



KGS Procurement Standard
**Annex: Environmental Hazardous
Substance Management Standard**

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1. Purpose

This Standard has been designed to clearly specify the management standard for chemical substances contained in products or materials we purchase from suppliers. We aim to familiarize the suppliers with the management standard.

2. Scope of Application

This Standard applies to all products, parts, materials, and indirect materials we purchase. It also applies to chemicals used in the manufacturing processes of the above items.

3. Application of the Standard

It goes without saying that this Standard has been established in compliance with laws. Should a customer wish to apply its own standard, however, we may apply the customer standard separately from usual cases for other customers. As for our suppliers, we request them to ensure that the KGS standard is applied for the operations of their consignee companies or those from which they purchase goods and materials for manufacturing products which are delivered to our company.

4. Definition of Terms

1) Supplier and Customer

“Supplier” refers to a company or a group from whom we purchase goods.
“Customer” refers to a company or a group to whom we sell goods.

2) Indirect material

It refers to packaging materials (carton, plastic bag, cushioning material, tape, label, ink, adhesive, etc.) and chemicals (mold lubricant, solvent, cleaning agent, etc.).

3) Environmental hazardous substance

It refers to a substance contained in products and materials or used during manufacture and with a significantly adverse impact (aspect) on human body and/or global environment. In accordance with laws and regulations as well as customer requests, we specify the substance to manage it by planning its elimination or reduction.

4) Containment

It refers to a condition in which the substance is mixed in or added and attached to a product, or fills the product regardless of whether it is intentional or not.

5) Impurity

It refers to a substance that is naturally and unintentionally contained in a material and/or formed during production and cannot be removed completely by technical means. For the substances that have Maximum Content Value (MCV) defined in the Procurement Standard must not be contained more than the quantity of MCV even if the substances are impurities.

6) Content rate

It refers to a value that the mass of the designated substance in one component (in homogeneous material) divided by the mass of the component (the homogeneous material).

7) Homogeneous material

A homogeneous material refers to a material that cannot be mechanically disjointed into different materials. The term “mechanically disjointed” means that the materials can be, in principle, separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.

(Example: plastics, ceramics, glass, metals, alloys, paper, board, resins, ink, coat, etc.)

8) Evidence

Evidence is the result of quantitative and qualitative analysis of a specified substance. For the substances with the specific MCV, its evidence must be obtained by quantitative analysis method with adequate accuracy. Refer to the supplementary document for the details of the analysis methods.

5. Management Standard for Environmental Hazardous Substances

1) We manage environmental hazardous substances by classifying them into the following three categories.

A	Banned Substance	Must not be contained in products, packaging materials, etc.
		Must not be used in manufacturing processes
B	Restricted Substance	Containment in products and packaging materials must be restricted.
		Use in manufacturing processes must be restricted.
C	Controlled Substance	The fact that the substance is contained in a product is preferably understood.
		The amount of use of the substance in a manufacturing process is preferably understood.

Refer to “List-1: List of Environmental Hazardous Substances” and the supplementary document for the details of the substances subject to the control.

2) Survey on environmental hazardous substances

We request suppliers to conduct a survey and provide information on the chemical substances used for products, parts, materials, or packaging materials which are delivered to our company as well as in the manufacturing processes of the above items. Refer to “List-1: List of Environmental Hazardous Substances” and the supplementary document for the survey.

- a) We request suppliers to fill out the separate form “Chemical Substance Content Survey Sheet” for each product to be delivered to our company. If the suppliers cannot disclose all of the contained substances because they are proprietary information, we would like to be advised so and would like them to provide the Certificate of Non-containment of Banned Chemical Substances.
- b) We request suppliers to fill out the separate form “Environmental Hazardous Substances in Manufacturing Process” for chemical substances used in the manufacturing plant of the product delivered to our company.
- c) We request suppliers to submit evidence (analysis data) of the substances upon request from our customers.
- d) We may request suppliers to conduct a special survey that is not specified in the Standard upon request from our customers.

