobenzene; 4-phenylazoaniline; 4-Aminoazobenzol	60-09-3
4,4'-diaminodiphenylmethane(MDA); 4,4'-methylenedianiline	101-77-9
2-naphthylamine	91-59-8

※ Azocolourants and Azodyes: Aromatic amines arising from the reduction of the azo bond of azo colorants.

Appendix 4-5 Control No.A4-30 “Detailed substance list of Volatile esters of bromoacetic acids”

REACH Annex XVII

Substances	CAS Registry Number®
Methyl bromoacetate	96-32-2
Ethyl bromoacetate	105-36-2
Propyl bromoacetate	35223-80-4
Butyl bromoacetate	18991-98-5

Appendix 6-1 Control No. B2-4”Detailed substance list of Brominated flame”

Substances	CAS Registry Number®
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Tetra-decabromo-diphenoxy-benzene	58965-66-5
1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1
3,5,3',5'-Tetrabromo-bisphenol A (TBBA); Tetrabromobisphenol A (TBBPA)	79-94-7
TBBA, unspecified	30496-13-0
TBBA-epichlorhydrin oligomer	40039-93-8
TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer	28906-13-0
TBBA carbonate oligomer, phenoxy end capped	94344-64-2
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-bisphenol A-phosgene polymer	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7
Brominated epoxy resin end-capped with tribromophenol	135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
TBBA-bis-(allyl-ether)	25327-89-3
TBBA-dimethyl-ether	37853-61-5
Tetrabromo-bisphenol S	39635-79-5
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
2,4-Dibromo-phenol	615-58-7
2,4,6-tribromo-phenol	118-79-6
Pentabromo-phenol	608-71-9
2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5

Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
Bis(methyl)tetrabromo-phthalate	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
TBPA, glycol-and propylene-oxide esters	75790-69-1
N,N'-Ethylene .bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Dibromo-neopentyl-glycol	3296-90-0
Tribromo-neopentyl-alcohol	36483-57-5
Poly tribromo-styrene	57137-10-7
Tribromo-styrene	61368-34-1
Dibromo-styrene grafted PP	171091-06-8
Poly-dibromo-styrene	31780-26-4
Bromo-/Chloro-paraffins	68955-41-9
Bromo-/Chloro-alpha-olefin	82600-56-4
Bromoethylene	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
Tris(tribromo-neopentyl) phosphate	19186-97-1
Chlorinated and brominated phosphate ester	125997-20-8
Pentabromo-toluene	87-83-2
Pentabromo-benzyl bromide	38521-51-6
1,3-Butadiene homopolymer, brominated	68441-46-3
Pentabromo-benzyl-acrylate, monomer	59447-55-1
Pentabromo-benzyl-acrylate, polymer	59447-57-3
Decabromo-diphenyl-ethane	84852-53-9
Tribromo-bisphenyl-maleinimide	59789-51-4
Tetrabromo-cyclo-octane	31454-48-5
1,2-Dibromo-4-(1,2 dibromo-methyl)-cyclo-hexane	3322-93-8
TBPA Na salt	25357-79-3
Tetrabromo phthalic anhydride	632-79-1

Appendix 6-2 Control No. B2-9 “CLP Regulation: substances in carcinogenic or mutagenic category”

Substances	CAS Registry Number®
Toluene	108-88-3
Chloro-1-ethylene (monomer vinyl chloride); Vinyl chloride	75-01-4
Beryllium	7440-41-7
Beryllium oxide (BeO)	1304-56-9
1,3-butadiene; buta-1,3-diene; Butadiene, 1,3-	106-99-0
Ethylene oxide; oxirane	75-21-8
Alpha,alpha,alpha-trichlorotoluene; benzotrichloride	98-07-7
Residues (coal tar), pitch distn.; Pitch Redistillate	92061-94-4
Distillates (coal tar), heavy oils; Heavy Anthracene Oil	90640-86-1
Distillates (coal tar), heavy oils, pyrene fraction; Heavy anthracene oil redistillate	91995-42-5
Distillates (coal tar), pitch, pyrene fraction; Heavy anthracene oil redistillate	91995-52-7
Nitrofen (ISO); 2,4-dichlorophenyl 4-nitrophenyl ether	1836-75-5
Benzo[def]chrysene; Benzo(a)pyrene	50-32-8
Benzo[e]pyrene	192-97-2
Benz[a]anthracene	56-55-3
Chrysene	218-01-9
Benzo(e)acephenanthrylene	205-99-2
Benzo[j]fluoranthene	205-82-3
Benzo(k)fluoranthene	207-08-9
Dibenz[a,h]anthracene	53-70-3

2,3-dibromopropan-1-ol; 2,3-dibromo-1-propanol	96-13-9
2-bromopropane	75-26-3

Appendix 6-3 Control No. B2-10 "Alternative Substances Hydrofluorocarbons (HFCs)"

