

Nihon Parkerizing Co., Ltd.

Standards on the Management of  
Chemicals Substances Contained  
in Products

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## **# Overview of the standards for management of chemical substances contained in products at Nihon Parkerizing Co., Ltd.**

In the face of ever-increasing concerns about the impact of chemicals on humans and the environment, Nihon Parkerizing Co., Ltd. (hereafter referred to as 'Nihon Parkerizing') recognizes its social responsibility as a company involved in the manufacture and sale of chemicals and has been working on initiatives related to chemical substance management.

Nihon Parkerizing has established its basic management policy and, at the same time, a management standard for chemical substances in products.

The management standards set forth the prohibited chemical substances and chemical substances to be reduced and controlled as selected by Nihon Parkerizing in accordance with the chemical substance management regulations in Japan and overseas and scientific knowledge on the hazards of chemical substances and social responsibility.

Nihon Parkerizing herein sets forth its policy on the management of chemical substances and a list of chemical substances that are prohibited and chemical substances that are to be reduced and controlled.

### **1. Prohibited Chemical Substances**

Nihon Parkerizing considers the following substances, the distribution of which is in principle prohibited in Japan by law, to be prohibited chemical substances.

None of the products of Nihon Parkerizing illegally contain any of these prohibited chemical substances.

In addition, Nihon Parkerizing prohibits the supply to Nihon Parkerizing of any raw materials or secondary materials that illegally contain prohibited chemical substances.

1.1 Class 1 Specified Chemicals under the Act on the Evaluation of Chemical Substances and Regulation of their Manufacture (hereinafter referred to as the Chemical Substances Control Law)

1.2 Harmful substances for which manufacture is prohibited under the Industrial Health and Safety Act

1.3 Specified poisonous substances under the Poisonous and Deleterious Substances Control Act

### **2. Chemical substances to be reduced**

Nihon Parkerizing will select target chemical substances to be reduced from among chemical substances that the company consumes a significant volume of and that may pose a risk to people and the environment.

Nihon Parkerizing will develop substitutes for products that contain chemical substances to be reduced.

Please inform us if your company supplies raw materials or secondary materials to Nihon Parkerizing that contain any of the chemical substances to be reduced.

#### **2.1 Chemical substances to be reduced**

### 3. Chemical substances to be controlled

Nihon Parkerizing will select substances that we determine should be controlled in accordance with chemical management regulations in Japan and overseas and from the perspective of social responsibility.

Please inform us if your company supplies raw materials or secondary materials to Nihon Parkerizing that contain any of the chemical substances to be controlled.

Regarding information on key foreign laws and regulations and the regulations of key industrial organizations, information will be managed in accordance with the latest version of chemSHERPA operated by the Joint Article Management Promotion-consortium (JAMP).

In addition, Nihon Parkerizing will select substances as Controlled Substances Designated by Nihon Parkerizing in cases where sufficient information on the target substance is not provided under chemSHERPA.

(Substances for which information is required to be communicated by law in Japan are excluded, as information on their content is communicated by means of safety data sheets (SDS).)

#### 3.1 chemSHERPA

#### 3.2 Controlled Substances Designated by Nihon Parkerizing

## **# Definition of terms**

### **1) Environmentally hazardous substance**

Substances that are or may be hazardous to humans or the environment.

Substances that pose risks to the environment, human rights, or other matters in the process of obtaining them, regardless of their hazardousness as substances.

(While all substances have some substance-specific hazards, Nihon Parkerizing selects substances that are deemed to be highly hazardous and require management for inclusion in this management standard.)

### **2) Intentionally contained**

Intentionally contained refers to when a substance is intentionally used or contained in a product to maintain the physical properties, function, quality or appearance of a material or product.

Nihon Parkerizing controls as 'Intentionally contained' any material that is used as a raw material, catalyst, solvent or other secondary material and cannot be removed in the end, or remains without being removed.

We also consider as intentionally contained any substances in raw materials which fall under this definition of "intentionally contained".

### **3) Unintentionally contained**

A substance is unintentionally contained if it is contained without being intentionally used.

This includes the following:

- \* Substances that are contained as impurities in materials and raw materials and remain in industrial materials even after technically sufficient removal in the refining process. Substances falling under the aforementioned definition of intentionally contained substances that are in raw materials will not be deemed unintentionally contained.

- \* By-products of the manufacturing process that cannot be removed even with technically sufficient removal. Substances that are intentionally contained due to the use of low-purity raw materials or a lower degree of purification than usual are not considered to be unintentional.

### **4) Permissible concentration (threshold)**

If a substance is unintentionally contained, the permissible concentration is one which is below the specified permissible value, below which the substance is not deemed prohibited or subject to control.

- \* Concentration is calculated using the 'weight of material considered homogeneous' as the population number.

- \* Nihon Parkerizing requires information on intentionally contained substances regardless of the concentration.

- \* Please also inform us if you have information on unintentionally contained substances.

### 5) CAS Registry Number (CAS RN®)

The CAS Registry Number is a unique numerical identifier assigned to each chemical substance by the American Chemical Society (ACS). It can be searched as a substance-specific identification number. However, there are CAS RN® including isomers and CAS RN® with inclusive names, so CAS RN® collation alone cannot be used to determine whether or not a substance is contained.

### 6) Contained in product

“Contained in product” means all parts and materials contained in products and packaging materials.

For example, it also includes the following states.

- \* When the target substance is intentionally used.
- \* When the target substance is contained as impurity.
- \* (For example, if there is a possibility of contamination of products from molds, jigs, tools, machinery and equipment that come into direct contact with the product in the manufacturing process, the parts that come into contact with the product must be considered to be targets of the prohibition of the inclusion of prohibited chemical substances.)

### 7) Impurities

Impurities are substances contained in natural materials that cannot be removed in the refining process or substances generated in the reaction process that are technically not removable.

### 8) chemSHERPA

chemSHERPA refers to chemSHERPA published by the Joint Article Management Promotion-consortium (JAMP) which is widely used as a standard tool for communicating information on chemical substances contained in (chemicals) products.

# [Prohibited chemicals] 1.1 Chemical Substances Control Law ; CSCL,  
Japan

(YYYY/MM/DD: 2024/6/1)

Japan CSCL: Class I Specified Chemical Substances

1	Polychlorinated biphenyls
2	Polychlorinated naphthalenes (only those containing 2 or more chlorine atoms in the molecule)
3	Hexachlorobenzene
4	1, 2, 3, 4, 10, 10-Hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-exo-1, 4-endo-5, 8-dimethanonaphthalene (Synonym: Aldrin)
5	1, 2, 3, 4, 10, 10-Hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-exo-1, 4-endo-5, 8-dimethanonaphthalene (Synonym: Dieldrin)
6	1, 2, 3, 4, 10, 10-Hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-endo-1, 4-endo-5, 8-dimethanonaphthalene (Synonym: Endrin)
7	1, 1, 1-Trichloro-2, 2-bis(4-chlorophenyl)ethane (Synonym: DDT)
8	1, 2, 4, 5, 6, 7, 8, 8-Octachloro-2, 3, 3a, 4, 7, 7a-hexahydro-4, 7-methano-1H-indene, 1, 4, 5, 6, 7, 8, 8-heptachloro-3a, 4, 7, 7a-tetrahydro-4, 7-methano-1H-indene and their analogous compounds (Synonym: Chlordane or Heptachlor)
9	Bis(tributyltin) oxide
10	N,N'-Ditolyl-p-phenylenediamine, N-Tolyl-N'-xylyl-p-phenylenediamine, or N,N'-Dixylyl-p-phenylenediamine
11	2, 4, 6-Tri-tert-butylphenol
12	Polychloro-2, 2-dimethyl-3-methylidenebicyclo[2. 2. 1]heptane (Synonym: Toxaphene)
13	Dodecachloropentacyclo[5. 3. 0. 0(2, 6). 0(3, 9). 0(4, 8)]decane (Synonym: Mirex)
14	2, 2, 2-Trichloro-1-(2-chlorophenyl)-1-(4-chlorophenyl)ethanol or 2, 2, 2-Trichloro-1, 1-bis(4-chlorophenyl)ethanol (Synonym: Kelthane or Dicofol)
15	Hexachlorobuta-1, 3-diene
16	2-(2H-1, 2, 3-Benzotriazol-2-yl)-4, 6-di-tert-butylphenol
17	Perfluoro(octane-1-sulfonic acid) (Synonym: PFOS) or its salts
18	Perfluoro(octane-1-sulfonyl) fluoride (Synonym: PFOSF)
19	Pentachlorobenzene
20	r-1, c-2, t-3, c-4, t-5, t-6-Hexachlorocyclohexane (Synonym: alpha-Hexachlorocyclohexane)
21	r-1, t-2, c-3, t-4, c-5, t-6-Hexachlorocyclohexane (Synonym: beta-Hexachlorocyclohexane)
22	r-1, c-2, t-3, c-4, c-5, t-6-Hexachlorocyclohexane (Synonym: gamma-Hexachlorocyclohexane or Lindane)
23	Decachloropentacyclo[5. 3. 0. 0(2, 6). 0(3, 9). 0(4, 8)]decan-5-one (Synonym: Chlordecone)
24	Hexabromobiphenyl
25	Tetrabromo(phenoxybenzene) (Synonym: Tetrabromodiphenyl ether)
26	Pentabromo(phenoxybenzene) (Synonym: Pentabromodiphenyl ether)

27	Hexabromo(phenoxybenzene) (Synonym: Hexabromodiphenyl ether)
28	Heptabromo(phenoxybenzene) (Synonym: Heptabromodiphenyl ether)
29	6, 7, 8, 9, 10, 10-Hexachloro-1, 5, 5a, 6, 9, 9a-hexahydro-6, 9-methano-2, 4, 3-benzodioxathiepin-3-oxide (synonym: Endosulfan or Benzoepin)
30	Hexabromocyclododecane
31	Pentachlorophenol, its salts or esters
32	Polychlorinated normal paraffin (It is limited that the number of carbon is 10 to 13 and the content of chlorine is more than 48% of the total weight.)
33	1, 1'-Oxybis(2, 3, 4, 5, 6-pentabromobenzene) (synonym: Decabromodiphenyl ether)
34	Perfluorooctanoic acid (Synonym: PFOA) or its salt
35	Perfluoro(hexane-1-sulfonic acid) (Synonym: PFHxS) or perfluoro(alkanesulfonic acid) (It is limited to those with a branched structure and the number of carbon is 6.) or their salts



# [Prohibited chemicals] 1.2 Industrial Safety and Health Act (ISHA),  
Japan

(YYYY/MM/DD: 2024/04/01)

Japan ISHA: Chemical Substances Prohibited to Manufacturing, etc.

1	Yellow phosphorus matches
2	Benzidine and its salts
3	4-aminodiphenyl and its salts
4	Asbestos (excluding the substances listed below, as prescribed by the Ordinance of the Ministry of Health, Labour and Welfare.) (a) Asbestos used as a sample for asbestos analysis, (b) Asbestos used for education to acquire knowledge or skills related to the investigation of the use situation of asbestos, (c) Asbestos used as a material or ingredient in the substance listed in (a) or (b)
5	4-nitrodiphenyl and its salts
6	Bis (chloromethyl) ether
7	Beta-naphthylamine and its salts
8	Gum containing benzene in a quantitative amount of more than 5% by volume of the solvent (including dilutants) of the said gum
9	Substances including No. 2, No. 3, No.5, No. 6, or No.7 over 1 weight %, or substances including No. 4 over 0.1 weight %.

# [Prohibited chemicals] 1.3 Poisonous and Deleterious Substances  
Control Act, Japan

Japan: Specified Poisonous Substances (by Law)  
(YYYY/MM/DD: 2024/04/01)

1	Octamethyl-pyrophosphoramide
2	Tetraalkyl lead
3	Diethyl-paranitrophenyl-thiophosphate
4	Dimethylethylmercapto ethylthiophosphate
5	Dimethyl-(diethylamido-1-chlorocrotonyl)-phosphate
6	Dimethylparanitrophenyl thiophosphate
7	Tetraethylpyrophosphate
8	Monofluoroacetate
9	Fluoroacetamide
10	In addition to the poisonous substances in the previous items, preparations containing those in the previous items, and other substances with significant toxicity which are designated by Cabinet Order.

Japan: Specified Poisonous Substances (by Cabinet order)  
(YYYY/MM/DD: 2024/06/01)

1	Preparations containing octamethylpyrophosphoramide
2	Preparations containing tetraalkyl lead
3	Preparations containing diethylparanitrophenylthiophosphate
4	Preparations containing dimethylethylmercapto ethylthiophosphate
5	Preparations containing dimethyl-(diethylamido-1-chlorocrotonyl)-phosphate
6	Preparations containing dimethylparanitrophenyl thiophosphate
7	Preparations containing tetraethylpyrophosphate
8	Salts of monofluoroacetic acid and preparations containing it
9	Preparations containing monofluoroacetamide
10	Preparations containing aluminum phosphide and its decomposition promoter

## # [Chemical Substances to be Reduced] 2.1 Chemical Substances to be Reduced

1	Nonylphenol and its derivatives
2	PFASs (Per- and polyfluoroalkyl substances) *

\*Per- and polyfluoroalkyl substances (PFASs) defined as:

Any substance that contains at least one fully fluorinated methyl (CF<sub>3</sub>-) or methylene (-CF<sub>2</sub>-) carbon atom (without any H/Cl/Br/I attached to it).