List of Environmental Hazardous Substances

	(A) Banned Substances (*: Conditionally exempted)			(B) Restricted Substances			(C) Controlled Substances
	KGS Ref. No.	Substance	Page in supplementary	KGS Ref. No.	Substance	Page in supplementary	
Inclusion in Products, Parts, Raw Materials, or Packaging Materials	A-1	Polybrominated biphenyl (PBB)*	4, 7	B-1	Organic phosphorous compounds	23	Class 1 Specified Chemical Substances under the PRTR Law (Substances excluding those listed on the left) Page in supplementary document 29-37
	A-2	Polybrominated biphenyl ether (PBDE)	4, 7	B-2	Thiram	24	
	A-3	Polychlorinated biphenyl (PCB)	7	B-3	Simazine	24	
	A-4	Polychlorinated terphenyl (PCT)	7	B-4	Thiobencarb	24	
	A-5	Polychlorinated naphthalene (PCN) = Number of chlorines is three or more.	7	B-5	Selenium and its compounds	24	
	A-6	Mirex	7	B-6	Carbon dioxide	24	
	A-7	Cadmium and its compounds*	4, 8	B-7	Methane	24	
	A-8	Lead and its compounds*	4, 8, 9	B-8	Dinitrogen monoxide	24	
	A-9	Mercury and its compounds*	4, 10	B-9	Sulfur Hexafluoride	24	
	A-10	Hexavalent chromium and its compounds*	5, 11	B-10	Chloroform	24	
	A-11	Asbestos	11	B-11	Halogenated resin additives (excluding A-1, A-2)	24-25	
	A-12	DDT	12				
	A-13	Chlordanes	12	B-12	Antimony and its compounds	26	
	A-14	Bis (tri-n-butyltin) oxide (TBTO)	12	B-13	Beryllium and its compounds	26	
	A-15	Tributyl Tins (TBTs) Triphenyl Tins (TPTs)	12, 13	B-14	Bismuth and its compounds	26	
				B-15	Chromium and its compounds (excluding A-10)	26	
	A-16	Azo compounds* (generating the specific amines)	5, 14	B-16	Cobalt and its compounds	26	
	A-17	2,4,6-tri-tert-butylphenol	14	B-17	Nickel and its compounds	26	
	A-18	Arsenic and its compounds*	5, 14	B-18	Organic tin and its compounds (excluding A-14)	26	
	A-19	Aldrin	14				
	A-20	Endrin	14	B-19	Tellurium and its compounds	26	
	A-21	Dieldrin	14	B-20	Thallium and its compounds	26	
	A-22	Radioactive substance	14	B-21	Azo compounds (excluding A-16)	26	
	A-23	Hexachlorobenzene	15	B-22	Phthalate esters	27	
	A-24	N,N'-dityl-para-phenylenediamine, N-tolyl-N'-xylyl-para-phenylenediamine, and N,N'-dixylil-para-phenylenediamine	15	B-23	Bisphenol A	27	
				B-24	Exempted use of banned substances with conditional exemptions		
	A-25	Toxaphene camphechloro octachlorocamphene polychlorocamphene	15	B-25	Volatile organic compounds (VOC) (excluding A-33)	27	
	A-26	Yellow phosphorus	15	B-26	Perfluorooctanoic acid (PFOA)	27	
	A-27	4-nitrodiphenyl and its salt	15				
	A-28	Bis-(chloromethyl) ether	15				
	A-29	Benzene	15				
	A-30	Formaldehyde*	5, 15				
	A-31	Polyvinyl chloride*	6, 15				
	A-32	Chlorinated paraffins *	6, 16				
	A-33	Ozone depleting substances*	16				
	A-34	Dioxins	17				
	A-35	Hydrofluorocarbon (HFC)	17				
	A-36	Perfluorocarbon (PFC)	18				
	A-37	Perfluorooctane sulfonate (PFOS) and its analogues	6, 18				
	A-38	Kelthane (Dicofol)	18				
A-39	Hexachlorobutadiene (HCBd)	18					
A-40	Specific benzotriazole	18					
Use in Manufacturing Process	1	Ozone depleting substances	18	1	HCFCs	28	
	2	Trichloroethylene	18				
	3	Tetrachloroethylene	18				
	4	Methylene chloride	18				
	5	1,2-Dichloroethane	18				
	6	1,1-dichloroethylene	18				
	7	cis-1,2-dichloroethylene	18				
	8	1,1,2-Trichloroethane	18				
	9	1,3-Dichloropropene	18				