Montreal Protocol Annex F

Substances	CAS Registry Number®
1,1,2,2-Tetrafluoroethane (HFC-134)	359-35-3
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2
1,1,2-Trifluoroethane (HFC-143)	430-66-0
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	460-73-1
1,1,1,3,3-Pentafluorobutane (HFC-365mfc)	406-58-6
1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea)	431-89-0
1,1,1,2,2,3-Hexafluoropropane (HFC-236cb)	677-56-5
1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)	431-63-0
1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)	690-39-1
1,1,2,2,3-Pentafluoropropane (HFC-245ca)	679-86-7
1,1,1,2,3,4,4,5,5,5-Decafluoropentane (HFC-43-10mee)	138495-42-8
Difluoromethane (HFC-32)	75-10-5
1,1,1,2,2-Pentafluoroethane (HFC-125)	354-33-6
1,1,1-Trifluoroethane (HFC-143a)	420-46-2
Fluoromethane (HFC-41)	593-53-3
1,2-Difluoroethane (HFC-152)	624-72-6
1,1-Difluoroethane (HFC-152a)	75-37-6
Trifluoromethane (HFC-23)	75-46-7

Appendix 6-4 Control No. B2-11 "Detailed substance list of Fluorinated greenhouse gases (PFC, SF6, HFC)"

Substances	CAS Registry Number®
carbon tetrafluoride; tetrafluoromethane; PFC14; Methane, tetrafluoro-	75-73-0
Ethane, hexafluoro-; Hexafluoroethane; PFC-116	76-16-4
Octafluoropropane; Perflurane; PFC-218	76-19-7
Decafluorobutane; PFC-31-10	355-25-9
Dodecafluoropentane; PFC-41-12	678-26-2
Tetradecafluorohexane; PFC-51-14	355-42-0
Octafluorocyclobutane; Perfluorocyclobutane; C4F8; PFC-c318	115-25-3
Sulfur Hexafluoride	2551-62-4
Trifluoromethane	75-46-7
Difluoromethane	75-10-5
Methyl fluoride	593-53-3
Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-	138495-42-8
Ethane, pentafluoro-	354-33-6
1,1,2,2-Tetrafluoroethane	359-35-3
1,1,1,2-Tetrafluoroethane	811-97-2
1,1-Difluoroethane	75-37-6
1,1,2-Trifluoroethane	430-66-0
Ethane, 1,1,1-trifluoro-	420-46-2
Propane, 1,1,1,2,3,3,3-heptafluoro-	431-89-0
1,1,1,2,2,3-Hexafluoro-propane	677-56-5
1,1,1,2,3,3-Hexafluoropropane	431-63-0
Propane, 1,1,1,3,3,3-hexafluoro-	690-39-1
1,1,2,2,3-Pentafluoropropane; HFC-245ca	679-86-7
1,1,1,3,3-Pentafluoropropane	460-73-1
1,1,1,3,3-Pentafluorobutane	406-58-6

[Revision history]

Ver.1.1 (November 2012)	Initial English version (Separated from Yokogawa Green Procurement Guideline)
Ver.1.2 (March 2013)	Addition of 8 th REACH 54-SVHC and correction of errors
Ver.1.3 (September 2013)	Addition of 9 th REACH 6-SVHC and other updates
Ver.1.4 (March 2014)	Addition of 10 th REACH 7-SVHC and other updates
Ver.1.5-a (February 2015)	Addition of 11 th , 12 th REACH 4+6-SVHC and other updates
Ver.1.6-a (August 2015)	Addition of 13 th REACH 2-SVHC and other updates
Ver.1.7-a (March 2016)	Addition of 14 th REACH 5-SVHC and other updates
Ver.1.8-a (August 2016)	Addition of 15 th REACH 1-SVHC and other updates
Ver.2.0-a (April 2017)	Addition of 16 th REACH 4-SVHC and other updates
Ver.2.1-a (October 2017)	Addition of 17 th REACH 6-SVHC(New1-SVHC) and other updates
Ver.2.1-b (November 2017)	"Prohibited substance 2" was corresponded to "RoHS 4 additional substances".
Ver.2.2-b (April 2018)	Addition of 18 th REACH 8-SVHC(New7-SVHC) and other updates
Ver.2.3-b (October 2018)	Addition of 19 th REACH 10-SVHC and other updates
Ver.2.4-b (March 2019)	Addition of 20 th REACH 6-SVHC and other updates
Ver.2.5-b (November 2019)	Addition of 21 st REACH 4-SVHC and other updates
Ver.2.6-b (April 2020)	Addition of 22 nd REACH 4-SVHC and other updates
Ver.2.7-b (November 2020)	Addition of 23 rd REACH 4-SVHC and other updates
Ver.2.8-b (May 2021)	Addition of 24 th REACH 2-SVHC, the change of levels and other updates
Ver.2.9-b (September 2021)	Addition of 5 PBT substances under US TSCA
Ver.2.91-b (October 2021)	Addition of 25 th REACH 8-SVHC and other updates
Ver.2.92-b (June 2022)	Addition of 26 th REACH 4-SVHC and other updates
Ver.2.93-b (January 2023)	Addition of 27 th REACH 1-SVHC and other updates
Ver.2.94-b (August 2023)	Addition of 28 th REACH 9-SVHC and other updates
Ver.2.95-b (April 2024)	Moved Table 5 REACH SVHC List to the attachment and other updates
Ver.2.96-b (August 2024)	Addition of 31 st REACH 1-SVHC and other updates
Ver.2.97-b (August 2025)	Addition of Prohibited substances and other updates
Ver.2.98-b (August 2025)	Deleted A1-26(MCCP), A1-27(LC-PFCAs, their salts and related compounds), Added A4-19(LC-PFCAs their salts, and their precursors)