## # [Managed chemicals] 3.1 chemSHERPA

In principle, we use chemSHERPA as the standard tool for communicating information on the management of chemical substances in products in Japan.

Please download the latest version of each tool from the website of the Joint Article Management Promotion-consortium (JAMP).

**chemSHERPA**

<https://chemsherpa.net/tool>

## # [Managed chemicals] 3.2 Original managed chemicals

Based Laws, etc		
Chemical Substances Control Law ; CSCL, Japan	Monitoring Chemical Substances	Annex 3.2.1.1
	Priority Assessment Chemical Substances	Annex 3.2.1.2
	Specified Existing Chemical Substances Specified Newly Announced Chemical Substances	*
Water Pollution Control Law, Japan	Harmful Substances	Annex 3.2.2
	Designated Substances	
	Oil	
Air Pollution Control Law, Japan	Volatile Organic Substances and others	Annex 3.2.3
Soil Contamination Countermeasures Act, Japan	Specified Harmful Substances	Annex 3.2.4
Dodd-Frank Wall Street Reform and Consumer Protection Act (USA)	Conflict Minerals	Annex 3.2.5
Biocidal Products Regulation (EU)	Biocide Substances	Annex 3.2.6
EU REACH SVHC	Candidates of SVHC Newly SVHC (not yet in chemSHERP)	Annex 3.2.7
Many countries	Nonylphenol, Octylphenol, other alkylphenols, and their derivatives	Annex 3.2.8
Many countries	Azo Colorants	
Many countries	Polyaromatic Hydrocarbons	
Many countries	Organic Halogenated Substances	
NPO etc.	Palm Oil	
Many countries, NPO etc.	Wood and its Related Substances	
NPO etc.	Natural rubber and its Related Substances	
Many countries	Nanomaterials	
Many countries, NPO etc.	Microplastics	

\* After the announcement of such substances, we will add as a new annex.

## # [Managed chemicals] 3.2.1.1 Monitoring Chemical Substances

	MITI Number	Chemical Substance Name
1	1-436	Mercury(II) oxide
2	3-430	1-tert-butyl-3,5-dimethyl-2,4,6-trinitrobenzene
3	3-2239	Cyclododeca-1,5,9-triene
4	3-2240	Cyclododecane
6	3-2341	1,1-Bis(tert-butyldioxy)-3,3,5-trimethylcyclohexane
7	3-2572	Tetraphenyltin
8	3-2855	1,3,5-Tribromo-2-(2,3-dibromo-2-methylpropoxy)benzene
9	3-3371	O-(2,4-Dichlorophenyl) O-ethyl phenylphosphonothioate
10	3-3427	1,3,5-Tri-tert-butylbenzene
11	4-18	Polybromobiphenyl (Br:2-5)
12	4-67	Dipentenedimer or its hydrogenated derivatives
13	4-577	2-isopropylbicyclo[4.4.0]decane or 3-isopropylbicyclo[4.4.0]decane
14	4-821	2,6-Di-tert-butyl-4-phenylphenol
15	4-961	Diisopropylnaphthalene
16	4-961	Triisopropylnaphthalene
18	5-3581, 5-3605	2,4-Di-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)phenol
20	4-16	Diethylbiphenyl
21	4-41	Hydrogenated terphenyl
22	4-638	Dibenzyltoluene
23	4-16	Triethylbiphenyl
24	5-256	N,N-Dicyclohexyl-1,3-benzothiazole-2-sulfenamide
25	5-3604	2-(2H-1,2,3-Benzotriazol-2-yl)-6-sec-butyl-4-tert-butylphenol
26	3-2835	2,4-Di-tert-butyl-6-[(2-nitrophenyl) diazenyl]phenol
27	3-3247	Perfluoro(1,2-dimethylcyclohexane)
28	4-39	2,2',6,6'-Tetra-tert-butyl-4,4'-methylenediphenol
29	2-2658, 2-2659	Perfluorododecanoic acid
30	2-2658, 2-2659	Perfluorotridecanoic acid
31	2-2658	Perfluorotetradecanoic acid
32	2-2658	Perfluoropentadecanoic acid
33	2-2658	Perfluorohexadecanoic acid
34	2-2366	Perfluoroheptane
35	2-2366	Perfluorooctane
36	5-71	2,2,3,3,4,4,5-Heptafluoro-5-(perfluorobutyl)oxolane and/or 2,2,3,3,4,5,5-heptafluoro-4-(perfluorobutyl)oxolane
37	3-540	4-sec-Butyl-2,6-di-tert-butylphenol
38	4-1263, 5-5112	1,4-Bis(isopropylamino)-9,10-anthraquinone

39	6-1849	alpha-(Difluoromethyl)-omega-(difluoromethoxy)poly[oxy(difluoromethylene)/oxy(tetrafluoroethylene)] (It is limited that a molecular weight of the polymer is 500 or more and 700 or less.)
40	7-475	2, 2, 4, 4, 6, 6, 8, 8-Octamethyl-1, 3, 5, 7, 2, 4, 6, 8-tetraoxatetrasiloxane (synonym: Octamethylcyclotetrasiloxane)
41	7-475	2, 2, 4, 4, 6, 6, 8, 8, 10, 10, 12, 12-Dodecamethyl-1, 3, 5, 7, 9, 11-hexaoxa-2, 4, 6, 8, 10, 12-hexasilacyclododecane (synonym: Dodecamethylcyclohexasiloxane)

## # [Managed chemicals] 3.2.1.2 Priority Assessment Chemical Substances

	MITI Number	Chemical Substance Name
1	1-172	Carbon disulfide
2	1-374	Hydrazine
3	2-6	n-Hexane
4	2-17	1, 3-Butadiene
5	2-20	Isoprene
6	2-35	Chloromethane (synonym: Methyl chloride)
8	2-37	Chloroform
10	2-53	Chloroethane
11	2-54	1, 2-Dichloroethane
15	2-129	Methylamine
16	2-134	Dimethylamine
17	2-186	Tetramethylammonium hydroxide
18	2-191	Nitromethane
19	2-218	Ethylene oxide
22	2-275	Epichlorohydrin
23	2-405	Ethylene glycol monomethyl ether
24	2-410	2-(1-Methylethoxy)ethanol
25	2-482	Formaldehyde
26	2-485	Acetaldehyde
27	2-680	N, N-Dimethylformamide
28	2-728	Vinyl acetate
31	2-987	Methyl acrylate
32	2-988	Ethyl acrylate
34	2-1014	Acrylamide
35	2-1025	Methacrylic acid
36	2-1263	Ethylenediaminetetraacetic acid
38	2-1508	Acetonitrile
39	2-1513	Acrylonitrile
40	2-1733	Thiourea
41	2-1820	Tetraethylthiuram disulfide (synonym: Disulfiram)
42	2-1848	N, N' -Ethylenebis(thiocarbamoylthiozinc) bis(N, N-dimethyldithiocarbamate) (synonym: Polycarbamate)
43	2-2863	Hexamethylene diisocyanate
45	3-1	Benzene
46	3-2, 3-60	Toluene
47	3-4	Styrene
48	3-5, 3-8	Isopropenylbenzene (synonym: alpha-Methylstyrene)
49	3-7, 3- 3427	1, 2, 4-Trimethylbenzene

50	3-28, 3-60	Ethylbenzene
51	3-39, 3-102	Benzyl chloride
53	3-41	p-Dichlorobenzene
54	3-105	Aniline
55	3-185	m-Phenylenediamine
56	3-185	o-phenylenediamine
59	3-436	Nitrobenzene
60	3-442	p-Chloronitrobenzene
62	3-481	Phenol
64	3-540, 9-1805	2, 6-Di-tert-butyl-4-methylphenol
65	3-543	Pyrocatechol (synonym: Catechol)
66	3-1307	Bis(2-ethylhexyl) phthalate
67	3-1328	Dimethyl terephthalate
68	3-1334	Terephthalic acid
69	3-1362	1, 2, 4-Benzenetricarboxylic acid 1, 2-anhydride
70	3-4280	Octadecylamine (N-B) triphenylborane
71	3-4392	[3-(2-Ethylhexyloxy)propylamine]triphenylboron
74	4-118	Methylenebis(4, 1-phenylene) diisocyanate
75	4-123	4, 4'-(Propane-2, 2-diyl)diphenol (synonym: 4, 4'-Isopropylidenediphenol or Bisphenol A)
76	4-311	Naphthalene
77	4-634	Dicyclopentadiene
80	5-839	1, 4-Dioxane
81	5-859	Morpholine
82	5-1097	epsilon-Caprolactam
84	5-6271	Bis(2-sulfidopyridin-1-olato)copper
85	5-6783	Dipotassium piperazine-1, 4-bis(carbodithioate)
86	3-589, 7-172	alpha-(Nonylphenyl)-omega-hydroxypoly(oxyethylene) (synonym: Poly(oxyethylene) nonylphenyl ether)
87	7-1279, 7-1283	Polycondensate of 4, 4'-isopropylidenediphenol and 1-chloro-2, 3-epoxypropane (synonym: Bisphenol A type epoxy resin) (liquid only)
91	2-302, 2-354	Diethanolamine
92	2-689	Peracetic acid
93	2-690	Acetic anhydride
94	2-984	Acrylic acid
95	2-1146	Sodium chloroacetate
96	3-2233	Cyclohexane
97	1-375	Hydroxylamine
102	2-207	Isopropyl alcohol
105	2-230	Ethylene glycol
106	2-234	Propane-1, 2-diol
107	2-301	2-Aminoethanol



108	2-308, 2-353	Triethanolamine
109	2-407, 2-2424, 7-97	2-Butoxyethanol
110	2-422	2-(2-Ethoxyethoxy) ethanol
112	2-510	Glyoxal
116	2-542	Methyl isobutyl ketone
117	2-670	Formic acid
118	2-740	2-Butoxyethyl acetate
119	2-1145	Chloroacetic acid
122	2-1673	Dimethyl sulfate
124	2-3049	1-Butanol
125	3-3, 3-60	Xylene
126	3-22	Cumene
129	3-2214	1,3-Diisocyanato(methyl) benzene
131	3-2376	Cyclohexanone
132	3-2381, 3-2389	3,5,5-Trimethylcyclohex-2-en-1-one
133	3-2387	(E)-4-(2,6,6-Trimethylcyclohex-1-en-1-yl) but-3-en-2-one
134	3-2667	3-(4-tert-Butylphenyl)-2-methylpropanal
135	5-53	Tetrahydrofuran
136	5-113	N-Methyl-2-pyrrolidone
137	5-1044	1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione
138	5-2742	Disodium 2,2'-vinylenebis[5-(4-morpholino-6-anilino-1,3,5-triazin-2-ylamino)benzenesulfonate] (synonym: Fluorescent-260)
139	5-3725, 9-1110	(T-4)-Bis[2-(thioxo-kappaS)-pyridin-1(2H)-olato-kappaO]zinc(II)
140	3-1884, 3-1906, 3-1949	Sodium alkylbenzenesulfonate(The alkyl is limited to the substituent groups derived from linear alkane of C=10-14.)
143	1-174	Silicon carbide
144	1-242	Nickel(II) dichloride
145	1-284	Chromium(VI) trioxide
146	1-393	Nickel(II) bis(sulfamate)
147	1-639, 1-648	Zirconium dichloride oxide
148	1-813	Nickel(II) sulfate
149	2-123	3-Chloropropene (synonym: Allyl chloride)
150	2-407, 2-2424, 7-97	2-Isobutoxyethanol
151	2-759	Allyl heptanoate
152	2-1277	Sodium salts of 2,2',2''-nitrilotriacetic acid
153	2-2509, 2-2521	N-[3-(Dimethylamino)propyl]stearamide

156	3-499, 4-57	Cresol
157	3-503	4-(1,1,3,3-Tetramethylbutyl)phenol
159	5-1043	Sodium 3,5-dichloro-2,4,6-trioxo-1,3,5-triazinan-1-ide (synonym: Sodium dichloroisocyanurate)
161	6-901	Sodium salts of polymer of acrylic acid
162	9-1741	Coal tar
163	9-1744	Coal tar pitch
164	2-133, 2-176, 2-185, 8-310, 8-342	Alkan-1-amine (C=8, 10, 12, 14, 16, 18, normal chain), (Z)-Octadec-9-en-1-amine or (9Z, 12Z)-Octadeca-9, 12-dien-1-amine
165	2-176	N,N-Dimethyldodecylamine
166	2-184, 9-795, 9-1971	Salt of hexadecyl(trimethyl)ammonium
167	2-184, 9-1971	Salt of didecyl(dimethyl)ammonium
168	2-184, 9-1971	Salt of bis(alkyl (C=12, 14, 16, 18, 20, normal chain))(dimethyl)ammonium
169	2-198	N,N-Dimethylalkan-1-amine oxide (C=10, 12, 14, 16, 18, normal chain), (Z)-N,N-dimethyloctadec-9-en-1-amine oxide or (9Z, 12Z)-N,N-dimethyloctadeca-9, 12-dien-1-amine oxide
170	2-217	Decan-1-ol
171	2-217, 2-3704	Alkanol (C=10-16) (only the substances that contain any of C=11-14 components)
172	2-611, 7-973	Sodium salt of saturated fatty acid (C=8-18, normal chain) or unsaturated fatty acid (C=16-18, normal chain)
173	2-814, 2-827, 2-2503, 7-87, 8-311	N,N-Bis(2-hydroxyethyl)alkanamide (C=8, 10, 12, 14, 16, 18, normal chain), (Z)-N,N-bis(2-hydroxyethyl)octadec-9-enamide or (9Z, 12Z)-N,N-bis(2-hydroxyethyl)octadeca-9, 12-dienamide
174	2-1290, 2-2707, 9-2027	[(3-Alkanamido (C=8, 10, 12, 14, 16, 18, normal chain)propyl)(dimethyl)ammonio]acetate or (Z)-{[3-(octadec-9-enamido)propyl](dimethyl)ammonio}acetate
175	2-1639, 2-2807, 9-2038	Sodium alkenesulfonate (C=14-16) or sodium hydroxyalkanesulfonate (C=14-16)
176	6-3223	Copolymer of acrylamide / 2-acrylamido-2-hydroxyacetic acid / [2-(acryloyloxy)ethyl](benzyl)(dimethyl)ammonium chloride / 2-(dimethylamino)ethyl methacrylate / benzyl[2-(methacryloyloxy)ethyl](dimethyl)ammonium chloride / 2-methylidenesuccinic acid (It is limited that the polymer is insoluble in fat-soluble solvent and usual solvent, and the content of the components having molecular weight less than 1,000 is 1% or less.)