- The conditions such as usages or maximum concentration values (MCV) for the banned substances are specified in the supplementary document.
- The banned substances must not be added intentionally for any usage. (It is also banned to intentionally contain the substances with the amount of MCV or less.)
- Even impurities must not exceed its maximum concentration values.
- Any substances which are not listed (because they are not likely to be used in KGS's products and not subjects of surveys) must not be used if it is banned to use or manufacture them by law. KGS may conduct a separate survey for those substances.
- The total content of cadmium, lead, mercury, and hexavalent chromium for packaging materials must be 100 ppm or less.
- The applicable laws and measuring methods for the banned substances are specified in the supplementary document for reference.
- Substances banned for manufacturing processes must not be used regardless of whether they will be contained in the products or not.

1. Banned substances with conditional exemptions (depending on the item, the application or the maximum content value-MCV)

A-1 : Polybrominated biphenyl (PBB)

	Application	MCV
Banned	All applications (e.g. flame retardant for plastics)	1000 ppm

A-2 : Polybrominated biphenyl ether (PBDE)

	Application	MCV
Banned	All applications (e.g. flame retardant in plastics)	1000 ppm

A-7 : Cadmium and its compounds

	Application	MCV
Banned	- Plastics (including rubber), paint, ink	5 ppm
	- Packaging materials	Total of 100 ppm of Cadmium, Hexavalent chromium, Lead and Mercury (resin: 5 ppm)
	- Any other applications except for the applications below.	100 ppm
Exempted	- Cadmium and its compounds in electrical contacts and cadmium plating for which high reliability is required and which have no substitutes materials - Applications exempted under RoHS such as optical glass, filter glass, etc.	-

A-8 : Lead and its compounds

	Application	MCV
Banned	- Plastics (including rubber), paint, ink	100 ppm
	- External electrode of parts and surface coating of terminal	
	- Packaging materials	Total of 100 ppm of Cadmium, Hexavalent Chromium, Lead and Mercury
	- Steel	0.35wt%
	- An alloying element of aluminum and batteries, battery pack	0.4wt%
	- Alloy of copper, brass, and phosphor bronze	4wt%
	- Lead in plating of electroless nickel plating and electroless gold plating - Any other application except for the exemptions below	1000 ppm
Exempted	- Electronic ceramic parts (e.g. piezoelectronic devices, dielectric materials) - Glass materials - High melting temperature type solders (containing 85% or more lead) - Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight - Solders for servers, storage and storage array systems - Network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications - Existing product which we sell to limited customers upon their request (including addition of upgraded items)	—

A-9 : Mercury and its compounds

	Application	MCV
Banned	- Packaging materials	Total of 100 ppm of Cadmium, Hexavalent Chromium, Lead and Mercury
	- Any other application except for the exemptions below	1000 ppm
Exempted	- Compact fluorescent lamps and straight-tube fluorescent lamps not exceeding 5 mg per lamp	—
	- Other lamps (e.g. high-pressure mercury vapor lamps)	

A-10 : Hexavalent chromium and its compounds

	Application	MCV
Banned	- Hexavalent chromium as an anti-corrosion of the plating surface (screw, steel plate and others), and ingredient of ink, paint, colorants.	1000 ppm
	- Packaging materials	Total of 100 ppm of Cadmium, Hexavalent Chromium, Lead and Mercury

A-16 : Azo compounds

	Application	MCV
Banned	- Azo compounds which generates following amines by decomposing in accordance with the test method specified in 76/769/EEC and which are contained in pigments used for parts which contact with human body	—

Amines which should not be formed by decomposition of Azo compounds

Substance name	English Name	CAS No.	Formula
4-アミノジフェニル	4-amimodiphenyl	92-67-1	C ₁₂ H ₁₁ N ₃
ベンジジン	Benzedrine	92-87-5	C ₁₂ H ₁₂ N ₂
4-クロロ- <i>o</i> -トルイジン; 4-クロロ-2-メチルアニリン	4-chloro- <i>o</i> -toluidine	95-69-2	C ₇ H ₈ ClN
2-ナフチルアミン	2-naphthylamine	91-59-8	C ₁₀ H ₉ N
<i>o</i> -アミノアゾトルエン	ortho-Aminoazotoluene	97-56-3	C ₁₄ H ₁₅ N ₃
5-ニトロ- <i>o</i> -トルイジン; 2-アミノ-4-ニトロトルエン	5-nitro- <i>o</i> -toluidine	99-55-8	C ₇ H ₈ N ₂ O ₂
<i>p</i> -クロロアニリン	<i>p</i> -chloroaniline	106-47-8	C ₆ H ₆ ClN
2, 4-ジアミノアニソール	2,4-diaminoanisole	615-05-4	C ₇ H ₁₀ N ₂ O
4, 4'-ジアミノジフェニルメタン; 4,4'-メチレンジアニリン	4,4'-diaminodiphenylmethane	101-77-9	C ₁₃ H ₁₄ N ₂
3, 3'-ジクロロベンジジン	3,3-dichlorobenzidine	91-94-1	C ₁₂ H ₁₀ Cl ₂ N ₂
3, 3'-ジメトキシベンジジン; ジアニジン及びその塩	3,3-dimethoxybenzidine; <i>o</i> -dianisidine	119-90-4	C ₁₄ H ₁₆ N ₂ O ₂
3, 3'-ジメチルベンジジン	3,3-dimethylbenzidine	119-93-7	C ₁₄ H ₁₆ N ₂
3, 3'-ジメチル-4, 4'-ジアミノジフェニルメタン	3,3-dimethyl-4,4'-diaminodiphenylmethane	838-88-0	C ₁₅ H ₁₈ N ₂
<i>p</i> -クレシジン; 2-メトキシ-5-メチルアニリン	<i>p</i> -cresidine; 2-methoxy-5-methylaniline	120-71-8	C ₈ H ₁₁ NO
4, 4'-メチレン-ビス-(2-クロロアニリン);	4,4'-methylene-bis-(2-chloroaniline)	101-14-4	C ₁₃ H ₁₂ Cl ₂ N ₂
3, 3'-ジクロロ-4, 4'-ジアミノジフェニルメタン	3,3'-dichloro-4,4'-diaminodiphenylmethane		
4, 4'-オキシジアニリン; 4,4'-ジアミノジフェニルエーテル	4,4'-oxydianiline	101-80-4	C ₁₂ H ₁₂ N ₂ O
4, 4'-チオジアニリン; 4,4'-ジアミノジフェニルスルファイト	4,4'-thiodianiline	139-65-1	C ₁₂ H ₁₂ N ₂ S
<i>o</i> -トルイジン	ortho-toluidine	95-53-4	C ₇ H ₉ N
2, 4-トルエンジアミン	2,4-toluenediamine	95-80-7	C ₇ H ₁₀ N ₂
2, 4, 5-トリメチルアニリン	2,4,5-trimethylaniline	137-17-7	C ₉ H ₁₃ N
<i>o</i> -アニシジン	<i>o</i> -anisidine	90-04-0	C ₇ H ₉ NO
4-アミノアゾベンゼン	4-aminoazobenzene	60-09-3	C ₁₂ H ₁₁ N ₃

A-18 : Arsenic and its compounds

	Application	MCV
Banned	- Any applications other than the following exemptions.	1000 ppm
Exempted	- Applications in semi-conductors, glass, thin copper, photographic sensitizers, magnetic filters, batteries	—

A-30 : Formaldehyde

	Application	MCV
Banned	- Applications in wooden products - Applications in fibers which contact with human body	—
Exempted	- Any applications other than the above	—

A-31 : Polyvinyl chloride (PVC)

	Application	MCV
Banned	<ul style="list-style-type: none"> - Materials, products, and goods which are newly adopted - Binders (PVC) - Packaging materials, indication labels - Heat shrinkable tube - PCB for noncontact IC card - Coated steel panel - General wiring material for internal use - Power supply codes (other than the use in EU countries) - Any application other than the following exemptions 	—
Exempted	<ul style="list-style-type: none"> - Existing product which we sell to limited customers upon their request(including addition of upgraded items) - Exterior equipment (MEF) - Fiber-optic polyvinyl chloride cable - Power strips for import into EU countries - Wiring material for external use 	—