177	1-417	Nickel(II) hydroxide
178	2-611, 9-1677	Potassium salt of saturated fatty acid(C=8-18, normal chain) or potassium salt of unsaturated fatty acid(C=18, normal chain)
179	2-1249	Potassium diethyldithiocarbamate
180	2-1291, 2-2709	2-(N-Dodecyl-N,N-dimethylammonio)acetate
182	2-2795	2,2-Dibromo-2-cyanoacetamide
184	3-326, 3-2694	Salt of alkyl(C=12-16) (benzyl) (dimethyl) ammonium
185	3-1585	Hexyl 2-hydroxybenzoate
187	5-683	4,6,6,7,8,8-Hexamethyl-1,3,4,6,7,8-hexahydrocyclopenta[g]isochromene
188	7-97	alpha-Alkyl(C=9-11)-omega-hydroxypoly(oxyethylene) (It is limited that a number-average molecular weight of the polymer is less than 1,000.)
189	7-97	alpha-Alkyl(C=12-15)-omega-hydroxypoly(oxyethylene) (It is limited that a number-average molecular weight of the polymer is less than 1,000.)
190	2-141	Triethylamine
191	1-124	Phosgene
192	1-158	Sodium cyanide
193	2-184, 9-1971	Salts of trimethyl(octadecyl) ammonium
196	2-759	Allyl hexanoate
199	3-2657	2-Benzylideneoctanal
200	3-2694	Salts of benzyl(dimethyl) (octyl) ammonium
201	3-7, 3-3427	1,3,5-Trimethylbenzene
203	3-543	Hydroquinone
204	4-1911	Reaction products of 3-methylpent-3-en-2-one and 3-methylidene-7-methylocta-1,6-diene, which consists of mixture of 1-(2,3,8,8-tetramethyl-1,2,3,4,5,6,7,8-octahydro-2-naphthyl)ethanone, 1-(2,3,8,8-tetramethyl-1,2,3,4,6,7,8,8a-octahydro-2-naphthyl)ethanone and 1-(2,3,8,8-tetramethyl-1,2,3,5,6,7,8,8a-octahydro-2-naphthyl)ethanone as a major component (80% or more)
205	5-1089	Oxacyclohexadecan-2-one
206	5-1104, 5-3880	1,4-Dioxacycloheptadecane-5,17-dione
207	5-3560	3-(1,3-Benzodioxol-5-yl)-2-methylpropanal
208	5-67, 9-137	5-Heptyloxolan-2-one
209	9-1735	Creosote oil
212	2-10	2,2,4,6,6-Pentamethylheptane
213	2-1620, 2-1623	Sodium 1,4-bis[(2-ethylhexyl)oxy]-1,4-dioxobutane-2-sulfonate
214	2-1679	Sodium alkyl(C=8-18) sulfate
216	2-184	Salts of dimethyl[bis(octadecen-1-yl)] ammonium

217	2-2936, 2-4162	(1-Hydroxyethane-1,1-diyl)diphosphonic acid or its potassium or sodium salt
218	2-68	Mono(or poly)chloroalkane(C=14-17, normal chain)
219	3-2522, 3-2613, 3-3363	Tritolyl phosphate
220	4-38, 4- 244	Dimethyl(1-phenylethyl)benzene
221	5-6165	4,5-Dichloro-2-octylisothiazol-3(2H)-one
222	7-110, 8- 55	Mono(or poly)ether of (mono ester of anhydro(or dianhydro)glucitol and dodecanoic acid) and alpha-hydro-omega-hydroxypoly(oxyethylene)
223	7-155	Onium salt or sodium salts of alpha-(alkyl(C=10-16))-omega-(sulfoxy)poly[(oxyethylene) (or oxyethylene/oxy(methylethylene))] (It is limited that the average of repeating number of the repeating unit is 1-4.)
224	7-1951, 7-1961	Polycondensation products of adipic acid / N-(2-aminoethyl) (or N,N'-bis(2-aminoethyl))ethane-1,2-diamine / 2-(chloromethyl)oxirane
225	7-872	alpha-(Isocyanatobenzyl)-omega-(isocyanatophenyl)poly[(isocyanatophenylene)methylene]
226	8-118	Salts of {poly[2-hydroxy-3-(trimethylammonio)propyl] ether of starch}
227	9-1958	Sodium (alkyl(C=12, branched chain))(alkyl(C=12, branched chain)phenoxy)benzenesulfonate (or sodium (alkyl(C=12, branched chain)phenoxy)benzenesulfonate or sodium (alkyl(C=12, branched chain))(phenoxy)benzenesulfonate or disodium (alkyl(C=12, branched chain))[(alkyl(C=12, branched chain))(sulfonato)phenoxy]benzenesulfonate or disodium (alkyl(C=12, branched chain))(sulfonatophenoxy)benzenesulfonate)
228	2-73	1-Bromopropane
229	2-184, 9- 1971	Salt of N,N,N-trimethyldodecane-1-aminium
230	2-611	Potassium 2-ethylhexanoate
231	2-642, 2- 766	3-Hydroxy-2,2-bis(hydroxymethyl)propyl octadecanoate
232	3-2311, 3-2345, 3-2356	2-tert-Butylcyclohexyl acetate
233	5-31	Furfuryl alcohol
234	6-898	Polymer of acrylic acid
235	7-114	Sodium alpha-(carboxylatomethyl)-omega-(dodecyloxy)poly(oxyethane-1,2-diyl) (The repeating number of repeating unit is an integer from 1 to 100.)
236	7-264	alpha-Hydro-omega-dodecanamidopoly(oxyethane-1,2-diyl) (The repeating number of repeating unit is an integer from 2 to 101.)
238	2-176	N-Methyldidecan-1-ylamine
239	2-184, 9- 1971	Salt of N-ethyl-N,N-dimethyltetradecan-1-aminium

240	2-413	1,1'-Oxydi (propan-2-ol)
241	2-769, 2-2491	2-[(Dodecanoyloxy)methyl]-2-ethylpropane-1,3-diyl di(dodecanoate)
242	2-1291, 2-2709	[Dimethyl(octadecyl)azaniumyl]acetate
244	2-3231	Ethyl hydrogen sulfate
245	3-1023	2,2,2-Trichloro-1-phenylethyl acetate
246	3-1730	Ethyl 2-phenylpropanoate
247	3-4307	Sodium dodecanoyloxybenzenesulfonate
248	4-658	3a,4,5,6,7,7a-Hexahydro-1H-4,7-methanoinden-5-yl acetate
249	4-1952	Cyclohexylidene(phenyl)acetonitrile
250	7-97	[alpha-(Alkyl (C=16-18))-omega-hydroxypoly(oxyethane-1,2-diyl) or alpha-(alkenyl (C=16-18))-omega-hydroxypoly(oxyethane-1,2-diyl)] (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
251	9-1473	Sodium 1-oxo-11lambda(5)-pyridine-2-thiolate
252	1-138	Hydrogen cyanide
253	3-1301	Diethyl phthalate
254	3-4387	5-Chloro-2-(4-chlorophenoxy)phenol
255	4-95, 4-96, 4-275	4,4'-Diamino-3,3'-dichlorodiphenylmethane (synonym: 4,4'-Methylenebis(2-chloroaniline))
256	4-1715	Mixture of bicyclo[2.2.1]heptane-2,5(or 2,6)-diyl dicyanide
257	-	Salt of cation of poly(azanediyldicarbonylazanediyldicarbonylazanediyldicarbonylhexane-1,6-diyl) (It is limited that the cation is formed by proton addition to the nitrogen atoms.)* It stands for the salt of cation formed by proton addition to the nitrogen atoms of ''Polyhexamethylenebiguanidine'' (MITI_Number 7-1729)
258	2-1289, 2-1291, 2-2709	(N,N-Dimethyltetradecan-1-aminiumyl)acetate
259	2-1640	Sodium alkanesulfonate(C=10-18), sodium hydrogen alkanedisulfonate(C=10-18) or disodium alkanedisulfonate(C=10-18)
260	2-3065	Sodium 1-methoxy-1-oxooctadecane-2-sulfonate or sodium 1-methoxy-1-oxohexadecane-2-sulfonate
261	2-4053	Mixture of 2-{dimethyl[3-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctane-1-sulfonamido)propyl]ammonio}acetate and N,N-dimethyl-3-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctane-1-sulfonamido)propylamine, which consists of 2-{dimethyl[3-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctane-1-sulfonamido)propyl]ammonio}acetate as a major component (95% or more)
262	2-546	Butan-2-one oxime

263	4-1977	Reaction products of 2,2-dimethyl-3-methylidenebicyclo[2.2.1]heptane and phenol, which consists of 1:1 reaction products of 2,2-dimethyl-3-methylidenebicyclo[2.2.1]heptane and phenol as a major component (60% or more) (It is limited that the molecular weight is 460 or less.)
264	2-1241, 2-1747	Diazenedicarboxamide
265	5-465	Methyl (1H-1,3-benzimidazol-2-yl)carbamate(synonym: Carbendazim)
266	7-60	alpha, alpha'-[(Alkyl (C=8-18, normal chain)azanediyl)di(ethane-2,1-diyl)]bis[omega-hydroxypoly(oxyethane-1,2-diyl)] (The repeating number of repeating unit is an integer 0 or more.) (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
267	7-72	Salt of {ester of 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methylethan-1-aminium and [saturated fatty acid(C=10-20, normal chain) (or unsaturated fatty acid(C=16-18, normal chain))]}
268	2-1265	Sodium salt of 2,2',2'',2'''-(ethane-1,2-diyl)dinitrilo)tetraacetic acid
269	7-60	alpha, alpha'-[(Alkyl (C=8-18, normal chain)azanediyl)bis(ethane-2,1-diyl (or methylethane-2,1-diyl))]bis{omega-hydroxypoly[oxyethane-1,2-diyl/oxy(methylethane-1,2-diyl)]} (The repeating number of repeating unit is an integer 1 or more.) (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
270	7-66	Salt of {ester of 2-hydroxy-N-(2-hydroxyethyl)-N,N-dimethylethan-1-aminium and [saturated fatty acid(C=10-18, normal chain) (or unsaturated fatty acid(C=18, normal chain))]} or salt of {ester of 2-hydroxy-N-(2-hydroxypropyl)-N,N-dimethylpropan-1-aminium and [saturated fatty acid(C=10-18, normal chain) (or unsaturated fatty acid(C=18, normal chain))]}
271	7-97	alpha-(Alkyl (C=6-18))-omega-hydroxypoly[oxyethane-1,2-diyl/oxy(methylethane-1,2-diyl)] (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
272	7-97	alpha-Hydro-omega-[(3-methylbut-3-en-1-yl)oxy]poly(oxyethane-1,2-diyl) (The repeating number of repeating unit is an integer 1 or more.) (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
273	7-141	[alpha-(Alkanoyl (C=8-18, normal chain))-omega-methoxypoly(oxyethane-1,2-diyl) or alpha-(alkenoyl (C=8-18, normal chain))-omega-methoxypoly(oxyethane-1,2-diyl)] (The repeating number of repeating unit is an integer 1 or more.) (It is limited that the number-average molecular weight of the polymer is less than 1,000.)
274	2-343	Salt of N,N,N-trimethyl-1-oxiranylmethanaminium
275	2-414	3-[(2-Ethylhexyl)oxy]propane-1,2-diol
276	2-422, 7-97	2-(2-Butoxyethoxy)ethan-1-ol (synonym: Diethylene glycol monobutyl ether)
277	2-723	N,N-Dimethylacetamide
278	2-726	Ethyl acetate
279	2-727	n-Propyl acetate

280	2-1667, 2-4305	Reaction products of sodium hydrogen sulfite and (chloromethyl)oxirane and N,N-dimethyldodecan-1-amine, which consists of 3-(N,N-dimethyldodecan-1-aminiumyl)-2-hydroxypropane-1-sulfonate as a major component (80% or more)
281	2-2807, 9-2038	Potassium octadecenesulfonate or potassium hydrogen octadecenedisulfonate or potassium hydroxyoctadecanesulfonate or dipotassium octadecenedisulfonate
282	2-2807, 9-2038	Potassium hydrogen hexadecenedisulfonate or potassium hydroxyhexadecanesulfonate or potassium hexadecenesulfonate or dipotassium hexadecenedisulfonate
283	3-1736, 3-1761	Methyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propanoate
284	3-2492	3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
285	5-3881	1,4-Dioxacyclohexadecane-5,16-dione