A-32 : Chlorinated paraffin

	Application	MCV
Banned	Short-chained chlorinated paraffin (SCCP) (C10-13, Cl = 48wt% or more)	—

A-37 : Perfluorooctanesulfonic acid (PFOS) and its analogues

	Application	MCV
Banned	- Products with its final form being a substance or dispending	50 ppm
	- Semi-finished or molded products with its final form not being a substance or dispending	1000 ppm
	- Covering material	1µg/m ²
Exempted	<ul style="list-style-type: none"> - Coating agent for photos used for film, paper, and printing plates - Photoresist for photolithography processes or antireflective coating agent 	—

2. Banned Substances in Detail

A-1 : Polybrominated biphenyl (PBB)

Substance Name	English Name	CAS No.	Formula	Application
ポリ臭化ビフェニル	Polybrominated biphenyls	e.g. 67774-32-7	$C_{12}H_{10-x}Br_x$ ($x=1-10$)	Flame retardant

A-2 : Polybrominated biphenyl ether (PBDE)

Substance Name	English Name	CAS No.	Formula	Application
ポリブロモジフェニルエーテル ;PBDE ポリブロモジフェニルオキシド ;PBDO ポリブロモビフェニルエーテル ;PBBE	Polybromodiphenyl ethers Polybromodiphenyl oxides Polybrominated biphenyl ethers		$C_{12}H_{10-x}Br_xO$ ($x=1-10$)	Flame retardant
デカブロモジフェニルエーテル ;DBDE デカブロモジフェニルオキシド ;DBDPO	Decabromodiphenyl ether Decabromodiphenyl oxide	1163-19-5	$C_{12}Br_{10}O$	Flame retardant (for PE, ABS, polyester)
オクタブロモジフェニルエーテル ;OBDE オクタブロモジフェニルオキシド ; OctaBDE	Octabromodiphenyl ether Octabromodiphenyl oxide	32536-52-0	$C_{12}H_2Br_8O$	Flame retardant (for ABS, HIPS LDPE)
ヘキサブロモジフェニルエーテル ; ヘキサブロモジフェニルオキシド	Hexabromodiphenyl ether Hexabromodiphenyl oxide	36483-60-0	$C_{12}H_4Br_6O$	Flame retardant
ペンタブロモジフェニルエーテル ; ペンタブロモジフェニルオキシド PentaBDE	Pentabromodiphenyl ether Pentabromodiphenyl oxide	32534-81-9	$C_{12}H_5Br_5O$	Flame retardant

A-3 : Polychlorinated biphenyl (PCB)

Substance Name	English Name	CAS No.	Formula	Application
PCB; ポリ塩化ビフェニル ; 塩素化ビフェニル	Polychlorinated biphenyl	1336-36-3	$C_{12}H_{10-x}Cl_x$ ($x=1-10$)	Heat medium, Lubricant, oil for condenser

A-4 : Polychlorinated terphenyl (PCT)

Substance Name	English Name	CAS No.	Formula	Application
PCT ; ポリ塩化ターフェニル	Polychlorinated terphenyl	61788-33-8	$C_{18}H_{14-x}Cl_x$ ($x=1-14$)	Lubricant, preservative, paint

A-5 : Polychlorinated naphthalene (PCN)

Substance Name	English Name	CAS No.	Formula	Application
PCN; ポリ塩化ナフタレン ; クロロナフタレン	Polychlorinated naphthalene		$C_{10}H_{8-x}Cl_x$ ($x \geq 3$)	Lubricant, Paint, plastics
トリクロロナフタレン	Trichloronaphthalene	1321-65-9	$C_{10}H_5Cl_3$	Stabilizer,
テトラクロロナフタレン	Tetrachloronaphthalene	1335-88-2	$C_{10}H_4Cl_4$	Electric insulator
ペンタクロロナフタレン	Pentachloronaphthalene	1321-64-8	$C_{10}H_3Cl_5$	Flame retardant
オクタクロロナフタレン	Octachloronaphthalene	2234-13-1	$C_{10}Cl_8$	Antiseptic

A-6 : Mirex

Substance Name	English Name	CAS No.	Formula	Application
ミレックス ; パークロロデカン ; ドデカクロロペンタシクロ [5.3.0.02, 6.03, 9.04, 8] デカン	Mirex; Perchlordecone; Dodecachlorooctahydro- 1,3,4-metheno-2H- cyclobuta (c, d) pentalene	2385-85-5	$C_{10}Cl_{12}$	Pesticide, Flame retardant

A-7 : Cadmium and its compounds

Substance Name	English Name	CAS No.	Formula	Application
カドミウム; 金属カドミウム	Cadmium	7440-43-9	Cd	Contact materials Surface treatment
カドミウム含有合金	Cadmium alloys			Low-temperature solder, fuse, others
酸化カドミウム	Cadmium oxide	1306-19-0	CdO	Colorant, alkali cell, chemical synthesis materials
塩化カドミウム	Cadmium chloride	10108-64-2	CdCl ₂	Plating bath PVC Stabilizer
硫化カドミウム; カドミウム黄	Cadmium sulfide	1306-23-6 8047-07-5	CdS	Optical element Paint Ink
硝酸カドミウム	Cadmium nitrate	10325-94-7	Cd(NO ₃) ₂	Colorant, battery Photo
硝酸カドミウム-4水和塩	Cadmium nitrate tetrahydrate	10022-68-1	Cd(NO ₃) ₂ ·4H ₂ O	
硫酸カドミウム	Cadmium sulfate	10124-36-4	CdSO ₄	Cadmium battery Plate brightener
ステアリン酸カドミウム; カドミウム石鹸	Cadmium stearate	2223-93-0	Cd(C ₁₈ H ₃₅ O ₂) ₂	PVC Stabilizer
その他カドミウム化合物	Other cadmium compounds			

A-8 : Lead and its compounds

Substance Name	English Name	CAS No.	Formula	Application
鉛	Lead metal	7349-92-1	Pb	
鉛/スズ合金	Lead/tin alloy		Pb-Sn	Solder, braze, electric connection
一酸化鉛; 酸化第一鉛; 酸化鉛(II); 密陀僧; リサーチ	Lead (II) oxide	1317-36-8	PbO	Colorant, rubber accelerator lubricant
二酸化鉛; 酸化第二鉛; 酸化鉛(IV); 過酸化鉛	Lead (IV) oxide	1309-60-0	PbO ₂	lead battery, rubber curing agent, raw material for colorant
三酸化二鉛; 三二酸化鉛	Dilead trioxide		Pb ₂ O ₃	
四酸化三鉛; 四三酸化鉛 鉛丹; 光明丹	Lead (II, IV) oxide	1314-41-6	Pb ₃ O ₄	Colorant, lead battery, glass, paint
アジ化鉛; 鉛アジド	Lead azide	13424-46-9	PbN ₆	
二弗化鉛; 弗化第一鉛; 弗化鉛(II)	Lead (II) fluoride	7783-46-2	PbF ₂	Special optical glass, pigment
二塩化鉛; 塩化鉛(II); クロル鉛	Lead (II) chloride	7758-95-4	PbCl ₂	
四塩化鉛; 塩化鉛(IV)	Lead (IV) chloride;	13463-30-4	PbCl ₄	
沃化第一鉛 沃化鉛(II)	Lead (II) iodide	10101-63-0	PbI ₂	Bronze, printing, photographs
硫化鉛(II)	Lead (II) sulfide	1314-87-0	PbS	Infrared ray detectors
シアン化鉛(II)	Lead (II) cyanide	592-05-2	Pb(CN) ₂	Antirust pigment
硼弗化鉛	Lead fluoroborate	13814-96-5	Pb(BF ₄) ₂	Plating bath, anticorrosive surface treatment
珪弗化鉛	Lead fluosilicate	25808-74-6	PbSiF ₆	Plating bath, lead refinement