## # [Managed chemicals] 3.2.2 Water Pollution Prevention Act, Japan

### 3.2.2-1 Harmful Substances

1	Cadmium and its compounds
2	Cyanide compounds
3	Organic phosphorus compounds (diethyl p-nitrophenol thiophosphate (parathion) , dimethyl p-nitrophenol thiophosphate (methyl parathion) , dimethyl ethylmercaptoethyl thiophosphate (demeton methyl) and ethyl-p-nitrophenylthionobenzenephosphate (EPN) only)
4	Lead and its compounds
5	Sesivalent chrome compounds
6	Arsenic and its compounds
7	Mercury , alkyl mercury and other mercury compounds
8	PCBs
9	Trichloroethylene
10	Tetrachloroethylene
11	Dichloromethane
12	Carbon tetrachloride
13	1, 2-Dichloroethane
14	1, 1-Dichloroethylene
15	1, 2-Dichloroethylene
16	1, 1, 1-Trichloroethane
17	1, 1, 2-Trichloroethane
18	1, 3-Dichloropropene
19	Tetramethylthiuram disulfide (Thiuram)
20	2-Chloro-4,6-bis(ethylamino)-S-triazine (Simazine)
21	S-(4-Chlorobenzyl) N,N-diethylthiocarbamate (Thiobencarb)
22	Benzene
23	Selenium and its compounds
24	Boron and its compounds
25	Fluorine and its compounds
26	Ammonia, ammonium compounds, nitrite compounds and nitrate compounds
27	Vinyl chloride monomer
28	1,4-Dioxane

### 3.2.2-2 Designated Substances

1	Formaldehyde
2	Hydrazine
3	Hydroxylamine
4	Hydrogen peroxide
5	Hydrogen chloride



6	Sodium hydroxide
7	Acrylonitrile
8	Potassium hydroxide
9	Acrylamide
10	Acrylic acid
11	Sodium hypochlorite
12	Carbon disulfide
13	Ethyl acetate
14	Methyl t-butyl ether; MTBE
15	Sulfuric acid
16	Phosgene
17	1,2-Dichloropropane
18	Chlorosulfonic acid
19	Thionyl dichloride
20	Chloroform
21	Dimethyl sulfate
22	Chloropicrin
23	Dimethyl 2,2-dichlorovinyl phosphate; Dichlorvos; DDVP
24	Dimethyl ethylsulfinyl isopropyl thiophosphate; Oxydeprofos; ESP
25	Toluene
26	Epichlorohydrin
27	Styrene
28	Xylene
29	p-Dichlorobenzene
30	2-sec-Butylphenyl N-methylcarbamate; fenobucarb; BPMC
31	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide; propyzamide
32	Tetrachloroisophthalonitrile; chlorothalonil; TPN
33	0,0-Dimethyl 0-3-methyl-4-nitrophenyl phosphorothioate; fenitrothion; MEP
34	S-Benzyl 0,0-diisopropyl phosphorothioate; iprobenfos; IBP
35	Diisopropyl 1,3-dithiolan-2-ylidenemalonate; isoprothiolane
36	0,0-Diethyl 0-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate; diazinon
37	0,0-Diethyl 0-5-phenyl-3-isoxazolyl phosphorothioate; isoxathion
38	2,4,6-Trichlorophenyl-4'-nitrophenylether; Chlornitrofen; CNP
39	0,0-Diethyl 0-3,5,6-trichloro-2-pyridyl phosphorothioate; chlorpyrifos
40	Bis(2-ethylhexyl) phthalate
41	Ethyl (Z)-3-[N-benzyl-N-[[methyl(1-methylthioethylideneaminooxycarbonyl)amino]thio]amino]propionate; alanycarb
42	1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene; Chlordane
43	Bromine
44	Aluminium and its compounds
45	Nickel and its compounds
46	Molybdenum and its compounds

47	Antimony and its compounds
48	Chloric acid and its salts
49	Bromic acid and its salts
50	Chromium and its compounds, except for chromium(VI) compounds
51	Manganese and its compounds
52	Iron and its compounds
53	Copper and its compounds
54	Zinc and its compounds
55	Phenols and its salts
56	1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane; hexamethylenetetramine
57	Aniline
58	Perfluorooctanoic acid (PFOA) and its salts
59	Perfluoro(octane-1-sulfonic acid) (PFOS) and its salts
60	Linear alkylbenzenesulfonic acid and its salts

### 3.2.2-3 Oil

1	Crude oil
2	Heavy oil
3	Lubricating oil
4	Diesel oil
5	Kerosene
6	Gasoline
7	Animal and vegetable oils

### # [Managed chemicals] 3.2.3 Japan Air Pollution Control Law

Classification	Cabinet Order Number	Cabinet Order Name
Soot and Smoke (Sulfur Oxides)	Article 2-1-(i) of Act	Sulfur oxides generated by the combustion of fuel or other items.
Soot and Smoke (Soot and Dust)	Article 2-1-(ii) of Act	Soot and dust generated by the combustion of fuel or other items or by the use of electricity as a source of heat.
Soot and Smoke (Hazardous Substances)	Article 2-1-(iii) of Act	Cadmium, chlorine, hydrogen fluoride, lead, and other substances (excluding those under item (i)) that are generated as a result of combustion, synthesis, decomposition, or other processes (excluding mechanical processes), that are likely to harm human health or living conditions, and that are specified by a Cabinet Order.
Soot and Smoke (Hazardous Substances)	Article 1-(i) of Cabinet order	Cadmium and its compounds
Soot and Smoke (Hazardous Substances)	Article 1-(ii) of Cabinet order	Chlorine and hydrogen chloride
Soot and Smoke (Hazardous Substances)	Article 1-(iii) of Cabinet order	Fluorine, hydrogen fluoride and silicon fluoride
Soot and Smoke (Hazardous Substances)	Article 1-(iv) of Cabinet order	Lead and its compounds
Soot and Smoke (Hazardous Substances)	Article 1-(v) of Cabinet order	Nitrogen oxides
Designated Soot and Smoke	Article 7-2 of Cabinet order	Sulfur oxides and nitrogen oxides
Volatile Organic Compounds (VOC)	Article 2-4 of Act	Any organic compound (excluding substances specified by a Cabinet Order as not being sources from which suspended particulate matter or oxidants are generated) that is in a gaseous state at the time of its emission or dispersal into the atmosphere.
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-1 of Cabinet order	methane
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-2 of Cabinet order	chlorodifluoromethane (HCFC-22)

Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-3 of Cabinet order	2-chloro-1, 1, 1, 2-tetrafluoroethane (HCFC-124)
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-4 of Cabinet order	1, 1-dichloro-1-fluoroethane (HCFC-141b)
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-5 of Cabinet order	1-chloro-1, 1-difluoroethane (HCFC-142b)
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-6 of Cabinet order	3, 3-dichloro-1, 1, 1, 2, 2-pentafluoropropane (HCFC-225ca)
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-7 of Cabinet order	1, 3-Dichloro-1, 1, 2, 2, 3-pentafluoropropane (HCFC-225cb)
Substances Excluded from Volatile Organic Compounds (VOC)	Article 2-2-8 of Cabinet order	1, 1, 1, 2, 3, 4, 4, 5, 5, 5-decafluoropentane (HFC-43-10mee)
Particulates	Article 2-7 of Act	substances that are generated or dispersed as a result of any mechanical process such as crushing or sorting materials, or as a result of the accumulation of such materials.
Specified Particulates	Article 2-4 of Cabinet order	Asbestos
Ordinary Particulates	Article 2-8 of Act	Particulates other than specified particulates.
Mercury and its Compounds	Article 2-13 of Act	Mercury and its compounds
Automobile Exhaust	Article 4-1 of Cabinet order	Carbon monoxide
Automobile Exhaust	Article 4-2 of Cabinet order	Hydrocarbons
Automobile Exhaust	Article 4-3 of Cabinet order	Lead compounds
Automobile Exhaust	Article 4-4 of Cabinet order	Nitrogen oxides
Automobile Exhaust	Article 4-5 of Cabinet order	Particulate matter
Specified Substances	Article 10-1 of Cabinet order	Ammonia
Specified Substances	Article 10-2 of Cabinet order	Hydrogen fluoride
Specified Substances	Article 10-3 of Cabinet order	Hydrogen cyanide

Specified Substances	Article 10-4 of Cabinet order	Carbon monoxide
Specified Substances	Article 10-5 of Cabinet order	Formaldehyde
Specified Substances	Article 10-6 of Cabinet order	Methanol
Specified Substances	Article 10-7 of Cabinet order	Hydrogen sulfide
Specified Substances	Article 10-8 of Cabinet order	Hydrogen phosphide
Specified Substances	Article 10-9 of Cabinet order	Hydrogen chloride
Specified Substances	Article 10-10 of Cabinet order	Nitrogen dioxide
Specified Substances	Article 10-11 of Cabinet order	Acrolein
Specified Substances	Article 10-12 of Cabinet order	Sulfur dioxide
Specified Substances	Article 10-13 of Cabinet order	Chlorine
Specified Substances	Article 10-14 of Cabinet order	Carbon disulfide
Specified Substances	Article 10-15 of Cabinet order	Benzene
Specified Substances	Article 10-16 of Cabinet order	Pyridine
Specified Substances	Article 10-17 of Cabinet order	Phenol
Specified Substances	Article 10-18 of Cabinet order	Sulfuric acid (including sulfur trioxide)
Specified Substances	Article 10-19 of Cabinet order	Silicon fluoride
Specified Substances	Article 10-20 of Cabinet order	Phosgene
Specified Substances	Article 10-21 of Cabinet order	Selenium dioxide
Specified Substances	Article 10-22 of Cabinet order	Chlorosulfonic acid
Specified Substances	Article 10-23 of Cabinet order	Yellow phosphorus
Specified Substances	Article 10-24 of Cabinet order	Phosphorus trichloride
Specified Substances	Article 10-25 of Cabinet order	Bromine
Specified Substances	Article 10-26 of Cabinet order	Nickel carbonyl

Specified Substances	Article 10-27 of Cabinet order	Phosphorus pentachloride
Specified Substances	Article 10-28 of Cabinet order	Mercaptan
Hazardous Air Pollutants	Article 2-16 of Act	A substance is likely to harm human health if it is ingested continuously and that causes air pollution (other than soot and smoke (but only those set forth in the items set forth under paragraph (1), items (i) and (iii)), specified particulates, and mercury and mercury compounds).
Hazardous Air Pollutants (Designated Substances)	3-1 of Supplementary Provisions of Cabinet Order	Benzene
Hazardous Air Pollutants (Designated Substances)	3-2 of Supplementary Provisions of Cabinet Order	Trichloroethylene
Hazardous Air Pollutants (Designated Substances)	3-3 of Supplementary Provisions of Cabinet Order	Tetrachloroethylene
Substances that may be classified as Hazardous Air Pollutants	1 of Central Environment Council 9th Report (Appendix 1)	Zinc and its compounds
Substances that may be classified as Hazardous Air Pollutants	2 of Central Environment Council 9th Report (Appendix 1)	Acrylamide
Substances that may be classified as Hazardous Air Pollutants	3 of Central Environment Council 9th Report (Appendix 1)	Ethyl acrylate
Substances that may be classified as Hazardous Air Pollutants	4 of Central Environment Council 9th Report (Appendix 1)	2-Hydroxyethyl acrylate

Substances that may be classified as Hazardous Air Pollutants	5 of Central Environment Council 9th Report (Appendix 1)	Methyl acrylate
Substances that may be classified as Hazardous Air Pollutants	6 of Central Environment Council 9th Report (Appendix 1)	Acrylonitrile
Substances that may be classified as Hazardous Air Pollutants	7 of Central Environment Council 9th Report (Appendix 1)	Acrolein
Substances that may be classified as Hazardous Air Pollutants	8 of Central Environment Council 9th Report (Appendix 1)	Acetaldehyde
Substances that may be classified as Hazardous Air Pollutants	9 of Central Environment Council 9th Report (Appendix 1)	Acetonitrile
Substances that may be classified as Hazardous Air Pollutants	10 of Central Environment Council 9th Report (Appendix 1)	o-Anisidine
Substances that may be classified as Hazardous Air Pollutants	11 of Central Environment Council 9th Report (Appendix 1)	Aniline
Substances that may be classified as Hazardous Air Pollutants	12 of Central Environment Council 9th Report (Appendix 1)	3-Amino-1H-1,2,4-triazole; Amitrole
Substances that may be classified as Hazardous Air Pollutants	13 of Central Environment Council 9th Report (Appendix 1)	1-Allyloxy-2,3-epoxypropane