Substance Name	English Name	CAS No.	Formula	Application
硝酸鉛	Lead nitrate	10099-74-8	Pb(NO ₃) ₂	Optical glass
炭酸鉛	Lead carbonate	598-63-0	PbCO ₃	
ヒドロキシ炭酸鉛 塩基性炭酸鉛; 鉛白	Lead Hydroxycarbonate	1344-36-1	(PbCO ₃) ₂ Pb(OH) ₂	Colorant, PVC Stabilizer
過塩素酸鉛	Lead perchlorate	13637-76-8	Pb(ClO ₄) ₂	
硫酸第一鉛; 硫酸鉛(Ⅱ)	Lead (II) sulfate	7446-14-2; 15739-80-7	PbSO ₄	Colorant, rubber compounding ingredients, PVC stabilizers, batteries
オキシ硫酸鉛 三塩基性硫酸鉛	Lead oxide sulfate	12202-17-4	Pb ₄ SO ₇	Colorant
オルト燐酸鉛; 燐酸鉛	Lead (II) Phosphate	7446-27-2	Pb ₃ (PO ₄) ₂	Plastics Stabilizer
チオシアン酸鉛	Lead thiocyanate	592-87-0	Pb(SCN) ₂	Stain, matches
酢酸第一鉛三水合物 酢酸鉛(Ⅱ)三水合物	Lead (II) acetate tryhydrate	6080-56-4	Pb(CH ₃ COO) ₂ - 3H ₂ O	
酢酸第一鉛; 酢酸鉛(Ⅱ); 鉛糖	Lead (II) acetate	301-04-2	Pb(CH ₃ COO) ₂	
酢酸第二鉛; 酢酸鉛(Ⅳ)	Lead (IV) acetate	546-67-8	Pb(CH ₃ COO) ₄	
オレイン酸鉛	Lead oleate	1120-46-3	Pb[CH ₃ (CH ₂) ₇ CH=CH(CH ₂) ₇ COO] ₂	Lubricant, curing agents, etc.
ステアリン酸鉛	Lead stearate	7428-48-0	Pb(C ₁₇ H ₃₅ COO) ₂	PVC Stabilizer, Lubricant
メタ硼酸鉛(Ⅱ); 硼酸鉛	Lead (II) metaborate	10214-39-8	Pb(BO ₂) ₂ -H ₂ O	Desiccants for paints
メタ珪酸鉛; 珪酸鉛	Lead metasilicate	11120-22-2; 10099-76-0	PbSiO ₃	Ceramics
アンチモン酸鉛	Lead antimonate	13150-89-9	Pb ₃ (SbO ₄) ₂	Colorant, coloring agents for glass
砒酸鉛; 砒酸水素鉛; 酸性砒酸鉛	Lead arsenate (1:1)	7784-40-9	PbHA ₅ O ₄	
亜砒酸鉛; メタ亜砒酸鉛	Lead (II) arsenite	10031-13-7	Pb(ASO ₂) ₂	Pesticide
クロム酸鉛; クロムイエロー; キングイエロー; ライプチッヒ イエロー; パリエロー	Lead chromate; chrome yellow	1344-37-2	PdCrO ₄	Colorant, paint, Ink
モリブデン酸鉛	Lead molybdate	10190-55-3	PbMoO ₄	Colorant
鉛鉛カルシウム	Calcium plumbate	12013-69-3	Ca ₂ PbO ₄	Oxidizers
テトラメチル鉛; 四メチル鉛; TML	Tetramethyllead	75-74-1	Pb(CH ₃) ₄	
テトラエチル鉛; 四エチル鉛; TEL	Tetraethyllead	78-00-2	Pb(C ₂ H ₅) ₄	
その他の鉛化合物および 合金	Other lead compounds and alloys			