Substances that may be classified as Hazardous Air Pollutants	14 of Central Environment Council 9th Report (Appendix 1)	Antimony and its compounds
Substances that may be classified as Hazardous Air Pollutants	15 of Central Environment Council 9th Report (Appendix 1)	3-Isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate
Substances that may be classified as Hazardous Air Pollutants	16 of Central Environment Council 9th Report (Appendix 1)	Isobutyraldehyde
Substances that may be classified as Hazardous Air Pollutants	17 of Central Environment Council 9th Report (Appendix 1)	Isoprene
Substances that may be classified as Hazardous Air Pollutants	18 of Central Environment Council 9th Report (Appendix 1)	4,4'-Isopropylidenediphenol; Bisphenol A
Substances that may be classified as Hazardous Air Pollutants	19 of Central Environment Council 9th Report (Appendix 1)	O-Ethyl-O-(3-methyl-4-methylthiophenyl) N-isopropylaminophosphonate; Fenamiphos
Substances that may be classified as Hazardous Air Pollutants	20 of Central Environment Council 9th Report (Appendix 1)	Isopropenylbenzene; alpha-Methylstyrene
Substances that may be classified as Hazardous Air Pollutants	21 of Central Environment Council 9th Report (Appendix 1)	Indium and its compounds
Substances that may be classified as Hazardous Air Pollutants	22 of Central Environment Council 9th Report (Appendix 1)	Indeno[1,2,3-cd]pyrene



Substances that may be classified as Hazardous Air Pollutants	23 of Central Environment Council 9th Report (Appendix 1)	2-Ethylhexanoic acid
Substances that may be classified as Hazardous Air Pollutants	24 of Central Environment Council 9th Report (Appendix 1)	Ethylbenzene
Substances that may be classified as Hazardous Air Pollutants	25 of Central Environment Council 9th Report (Appendix 1)	Ethylenimine
Substances that may be classified as Hazardous Air Pollutants	26 of Central Environment Council 9th Report (Appendix 1)	Ethylene glycol monoethyl ether acetate; 2-Ethoxyethyl acetate
Substances that may be classified as Hazardous Air Pollutants	27 of Central Environment Council 9th Report (Appendix 1)	Ethylenediamine
Substances that may be classified as Hazardous Air Pollutants	28 of Central Environment Council 9th Report (Appendix 1)	Ethylenediaminetetraacetic acid
Substances that may be classified as Hazardous Air Pollutants	29 of Central Environment Council 9th Report (Appendix 1)	2-Ethoxyethanol; Ethylene glycol monoethyl ether
Substances that may be classified as Hazardous Air Pollutants	30 of Central Environment Council 9th Report (Appendix 1)	Epichlorohydrin
Substances that may be classified as Hazardous Air Pollutants	31 of Central Environment Council 9th Report (Appendix 1)	1, 2-Epoxybutane

Substances that may be classified as Hazardous Air Pollutants	32 of Central Environment Council 9th Report (Appendix 1)	2, 3-Epoxy-1-propanol
Substances that may be classified as Hazardous Air Pollutants	33 of Central Environment Council 9th Report (Appendix 1)	2, 3-Epoxypropyl phenyl ether
Substances that may be classified as Hazardous Air Pollutants	34 of Central Environment Council 9th Report (Appendix 1)	Allyl chloride; 3-Chloropropene
Substances that may be classified as Hazardous Air Pollutants	35 of Central Environment Council 9th Report (Appendix 1)	Iron(III) trichloride
Substances that may be classified as Hazardous Air Pollutants	36 of Central Environment Council 9th Report (Appendix 1)	Chlorinated paraffin (C=10-13)
Substances that may be classified as Hazardous Air Pollutants	37 of Central Environment Council 9th Report (Appendix 1)	Vinyl chloride monomer; Chloroethylene; Vinyl chloride
Substances that may be classified as Hazardous Air Pollutants	38 of Central Environment Council 9th Report (Appendix 1)	Benzyl chloride
Substances that may be classified as Hazardous Air Pollutants	39 of Central Environment Council 9th Report (Appendix 1)	Methyl chloride; Chloromethane
Substances that may be classified as Hazardous Air Pollutants	40 of Central Environment Council 9th Report (Appendix 1)	1-Octanol

Substances that may be classified as Hazardous Air Pollutants	41 of Central Environment Council 9th Report (Appendix 1)	Catechol; Pyrocatechol
Substances that may be classified as Hazardous Air Pollutants	42 of Central Environment Council 9th Report (Appendix 1)	epsilon-Caprolactam
Substances that may be classified as Hazardous Air Pollutants	43 of Central Environment Council 9th Report (Appendix 1)	Xylene
Substances that may be classified as Hazardous Air Pollutants	44 of Central Environment Council 9th Report (Appendix 1)	Quinoline
Substances that may be classified as Hazardous Air Pollutants	45 of Central Environment Council 9th Report (Appendix 1)	Silver and its compounds
Substances that may be classified as Hazardous Air Pollutants	46 of Central Environment Council 9th Report (Appendix 1)	Glyoxal
Substances that may be classified as Hazardous Air Pollutants	47 of Central Environment Council 9th Report (Appendix 1)	Chrysene; Benzo[a]phenanthrene
Substances that may be classified as Hazardous Air Pollutants	48 of Central Environment Council 9th Report (Appendix 1)	Glutaraldehyde
Substances that may be classified as Hazardous Air Pollutants	49 of Central Environment Council 9th Report (Appendix 1)	Chromium and its compounds

Substances that may be classified as Hazardous Air Pollutants	50 of Central Environment Council 9th Report (Appendix 1)	Chloroaniline
Substances that may be classified as Hazardous Air Pollutants	51 of Central Environment Council 9th Report (Appendix 1)	Chloroacetic acid
Substances that may be classified as Hazardous Air Pollutants	52 of Central Environment Council 9th Report (Appendix 1)	1-Chloro-2,4-dinitrobenzene
Substances that may be classified as Hazardous Air Pollutants	53 of Central Environment Council 9th Report (Appendix 1)	Chlorodibromomethane; Dibromochloromethane
Substances that may be classified as Hazardous Air Pollutants	54 of Central Environment Council 9th Report (Appendix 1)	p-Chloronitrobenzene; p-Nitrochlorobenzene
Substances that may be classified as Hazardous Air Pollutants	55 of Central Environment Council 9th Report (Appendix 1)	(RS)-1-p-Chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol; Tebuconazole
Substances that may be classified as Hazardous Air Pollutants	56 of Central Environment Council 9th Report (Appendix 1)	2-Chloropropionic acid
Substances that may be classified as Hazardous Air Pollutants	57 of Central Environment Council 9th Report (Appendix 1)	Chlorobenzene
Substances that may be classified as Hazardous Air Pollutants	58 of Central Environment Council 9th Report (Appendix 1)	Chloroform

Substances that may be classified as Hazardous Air Pollutants	59 of Central Environment Council 9th Report (Appendix 1)	3-Chloro-2-methyl-1-propene
Substances that may be classified as Hazardous Air Pollutants	60 of Central Environment Council 9th Report (Appendix 1)	Cobalt and its compounds
Substances that may be classified as Hazardous Air Pollutants	61 of Central Environment Council 9th Report (Appendix 1)	Vinyl acetate
Substances that may be classified as Hazardous Air Pollutants	62 of Central Environment Council 9th Report (Appendix 1)	2-Methoxyethyl acetate; Ethylene glycol monomethyl ether acetate
Substances that may be classified as Hazardous Air Pollutants	63 of Central Environment Council 9th Report (Appendix 1)	Ethylene oxide
Substances that may be classified as Hazardous Air Pollutants	64 of Central Environment Council 9th Report (Appendix 1)	Propylene oxide; 1,2-Epoxypropane
Substances that may be classified as Hazardous Air Pollutants	65 of Central Environment Council 9th Report (Appendix 1)	Cyanamide
Substances that may be classified as Hazardous Air Pollutants	66 of Central Environment Council 9th Report (Appendix 1)	2,4-Diaminoanisole
Substances that may be classified as Hazardous Air Pollutants	67 of Central Environment Council 9th Report (Appendix 1)	4,4'-Diaminodiphenyl ether

Substances that may be classified as Hazardous Air Pollutants	68 of Central Environment Council 9th Report (Appendix 1)	Inorganic cyanide compounds (except complex salts and cyanates)
Substances that may be classified as Hazardous Air Pollutants	69 of Central Environment Council 9th Report (Appendix 1)	2-(Diethylamino)ethanol
Substances that may be classified as Hazardous Air Pollutants	70 of Central Environment Council 9th Report (Appendix 1)	Carbon tetrachloride
Substances that may be classified as Hazardous Air Pollutants	71 of Central Environment Council 9th Report (Appendix 1)	1,4-Dioxane
Substances that may be classified as Hazardous Air Pollutants	72 of Central Environment Council 9th Report (Appendix 1)	1,3-Dioxolane
Substances that may be classified as Hazardous Air Pollutants	73 of Central Environment Council 9th Report (Appendix 1)	Cyclohexanamine
Substances that may be classified as Hazardous Air Pollutants	74 of Central Environment Council 9th Report (Appendix 1)	1,2-Dichloroethane
Substances that may be classified as Hazardous Air Pollutants	75 of Central Environment Council 9th Report (Appendix 1)	1,1-Dichloroethylene; Vinylidene dichloride
Substances that may be classified as Hazardous Air Pollutants	76 of Central Environment Council 9th Report (Appendix 1)	cis-1,2-Dichloroethylene

Substances that may be classified as Hazardous Air Pollutants	77 of Central Environment Council 9th Report (Appendix 1)	trans-1,2-Dichloroethylene
Substances that may be classified as Hazardous Air Pollutants	78 of Central Environment Council 9th Report (Appendix 1)	Dichloroacetic acid
Substances that may be classified as Hazardous Air Pollutants	79 of Central Environment Council 9th Report (Appendix 1)	1,2-Dichloro-4-nitrobenzene
Substances that may be classified as Hazardous Air Pollutants	80 of Central Environment Council 9th Report (Appendix 1)	1,4-Dichloro-2-nitrobenzene
Substances that may be classified as Hazardous Air Pollutants	81 of Central Environment Council 9th Report (Appendix 1)	1,2-Dichloropropane
Substances that may be classified as Hazardous Air Pollutants	82 of Central Environment Council 9th Report (Appendix 1)	Dichlorobromomethane; Bromodichloromethane
Substances that may be classified as Hazardous Air Pollutants	83 of Central Environment Council 9th Report (Appendix 1)	o-Dichlorobenzene
Substances that may be classified as Hazardous Air Pollutants	84 of Central Environment Council 9th Report (Appendix 1)	p-Dichlorobenzene
Substances that may be classified as Hazardous Air Pollutants	85 of Central Environment Council 9th Report (Appendix 1)	Dichloromethane; Methylene dichloride

Substances that may be classified as Hazardous Air Pollutants	86 of Central Environment Council 9th Report (Appendix 1)	Dinitrotoluene
Substances that may be classified as Hazardous Air Pollutants	87 of Central Environment Council 9th Report (Appendix 1)	1, 6-Dinitropyrene
Substances that may be classified as Hazardous Air Pollutants	88 of Central Environment Council 9th Report (Appendix 1)	1, 8-Dinitropyrene
Substances that may be classified as Hazardous Air Pollutants	89 of Central Environment Council 9th Report (Appendix 1)	Divinylbenzene
Substances that may be classified as Hazardous Air Pollutants	90 of Central Environment Council 9th Report (Appendix 1)	Dibenzo[a, h]acridine
Substances that may be classified as Hazardous Air Pollutants	91 of Central Environment Council 9th Report (Appendix 1)	Dibenzo[a, j]acridine
Substances that may be classified as Hazardous Air Pollutants	92 of Central Environment Council 9th Report (Appendix 1)	Dibenz[a, h]anthracene
Substances that may be classified as Hazardous Air Pollutants	93 of Central Environment Council 9th Report (Appendix 1)	7H-Dibenzo[c, g]carbazole
Substances that may be classified as Hazardous Air Pollutants	94 of Central Environment Council 9th Report (Appendix 1)	Naphtho[1, 2, 3, 4-def]chrysene



Substances that may be classified as Hazardous Air Pollutants	95 of Central Environment Council 9th Report (Appendix 1)	Dibenzo[b, def]chrysene
Substances that may be classified as Hazardous Air Pollutants	96 of Central Environment Council 9th Report (Appendix 1)	Benzo(r, s, t)pentaphene
Substances that may be classified as Hazardous Air Pollutants	97 of Central Environment Council 9th Report (Appendix 1)	Dibenzo[def, p]chrysene
Substances that may be classified as Hazardous Air Pollutants	98 of Central Environment Council 9th Report (Appendix 1)	N, N-Dimethylacetamide
Substances that may be classified as Hazardous Air Pollutants	99 of Central Environment Council 9th Report (Appendix 1)	2, 6-Dimethylaniline
Substances that may be classified as Hazardous Air Pollutants	100 of Central Environment Council 9th Report (Appendix 1)	Dimethylamine
Substances that may be classified as Hazardous Air Pollutants	101 of Central Environment Council 9th Report (Appendix 1)	Dimethyl disulfide
Substances that may be classified as Hazardous Air Pollutants	102 of Central Environment Council 9th Report (Appendix 1)	Dimethyl 2, 2, 2-trichloro-1-hydroxyethylphosphonate; Trichlorfon; DEP
Substances that may be classified as Hazardous Air Pollutants	103 of Central Environment Council 9th Report (Appendix 1)	1, 1-Dimethylhydrazine

Substances that may be classified as Hazardous Air Pollutants	104 of Central Environment Council 9th Report (Appendix 1)	3,3'-Dimethylbiphenyl-4,4'-diyl diisocyanate
Substances that may be classified as Hazardous Air Pollutants	105 of Central Environment Council 9th Report (Appendix 1)	N,N-Dimethylformamide
Substances that may be classified as Hazardous Air Pollutants	106 of Central Environment Council 9th Report (Appendix 1)	Brominated biphenyl (Br=2-5)
Substances that may be classified as Hazardous Air Pollutants	107 of Central Environment Council 9th Report (Appendix 1)	Water-soluble salts of bromic acid
Substances that may be classified as Hazardous Air Pollutants	108 of Central Environment Council 9th Report (Appendix 1)	Mercury and its compounds
Substances that may be classified as Hazardous Air Pollutants	109 of Central Environment Council 9th Report (Appendix 1)	Hydrogenated terphenyl
Substances that may be classified as Hazardous Air Pollutants	110 of Central Environment Council 9th Report (Appendix 1)	Organic tin compounds
Substances that may be classified as Hazardous Air Pollutants	111 of Central Environment Council 9th Report (Appendix 1)	Styrene
Substances that may be classified as Hazardous Air Pollutants	112 of Central Environment Council 9th Report (Appendix 1)	Selenium and its compounds

Substances that may be classified as Hazardous Air Pollutants	113 of Central Environment Council 9th Report (Appendix 1)	Dioxins (Polychlorinated dibenzofurans and Polychlorinated dibenzo-p-dioxins)
Substances that may be classified as Hazardous Air Pollutants	114 of Central Environment Council 9th Report (Appendix 1)	Thallium and its compounds
Substances that may be classified as Hazardous Air Pollutants	115 of Central Environment Council 9th Report (Appendix 1)	Thiourea
Substances that may be classified as Hazardous Air Pollutants	116 of Central Environment Council 9th Report (Appendix 1)	Thiophenol
Substances that may be classified as Hazardous Air Pollutants	117 of Central Environment Council 9th Report (Appendix 1)	0,0-Diethyl 0-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate; Diazinon
Substances that may be classified as Hazardous Air Pollutants	118 of Central Environment Council 9th Report (Appendix 1)	0,0-Dimethyl 0-3-methyl-4-nitrophenyl phosphorothioate; Fenitrothion; MEP
Substances that may be classified as Hazardous Air Pollutants	119 of Central Environment Council 9th Report (Appendix 1)	Decabromodiphenyl ether
Substances that may be classified as Hazardous Air Pollutants	120 of Central Environment Council 9th Report (Appendix 1)	1, 3, 5, 7-Tetraazatricyclo[3. 3. 1. 1 (3, 7)]decane; Hexamethylenetetramine
Substances that may be classified as Hazardous Air Pollutants	121 of Central Environment Council 9th Report (Appendix 1)	1, 1, 2, 2-Tetrachloroethane

Substances that may be classified as Hazardous Air Pollutants	122 of Central Environment Council 9th Report (Appendix 1)	Tetrachloroethylene
Substances that may be classified as Hazardous Air Pollutants	123 of Central Environment Council 9th Report (Appendix 1)	2, 3, 5, 6-Tetrachloro-p-benzoquinone
Substances that may be classified as Hazardous Air Pollutants	124 of Central Environment Council 9th Report (Appendix 1)	Tetrahydromethylphthalic anhydride
Substances that may be classified as Hazardous Air Pollutants	125 of Central Environment Council 9th Report (Appendix 1)	Tetramethylthiuram disulfide; Thiram
Substances that may be classified as Hazardous Air Pollutants	126 of Central Environment Council 9th Report (Appendix 1)	Terephthalic acid
Substances that may be classified as Hazardous Air Pollutants	127 of Central Environment Council 9th Report (Appendix 1)	Dimethyl terephthalate
Substances that may be classified as Hazardous Air Pollutants	128 of Central Environment Council 9th Report (Appendix 1)	Copper and its compounds
Substances that may be classified as Hazardous Air Pollutants	129 of Central Environment Council 9th Report (Appendix 1)	Triethylamine
Substances that may be classified as Hazardous Air Pollutants	130 of Central Environment Council 9th Report (Appendix 1)	Triethylenetetramine

Substances that may be classified as Hazardous Air Pollutants	131 of Central Environment Council 9th Report (Appendix 1)	1, 1, 2-Trichloroethane
Substances that may be classified as Hazardous Air Pollutants	132 of Central Environment Council 9th Report (Appendix 1)	Trichloroethylene
Substances that may be classified as Hazardous Air Pollutants	133 of Central Environment Council 9th Report (Appendix 1)	Trichloroacetic acid
Substances that may be classified as Hazardous Air Pollutants	134 of Central Environment Council 9th Report (Appendix 1)	2, 4, 6-Trichloro-1, 3, 5-triazine
Substances that may be classified as Hazardous Air Pollutants	135 of Central Environment Council 9th Report (Appendix 1)	2, 4, 6-Trichlorophenol
Substances that may be classified as Hazardous Air Pollutants	136 of Central Environment Council 9th Report (Appendix 1)	1, 2, 3-Trichloropropane
Substances that may be classified as Hazardous Air Pollutants	137 of Central Environment Council 9th Report (Appendix 1)	1, 2, 4-Trichlorobenzene
Substances that may be classified as Hazardous Air Pollutants	138 of Central Environment Council 9th Report (Appendix 1)	o-Tolidine; 3, 3'-Dimethylbenzidine
Substances that may be classified as Hazardous Air Pollutants	139 of Central Environment Council 9th Report (Appendix 1)	1, 3, 5-Tris(2, 3-epoxypropyl)-1, 3, 5-triazine-2, 4, 6 (1H, 3H, 5H)-trione

Substances that may be classified as Hazardous Air Pollutants	140 of Central Environment Council 9th Report (Appendix 1)	Toluidine
Substances that may be classified as Hazardous Air Pollutants	141 of Central Environment Council 9th Report (Appendix 1)	Toluene
Substances that may be classified as Hazardous Air Pollutants	142 of Central Environment Council 9th Report (Appendix 1)	Toluenediamine
Substances that may be classified as Hazardous Air Pollutants	143 of Central Environment Council 9th Report (Appendix 1)	Toluenediisocyanate; Tolylene diisocyanate
Substances that may be classified as Hazardous Air Pollutants	144 of Central Environment Council 9th Report (Appendix 1)	Naphthalene
Substances that may be classified as Hazardous Air Pollutants	145 of Central Environment Council 9th Report (Appendix 1)	1,5-Naphthalenediyl diisocyanate
Substances that may be classified as Hazardous Air Pollutants	146 of Central Environment Council 9th Report (Appendix 1)	Zirconium dichloride oxide
Substances that may be classified as Hazardous Air Pollutants	147 of Central Environment Council 9th Report (Appendix 1)	ethylene dibromide; 1,2-Dibromoethane; EDB
Substances that may be classified as Hazardous Air Pollutants	148 of Central Environment Council 9th Report (Appendix 1)	Nickel and its compounds

Substances that may be classified as Hazardous Air Pollutants	149 of Central Environment Council 9th Report (Appendix 1)	o-Nitroanisole
Substances that may be classified as Hazardous Air Pollutants	150 of Central Environment Council 9th Report (Appendix 1)	o-Nitroaniline
Substances that may be classified as Hazardous Air Pollutants	151 of Central Environment Council 9th Report (Appendix 1)	N-Nitrosodiethylamine
Substances that may be classified as Hazardous Air Pollutants	152 of Central Environment Council 9th Report (Appendix 1)	N-Nitrosodi-N-butylamine
Substances that may be classified as Hazardous Air Pollutants	153 of Central Environment Council 9th Report (Appendix 1)	N-Nitrosodi-N-propylamine
Substances that may be classified as Hazardous Air Pollutants	154 of Central Environment Council 9th Report (Appendix 1)	N-Nitrosodimethylamine
Substances that may be classified as Hazardous Air Pollutants	155 of Central Environment Council 9th Report (Appendix 1)	N-Nitroso-N-methylurea
Substances that may be classified as Hazardous Air Pollutants	156 of Central Environment Council 9th Report (Appendix 1)	N-Nitrosomorpholine
Substances that may be classified as Hazardous Air Pollutants	157 of Central Environment Council 9th Report (Appendix 1)	o-Nitrotoluene

Substances that may be classified as Hazardous Air Pollutants	158 of Central Environment Council 9th Report (Appendix 1)	1-Nitropyrene
Substances that may be classified as Hazardous Air Pollutants	159 of Central Environment Council 9th Report (Appendix 1)	3-Nitrofluoranthene
Substances that may be classified as Hazardous Air Pollutants	160 of Central Environment Council 9th Report (Appendix 1)	2-Nitrofluorene
Substances that may be classified as Hazardous Air Pollutants	161 of Central Environment Council 9th Report (Appendix 1)	3-Nitrobenzanthrone
Substances that may be classified as Hazardous Air Pollutants	162 of Central Environment Council 9th Report (Appendix 1)	Nitrobenzene
Substances that may be classified as Hazardous Air Pollutants	163 of Central Environment Council 9th Report (Appendix 1)	Nitromethane
Substances that may be classified as Hazardous Air Pollutants	164 of Central Environment Council 9th Report (Appendix 1)	Carbon disulfide
Substances that may be classified as Hazardous Air Pollutants	165 of Central Environment Council 9th Report (Appendix 1)	Nonylphenol
Substances that may be classified as Hazardous Air Pollutants	166 of Central Environment Council 9th Report (Appendix 1)	Vanadium and its compounds



Substances that may be classified as Hazardous Air Pollutants	167 of Central Environment Council 9th Report (Appendix 1)	5'-[N,N-Bis(2-acetyloxyethyl)amino]-2'-(2-bromo-4,6-dinitrophenylazo)-4'-methoxyacetanilide
Substances that may be classified as Hazardous Air Pollutants	168 of Central Environment Council 9th Report (Appendix 1)	1,3-Bis[(2,3-epoxypropyl)oxy]benzene
Substances that may be classified as Hazardous Air Pollutants	169 of Central Environment Council 9th Report (Appendix 1)	Zinc bis(N,N-dimethyldithiocarbamate); Ziram
Substances that may be classified as Hazardous Air Pollutants	170 of Central Environment Council 9th Report (Appendix 1)	Arsenic and its compounds
Substances that may be classified as Hazardous Air Pollutants	171 of Central Environment Council 9th Report (Appendix 1)	Hydrazine
Substances that may be classified as Hazardous Air Pollutants	172 of Central Environment Council 9th Report (Appendix 1)	Hydroquinone
Substances that may be classified as Hazardous Air Pollutants	173 of Central Environment Council 9th Report (Appendix 1)	4-Vinyl-1-cyclohexene
Substances that may be classified as Hazardous Air Pollutants	174 of Central Environment Council 9th Report (Appendix 1)	2-Vinylpyridine
Substances that may be classified as Hazardous Air Pollutants	175 of Central Environment Council 9th Report (Appendix 1)	N-Vinyl-2-pyrrolidone

Substances that may be classified as Hazardous Air Pollutants	176 of Central Environment Council 9th Report (Appendix 1)	Biphenyl
Substances that may be classified as Hazardous Air Pollutants	177 of Central Environment Council 9th Report (Appendix 1)	Piperazine
Substances that may be classified as Hazardous Air Pollutants	178 of Central Environment Council 9th Report (Appendix 1)	Pyridine
Substances that may be classified as Hazardous Air Pollutants	179 of Central Environment Council 9th Report (Appendix 1)	Pyrene
Substances that may be classified as Hazardous Air Pollutants	180 of Central Environment Council 9th Report (Appendix 1)	Phenylhydrazine
Substances that may be classified as Hazardous Air Pollutants	181 of Central Environment Council 9th Report (Appendix 1)	2-Phenylphenol
Substances that may be classified as Hazardous Air Pollutants	182 of Central Environment Council 9th Report (Appendix 1)	N-Phenylmaleimide
Substances that may be classified as Hazardous Air Pollutants	183 of Central Environment Council 9th Report (Appendix 1)	Phenylenediamine
Substances that may be classified as Hazardous Air Pollutants	184 of Central Environment Council 9th Report (Appendix 1)	p-Phenetidine

Substances that may be classified as Hazardous Air Pollutants	185 of Central Environment Council 9th Report (Appendix 1)	Phenol
Substances that may be classified as Hazardous Air Pollutants	186 of Central Environment Council 9th Report (Appendix 1)	1, 3-Butadiene
Substances that may be classified as Hazardous Air Pollutants	187 of Central Environment Council 9th Report (Appendix 1)	Diallyl phthalate
Substances that may be classified as Hazardous Air Pollutants	188 of Central Environment Council 9th Report (Appendix 1)	Di (2-ethylhexyl) phthalate
Substances that may be classified as Hazardous Air Pollutants	189 of Central Environment Council 9th Report (Appendix 1)	Dibutyl phthalate
Substances that may be classified as Hazardous Air Pollutants	190 of Central Environment Council 9th Report (Appendix 1)	n-Butyl benzyl phthalate
Substances that may be classified as Hazardous Air Pollutants	191 of Central Environment Council 9th Report (Appendix 1)	n-Butyl-2, 3-epoxypropyl ether
Substances that may be classified as Hazardous Air Pollutants	192 of Central Environment Council 9th Report (Appendix 1)	Butylhydroxyanisole; BHA
Substances that may be classified as Hazardous Air Pollutants	193 of Central Environment Council 9th Report (Appendix 1)	tert-Butyl hydroperoxide

Substances that may be classified as Hazardous Air Pollutants	194 of Central Environment Council 9th Report (Appendix 1)	Fluorides (water-soluble inorganic compounds only)
Substances that may be classified as Hazardous Air Pollutants	195 of Central Environment Council 9th Report (Appendix 1)	2-Butenal
Substances that may be classified as Hazardous Air Pollutants	196 of Central Environment Council 9th Report (Appendix 1)	Furan
Substances that may be classified as Hazardous Air Pollutants	197 of Central Environment Council 9th Report (Appendix 1)	Fluoranthene
Substances that may be classified as Hazardous Air Pollutants	198 of Central Environment Council 9th Report (Appendix 1)	Fluorene
Substances that may be classified as Hazardous Air Pollutants	199 of Central Environment Council 9th Report (Appendix 1)	2-Propyn-1-ol
Substances that may be classified as Hazardous Air Pollutants	200 of Central Environment Council 9th Report (Appendix 1)	1-Bromopropane
Substances that may be classified as Hazardous Air Pollutants	201 of Central Environment Council 9th Report (Appendix 1)	2-Bromopropane
Substances that may be classified as Hazardous Air Pollutants	202 of Central Environment Council 9th Report (Appendix 1)	Bromoform; Tribromomethane

Substances that may be classified as Hazardous Air Pollutants	203 of Central Environment Council 9th Report (Appendix 1)	Bromomethane; Methyl bromide
Substances that may be classified as Hazardous Air Pollutants	204 of Central Environment Council 9th Report (Appendix 1)	Hexachlorobenzene
Substances that may be classified as Hazardous Air Pollutants	205 of Central Environment Council 9th Report (Appendix 1)	Hexamethylenediamine
Substances that may be classified as Hazardous Air Pollutants	206 of Central Environment Council 9th Report (Appendix 1)	Hexamethylene diisocyanate
Substances that may be classified as Hazardous Air Pollutants	207 of Central Environment Council 9th Report (Appendix 1)	Hexane
Substances that may be classified as Hazardous Air Pollutants	208 of Central Environment Council 9th Report (Appendix 1)	Beryllium and its compounds
Substances that may be classified as Hazardous Air Pollutants	209 of Central Environment Council 9th Report (Appendix 1)	Water-soluble salts of peroxodisulfuric acid
Substances that may be classified as Hazardous Air Pollutants	210 of Central Environment Council 9th Report (Appendix 1)	Perfluoro(octane-1-sulfonic acid); PFOS
Substances that may be classified as Hazardous Air Pollutants	211 of Central Environment Council 9th Report (Appendix 1)	Benzene

Substances that may be classified as Hazardous Air Pollutants	212 of Central Environment Council 9th Report (Appendix 1)	1, 2, 4-Benzenetricarboxylic 1, 2-anhydride
Substances that may be classified as Hazardous Air Pollutants	213 of Central Environment Council 9th Report (Appendix 1)	Benzo[a]anthracene
Substances that may be classified as Hazardous Air Pollutants	214 of Central Environment Council 9th Report (Appendix 1)	Benzotrichloride; Benzylidyne trichloride
Substances that may be classified as Hazardous Air Pollutants	215 of Central Environment Council 9th Report (Appendix 1)	Benzo[a]pyrene
Substances that may be classified as Hazardous Air Pollutants	216 of Central Environment Council 9th Report (Appendix 1)	Benzo[e]pyrene
Substances that may be classified as Hazardous Air Pollutants	217 of Central Environment Council 9th Report (Appendix 1)	Benzo[b]fluoranthene
Substances that may be classified as Hazardous Air Pollutants	218 of Central Environment Council 9th Report (Appendix 1)	Benzo[j]fluoranthene
Substances that may be classified as Hazardous Air Pollutants	219 of Central Environment Council 9th Report (Appendix 1)	Benzo[k]fluoranthene
Substances that may be classified as Hazardous Air Pollutants	220 of Central Environment Council 9th Report (Appendix 1)	Pentachlorobenzene

Substances that may be classified as Hazardous Air Pollutants	221 of Central Environment Council 9th Report (Appendix 1)	Boron compounds
Substances that may be classified as Hazardous Air Pollutants	222 of Central Environment Council 9th Report (Appendix 1)	Polychlorinated naphthalene
Substances that may be classified as Hazardous Air Pollutants	223 of Central Environment Council 9th Report (Appendix 1)	Polychlorinated biphenyl; PCB
Substances that may be classified as Hazardous Air Pollutants	224 of Central Environment Council 9th Report (Appendix 1)	Formaldehyde
Substances that may be classified as Hazardous Air Pollutants	225 of Central Environment Council 9th Report (Appendix 1)	Manganese and its compounds
Substances that may be classified as Hazardous Air Pollutants	226 of Central Environment Council 9th Report (Appendix 1)	Maleic anhydride
Substances that may be classified as Hazardous Air Pollutants	227 of Central Environment Council 9th Report (Appendix 1)	Methacrylic acid
Substances that may be classified as Hazardous Air Pollutants	228 of Central Environment Council 9th Report (Appendix 1)	2, 3-Epoxypropyl methacrylate
Substances that may be classified as Hazardous Air Pollutants	229 of Central Environment Council 9th Report (Appendix 1)	Methyl methacrylate

Substances that may be classified as Hazardous Air Pollutants	230 of Central Environment Council 9th Report (Appendix 1)	N-Methylaniline
Substances that may be classified as Hazardous Air Pollutants	231 of Central Environment Council 9th Report (Appendix 1)	Methylamine
Substances that may be classified as Hazardous Air Pollutants	232 of Central Environment Council 9th Report (Appendix 1)	1-Naphthyl N-methylcarbamate; carbaryl; NAC
Substances that may be classified as Hazardous Air Pollutants	233 of Central Environment Council 9th Report (Appendix 1)	2-sec-Butylphenyl N-methylcarbamate; Fenobucarb; BPMC
Substances that may be classified as Hazardous Air Pollutants	234 of Central Environment Council 9th Report (Appendix 1)	3-Methylthiopropenal
Substances that may be classified as Hazardous Air Pollutants	235 of Central Environment Council 9th Report (Appendix 1)	1-Methylnaphthalene
Substances that may be classified as Hazardous Air Pollutants	236 of Central Environment Council 9th Report (Appendix 1)	2-Methylnaphthalene
Substances that may be classified as Hazardous Air Pollutants	237 of Central Environment Council 9th Report (Appendix 1)	4, 4' -Methylenedianiline
Substances that may be classified as Hazardous Air Pollutants	238 of Central Environment Council 9th Report (Appendix 1)	4, 4' -Methylenebis(2-chloroaniline); 3, 3' -Dichloro-4, 4' - diaminodiphenylmethane



Substances that may be classified as Hazardous Air Pollutants	239 of Central Environment Council 9th Report (Appendix 1)	Methylenebis(4,1-cyclohexylene) diisocyanate
Substances that may be classified as Hazardous Air Pollutants	240 of Central Environment Council 9th Report (Appendix 1)	Methylenebis(4-phenyl isocyanate); Methylenebis(4,1-phenylene) diisocyanate
Substances that may be classified as Hazardous Air Pollutants	241 of Central Environment Council 9th Report (Appendix 1)	2-Methoxyethanol; Ethylene glycol monomethyl ether
Substances that may be classified as Hazardous Air Pollutants	242 of Central Environment Council 9th Report (Appendix 1)	2-Mercaptoimidazoline; Ethylenethiourea; 2-Imidazolidinethione
Substances that may be classified as Hazardous Air Pollutants	243 of Central Environment Council 9th Report (Appendix 1)	Molybdenum and its compounds
Substances that may be classified as Hazardous Air Pollutants	244 of Central Environment Council 9th Report (Appendix 1)	Morpholine
Substances that may be classified as Hazardous Air Pollutants	245 of Central Environment Council 9th Report (Appendix 1)	Dimethyl 2,2-dichlorovinyl phosphate; Dichlorvos; DDVP
Substances that may be classified as Hazardous Air Pollutants	246 of Central Environment Council 9th Report (Appendix 1)	Tris(2-chloroethyl) phosphate
Substances that may be classified as Hazardous Air Pollutants	247 of Central Environment Council 9th Report (Appendix 1)	Tris(2,3-dibromopropyl) phosphate

Substances that may be classified as Hazardous Air Pollutants	248 of Central Environment Council 9th Report (Appendix 1)	Tritolyl phosphate
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	1 of Central Environment Council 9th Report (Appendix 2)	Acrylonitrile
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	2 of Central Environment Council 9th Report (Appendix 2)	Acetaldehyde
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	3 of Central Environment Council 9th Report (Appendix 2)	Vinyl chloride monomer; Chloroethylene; Vinyl chloride
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	4 of Central Environment Council 9th Report (Appendix 2)	Methyl chloride; Chloromethane
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	5 of Central Environment Council 9th Report (Appendix 2)	Chromium and chromium(III) compounds
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	6 of Central Environment Council 9th Report (Appendix 2)	Chromium(VI) compounds
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	7 of Central Environment Council 9th Report (Appendix 2)	Chloroform
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	8 of Central Environment Council 9th Report (Appendix 2)	Ethylene oxide

Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	9 of Central Environment Council 9th Report (Appendix 2)	1,2-Dichloroethane
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	10 of Central Environment Council 9th Report (Appendix 2)	Dichloromethane; Methylene dichloride
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	11 of Central Environment Council 9th Report (Appendix 2)	Mercury and its compounds
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	12 of Central Environment Council 9th Report (Appendix 2)	Dioxins (Polychlorinated dibenzofurans and Polychlorinated dibenzo-p-dioxins)
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	13 of Central Environment Council 9th Report (Appendix 2)	Tetrachloroethylene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	14 of Central Environment Council 9th Report (Appendix 2)	Trichloroethylene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	15 of Central Environment Council 9th Report (Appendix 2)	Toluene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	16 of Central Environment Council 9th Report (Appendix 2)	Nickel compounds
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	17 of Central Environment Council 9th Report (Appendix 2)	Arsenic and its compounds

Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	18 of Central Environment Council 9th Report (Appendix 2)	1,3-Butadiene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	19 of Central Environment Council 9th Report (Appendix 2)	Beryllium and its compounds
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	20 of Central Environment Council 9th Report (Appendix 2)	Benzene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	21 of Central Environment Council 9th Report (Appendix 2)	Benzo[a]pyrene
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	22 of Central Environment Council 9th Report (Appendix 2)	Formaldehyde
Substances that may be classified as Hazardous Air Pollutants (Priority Action Substances)	23 of Central Environment Council 9th Report (Appendix 2)	Manganese and its compounds

### Typical VOC substances in Japan

Order	CAS RN®	Substance name
1	108-88-3	Toluene
2	1330-20-7	Xylene
3	108-67-8	1, 3, 5-Trimethylbenzene
4	141-78-6	Ethyl acetate
5	124-18-5	Deccan
6	67-56-1	Methanol
7	75-09-2	Dichloromethane
8	78-93-3	Methyl ethyl ketone
9	106-97-8	n-Butane
10	75-28-5	Isobutane
11	79-01-6	Trichloroethylene

12	67-30-0	Isopropanol
13	123-86-4	Butyl acetate
14	67-64-1	Acetone
15	108-10-1	Methyl isobutyl ketone
16	111-76-2 7580-85-0	2-Butoxyethanol, 2-tert-Butoxyethanol
17	110-54-3	n-Hexane
18	78-92-2	n-Butanol
19	109-66-0	n-Pentane
20	107-01-7	cis-2-Butene
21	78-83-1	Isobutanol
22	107-98-2	Propylene glycol monomethyl ether
23	127-18-4	Tetrachloroethylene
24	110-82-7	Cyclohexane
25	109-60-4	Propyl acetate
26	624-64-6	trans-2-Butene
27	110-80-5	2-Ethoxyethanol
28	1120-21-4	Undecane
29	111-84-2	Nonane
30	108-65-6	2-Propanol, 1-methoxy-, acetate
31	107-83-5	2-Methylpentane
32	107-21-1	Ethylene glycol
33	513-35-9	2-Methyl-2-butene
34	1678-91-7	Ethylcyclohexane
35	119-64-2	Tetraline
36	110-43-0	2-Heptanone
37	591-78-6	Hexan-2-one
38	74-87-3	Chloromethane
39	100-51-6	Benzyl alcohol
40	120-92-3	Cyclopentanone
41	563-46-2	2-Methyl-1-butene
42	142-82-5	n-Heptane
43	92-51-3	Bicyclohexyl
44	68-12-2	N,N-Dimethylformamide
45	646-04-8	trans-2-Pentene
46	627-20-3	cis-2-Pentene
47	100-42-5	Styrene
48	872-50-4	1-Methyl-2-pyrrolidone
49	111-15-9	2-Ethoxyethyl acetate
50	71-43-2	Benzene
51	78-59-1	Isoholone
52	108-94-1	Cyclohexanone
53	64-17-5	Ethanol
54	96-37-7	Methylcyclopentane
55	108-05-4	Vinyl acetate

56	589-34-4	3-Methylhexane
57	79-29-8	2, 3-Dimethylbutane
58	75-83-2	2, 2-Dimethylbutane
59	108-87-2	Methylcyclohexane
60	109-59-1	2-Isopropoxyethanol
61	107-06-2	1, 2-Dichloroethane
62	75-01-4	PVC monomer
63	116-14-3	Tetrafluoroethylene
64	100-41-4	Ethylbenzene
65	98-82-8	Cumene
66	75-00-3	Chloroethane
67	71-55-6	Trichloroethane
68	107-13-1	Acrylonitrile
69	109-99-9	Tetrahydrofuran
70	109-86-4	2-Methoxyethanol
71	106-94-5	1-Bromopropane
72	80-62-6	Methyl methacrylate
73	106-99-0	1, 3-Butadiene
74	75-35-4	1, 1-Dichloroethylene
75	142-82-5	2, 4-Dimethylpentane
76	75-56-9	2-Methyloxirane
77	67-66-3	Chloroform
78	74-83-9	Bromomethane
79	7705-14-8	4-Isopropenyl-1-methylcyclohexene
80	592-76-7	1-Heptene
81	123-91-1	1, 4-Dioxane
82	75-05-8	Acetonitrile
83	107-05-1	Allyl chloride
84	79-10-7	Acrylic acid
85	78-79-5	Isoprene
86	75-07-0	Acetaldehyde
87	78-87-5	1, 2-Dichloropropane
88	110-49-6	2-Methoxyethyl acetate
89	75-21-8	Oxirane
90	95-50-1	o-Dichlorobenzene
91	108-90-7	Chlorobenzene
92	107-31-3	Methyl formate
93	121-44-8	Triethylamine
94	589-81-1	3-Methylheptane
95	108-95-2	Phenol
96	90-30-2	Naphthalene
97	96-33-3	Methyl acrylate
98	108-91-8	Cyclohexylamine
99	50-00-0	Formaldehyde
100	106-89-8	2-(Chloromethyl)oxirane

# [Managed chemicals] 3.2.4 Soil Contamination Countermeasures Act,  
Japan

1	Cadmium and its compounds	Class 2
2	Sexivalent chrome compounds	Class 2
3	Chloroethylene; Vinyl chloride; Vinyl chloride monomer	Class 1
4	2-Chloro-4,6-bis(ethylamino)-1,3,5-triazine; shimazine; CAT	Class 3
5	Cyanide compounds	Class 2
6	S-4-chlorobenzyl diethylthiocarbamate	Class 3
7	Carbon tetrachloride	Class 1
8	1, 2-Dichloroethane	Class 1
9	1, 1-Dichloroethylene	Class 1
10	1, 2-Dichloroethylene	Class 1
11	1, 3-Dichloropropene	Class 1
12	Dichloromethane	Class 1
13	Mercury and its compounds	Class 2
14	Selenium and its compounds	Class 2
15	Tetrachloroethylene	Class 1
16	Tetramethylthiuram disulfide	Class 3
17	1, 1, 1-Trichloroethane	Class 1
18	1, 1, 2-Trichloroethane	Class 1
19	Trichloroethylene	Class 1
20	Lead and its compounds	Class 2
21	Arsenic and its compounds	Class 2
22	Fluorine and its compounds	Class 2
23	Benzene	Class 1
24	Boron and its compounds	Class 2
25	PCBs	Class 3
26	Organic phosphorus compounds (diethyl p-nitrophenol thiophosphate (parathion), dimethyl p-nitrophenol thiophosphate (methyl parathion), dimethyl ethylmercaptoethyl thiophosphate (demeton methyl) and ethyl-p-nitrophenylthionobenzenephosphate (EPN) only)	Class 3

## # [Managed chemicals] 3.2.5 Conflict minerals

### DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT (USA)

Public Law 111-203, 111th Congress (2010)

#### SEC. 1502. CONFLICT MINERALS.

(a) Sense of Congress on Exploitation and Trade of Conflict Minerals Originating in the Democratic Republic of the Congo.--It is the sense of Congress that the exploitation and trade of conflict minerals originating in the Democratic Republic of the Congo is helping to finance conflict characterized by extreme levels of violence in the eastern Democratic Republic of the Congo, particularly sexual- and gender-based violence, and contributing to an emergency humanitarian situation therein, warranting the provisions of section 13(p) of the Securities Exchange Act of 1934, as added by subsection (b).

Are any of the following metals intentionally included because they are necessary for the product's specifications or function?
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Are any of the following metals contained in the product because they are required in the production process, although they are not necessary for the specification or function of the product?
---

Are any of the constituent materials of the product contained in accordance with the above conditions?
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Substances
gold
tantalum
tungsten
tin

From the perspective of responsible mineral procurement, we also request the following substances to be managed in the same way as gold, tantalum, tungsten and tin.

Substances
cobalt
mica*

\* When mica is included, please also specify whether it is natural or synthetic mica.



## # [Managed chemicals] 3.2.6 Biocide

### Concerning the making available on the market and use of biocidal products (EU)

REGULATION (EU) No 528/2012

Article 3 Definitions 1.1. For the purposes of this Regulation, the following definitions shall apply:

(a) 'biocidal product' means

- any substance or mixture, in the form in which it is supplied to the user, consisting of, containing or generating one or more active substances, with the intention of destroying, deterring, rendering harmless, preventing the action of, or otherwise exerting a controlling effect on, any harmful organism by any means other than mere physical or mechanical action,
- any substance or mixture, generated from substances or mixtures which do not themselves fall under the first indent, to be used with the intention of destroying, deterring, rendering harmless, preventing the action of, or otherwise exerting a controlling effect on, any harmful organism by any means other than mere physical or mechanical action.

A treated article that has a primary biocidal function shall be considered a biocidal product.

Does the product contain any substances that fall within the above conditions?
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### # [Managed chemicals] 3.2.7 New SVHC candidate or new SVHC substances

(Not yet including in ChemSHERPA)

31st SVHC, 1 substance (2024/06/27)

Name	EC Number	CAS RN®
Bis( $\alpha$ , $\alpha$ -dimethylbenzyl) peroxide	201-279-3	80-43-3

G/TBT/N/EU/803 - WTO

Name	EC Number	CAS RN®
Resorcinol	203-585-2	108-46-3

<https://ec.europa.eu/transparency/comitology-register/screen/documents/075559/4/consult?lang=en>

## # [Managed chemicals] 3.2.8 Others

Substances	Scope
Nonylphenol and its derivatives (Reduced chemicals) Octylphenol and its derivatives Other alkylphenol and its derivatives (Including all of linear and branched isomers, and their alkoxylates)	—
Azo compounds (Dyes and pigments, and others)	Carcinogenic amine structure POPs substances as an impurity
Polyaromatic hydrocarbons (Fused substances of aromatic structures)	Carcinogenic polyaromatic hydrocarbons
Organic halogen compounds (Halogen (fluoride, chloride, bromide, and iodide) atom directly bonded to carbon atom compounds)	Any kind of regulations and guidelines POPs substances as an impurity
Palm oil, palm kernel oil, and their derivatives	Concern of environmental and human right (Certification and self audit)
Woods and related compounds (Wood, pulp, cellulose, paper, biomass, their byproducts and their derivatives)	Concern of environmental and human right (Certification and self audit)
Natural rubber and their derivatives (Natural rubber, latex and derivatives)	Concern of environmental and human right (Certification and self audit)
nanomaterials (Primary particles, at least of one dimension diameter 1-100 nm)	Hazard (Concern of unknown hazard)
micro plastics (diameter or edge less than 5 mm)	Global environment (especially aquatic organisms)

## # Revision history

Rev.	Date (YYYY/MM/DD)	Details
0	2014/3/25	
1	2014/10/15	Updated list of substances
2	2017/6/13	<p>Chemical substances reviewed, updated list of substances</p> <p>In the face of stricter management regulations on chemical substances due to changes in scientific knowledge and social conditions, we conducted a major review of the chemical substances subject to control by our company with the aim of simplifying information management.</p> <p>The changes further clarified the use of chemSHERPA (MSDSplus), a standard tool for communicating information on chemical substances in products, for items for which management regulations are revised more frequently, with the aim of simplifying management both internally and externally.</p>
3	2017/9/11	<p>Updated list of substances</p> <p>Following the publication of chemSHERPA and MSDSplus, which reflect the SVHC 17th candidate substances, we updated to the latest versions of each tool.</p>
4	2018/2/28	<p>Updated list of substances</p> <p>In order to rationalize responses during the period between the announcement of candidate substances for listing as SVHC (Substances of very high concern) and the announcement of substances to be listed and the revision of chemSHERPA, we designated SVHC candidate substances and substances to be revised that are not reflected in chemSHERPA as substances subject to our own management regulations. The list also includes the SVHC 18th candidate substances for which public opinion was being sought as of the revision date. We updated version information on chemSHERPA and MSDSplus used for communicating information on chemical substances in products following the release of new versions of chemSHERPA and MSDSplus reflecting the SVHC 18th candidate substances decision.</p>
5	2018/3/15	<p>Updated list of substances</p> <p>Following the announcement of the candidate substances for the SVHC 19th candidate substances, we included these substances in the survey.</p>
6	2018/4/26	Updated list of substances

		<p>We updated our lists to reflect the designations and revocations of chemical substances in March/April 2018 under the Chemical Substances Control Act including the Class I Specified substances, monitoring and priority assessment chemical substances lists.</p> <p>Following the European Commission decision to add SVHC, these substances were included in the scope of the study.</p>
7	2018/8/27	<p>Updated list of substances</p> <p>We updated version information on chemSHERPA used for communicating information on chemical substances in products following the release of a new version of chemSHERPA reflecting the decision on additional listing of the SVHC 19th candidate substances.</p> <p>Also, as support for MSDSplus ended in June 2018, MSDSplus-related statements were deleted.</p>
8	2018/9/6	<p>Updated list of substances</p> <p>Following the announcement of the SVHC 20th candidate substances, these substances were included in our survey.</p>
9	2019/1/18	<p>Updated list of substances</p> <p>Following the announcement of the SVHC 20th candidate substances, these substances were included in our survey.</p>
10 (Ver. 2.20)	2019/5/17	<p>We clarified the positioning of "prohibited chemical substances", "chemical substances to be reduced" and "chemical substances to be controlled" within our company.</p> <p>As progress has been made in reducing the use of nonylphenol compounds, we moved these from the list of chemical substances to be reduced to the list of chemical substances to be controlled.</p> <p>Updated list of substances</p> <p>We updated to the latest version of chemSHERPA following announcement of the new version.</p> <p>We updated the list following the decision on the Priority Assessment Chemical Substances for 2019.</p> <p>We added cobalt and mica to the list of conflict minerals from the perspective of responsible mineral sourcing.</p> <p>Following the announcement of the SVHC 21th candidate substances, we included these substances in our survey.</p> <p>We added "nonylphenols" to our list of chemical substances to be controlled.</p>

		<p>We checked and updated information on other latest versions of laws and regulations to the latest effective date. The URLs cited were also checked and updated to ensure consistency with the corresponding external information.</p>
11 (Ver. 2.21)	2019/11/20	<p>Updated list of substances</p> <p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p> <p>We updated to the latest version of chemSHERPA following announcement of the new version.</p> <p>Following the announcement of the SVHC 21st candidate substances, these substances were included in our survey.</p>
12 (Ver. 2.30)	2020/7/1	<p>Updated list of substances</p> <p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p> <p>We updated to the latest version of chemSHERPA following announcement of the new version.</p> <p>We updated monitoring chemicals and priority assessment chemicals as of April 1st 2020.</p> <p>Following the announcement of the SVHC 23rd candidate substances, we included these substances in our survey.</p>
13 (Ver. 2.40)	2021/7/1	<p>Updated list of substances</p> <p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p> <p>We added information on the revision of Class I Specified Chemical Substances of the Chemical Substances Control Act, scheduled to enter into force on October 22nd 2021.</p> <p>We updated to the latest version following the announcement of updates to chemSHERPA.</p> <p>We updated monitoring chemicals and priority assessment chemicals as of April 1st 2021.</p> <p>Following the announcement of the SVHC 25th candidate substances and the WTO/TBT notification of the SVHC listing of resorcinol, we added these substances to our survey list.</p> <p>We also listed alkylphenol compounds other than nonylphenol and octyl phenol (other than C8 and C9) in our survey list.</p>
	2022/7/1	Updated list of substances

14 (Ver. 2.50)		<p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p> <p>We updated to the latest version following the announcement of updates to chemSHERPA.</p> <p>We updated monitoring chemicals and priority assessment chemicals as of April 1st 2022.</p> <p>We amended the CAS RN® of the volatile organic compound "16 butyl cellosolve".</p> <p>Following the announcement of the SVHC 27th candidate substances and the WTO/TBT notification of the SVHC listing of resorcinol, we added these substances to our survey list.</p>
15 (Ver. 2.60)	2023/7/26	<p>Updated list of substances</p> <p>We added list of designated substances by 'Soil Contamination Countermeasures Act, Japan' from the perspective of responsible soil pollution.</p> <p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p> <p>We have changed the description for chemSHERPA to download the latest version from the website.</p> <p>We updated monitoring chemicals and priority assessment chemicals as of April 1st 2023.</p> <p>In the list of Water Pollution Prevention Act, Japan, we added four substances as Designated Substances from update of law and seven kinds of oils as 'oil'.</p> <p>Following the announcement of the SVHC 29th candidate substances and the WTO/TBT notification of the SVHC listing of resorcinol, we added these substances to our survey list.</p> <p>We added two chemical substances to be reduced.</p>
16 (Ver. 2.70)	2024/7/10	<p>Updated list of substances</p> <p>PFHxS as a new "Japan CSCL: Class I Specified Chemical Substances" were added to inhibited chemicals.</p> <p>We reformed "volatile organic compounds (VOC)" list as designated substances by 'Japan Air Pollution Control Law' from the perspective of responsible air pollution. VOCs are included in this term.</p> <p>The latest laws and regulations have been checked and the date of the last update of each law and regulation has been changed.</p>

		<p>We updated monitoring chemicals and priority assessment chemicals as of April 1st 2024.</p>
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