A-9 : Mercury and its compounds

Substance Name	English Name	CAS No.	Formula	Application
水銀; 金属水銀	Mercury	7439-97-6	Hg	Electrodes, mercury lamps
水銀合金; アマルガム	Mercury alloys; amalgam			
酸化第一水銀; 酸化水銀(Ⅰ)	Mercury (I) oxide	15829-53-5	Hg ₂ O	
酸化第二水銀; 酸化水銀(Ⅱ)	Mercury (II) oxide	21908-53-2	HgO	Mercury cells, preservatives
塩化第一水銀; 塩化水銀(Ⅰ); カロメル	Mercury (I) chloride	10112-91-1	Hg ₂ Cl ₂	Electrodes, Colorant
塩化第二水銀; 塩化水銀(Ⅱ); 昇コウ	Mercury (II) chloride	7484-94-7	HgCl ₂	Metal etching, batteries, preservatives
硝酸第二水銀; 硝酸水銀(Ⅱ)	Mercury (II) nitrate	10045-94-0	Hg(NO ₃) ₂	Felt, catalysts
硫酸第一水銀; 硫酸水銀(Ⅰ)	Mercury (I) sulfate		Hg ₂ SO ₄	Battery
雷酸第二水銀; 雷酸水銀(Ⅱ)	Mercury (II) fulminate	628-86-4	Hg(ONC) ₂	
酢酸第二水銀; 酢酸水銀(Ⅱ)	Mercury (II) acetate	1600-27-7	Hg(CH ₃ COO) ₂	
メチル水銀塩	Methylmercury salts	e.g. 22967-92-6	CH ₃ HgX; X=Cl, Br, I, OH, etc	Fungicides
エチル水銀塩	Ethylmercury salts		C ₂ H ₅ HgX; X=Cl, Br, I, OH, etc	Antiseptic disinfectants
プロピル水銀塩	Propylmercury salts		C ₃ H ₇ HgX; X=Cl, Br, I, OH, etc	
フェニル水銀塩	Phenylmercury salts		C ₆ H ₅ HgX; X=Cl, Br, I, OH, etc	Preservatives disinfectants
メキシエチル水銀塩	Methoxyethylmercury salts		CH ₃ OC ₂ H ₄ HgX; X=Cl, Br, I, OH, etc	Disinfectants fungicides
ジアルキル水銀	Dialkylmercury		R ₂ Hg; R=alkyl group (C _n H _{2n+1})	
ジフェニル水銀	Diphenylmercury	587-85-9	(C ₆ H ₅) ₂ Hg	
その他の水銀化合物	Other mercury compounds			

A-10 : Hexavalent chromium and its compounds

Substance Name	English Name	CAS No.	Formula	Application
三酸化クロム;酸化クロム(VI); 無水クロム酸;クロム酸	Chromium (VI) oxide; chromium trioxide	1333-82-0	CrO ₃	Pigments, catalysts, plating, tanning
クロム酸リチウム	Lithium chromate	14307-35-8	Li ₂ CrO ₄	Corrosion prevention
クロム酸ナトリウム	Sodium chromate	7775-11-3	Na ₂ CrO ₄	Antirust, tanning
クロム酸カリウム	Potassium chromate	7789-00-6	K ₂ CrO ₄	Colorant, ink, tanning
塩化クロム酸カリウム; トリオクソクロロクロム酸カリウム	Potassium chlorochromate	16037-50-6	K[CrO ₃ Cl]	
クロム酸アンモニウム	Ammonium chromate	7788-98-9	(NH ₄) ₂ CrO ₄	photograph, catalyst
クロム酸銅	Copper chromate	13548-42-0	CuCrO ₄	mordants
クロム酸マグネシウム	Magnesium chromate	13423-61-5	MgCrO ₄	Antirust, surface treatment
クロム酸カルシウム; カルシウムクロムイエロー	Calcium chromate	13765-19-0	CaCrO ₄	Colorant, ink tanning
クロム酸ストロンチウム	Strontium chromate	7789-06-2	SrCrO ₄	Colorant, antirust
クロム酸バリウム	Barium chromate	10294-40-3	BaCrO ₄	Corrosion prevention, colorant, coloring agents for ceramics
クロム酸鉛;クロムイエロー; キングイエロー;ライプツヒ イエロー;パリエロー	Lead chromate chrome yellow	1344-37-2	PbCrO ₄	Colorant, Paint, ink
クロム酸鉛;黄亜鉛;亜鉛黄; ジンククロメート;ジンクイエロー	Zinc chromate	12018-19-8 13530-65-9 14018-95-2	ZnCrO ₄	Colorant, ink anticorrosives
重クロム酸ナトリウム; 重クロム酸ソーダ	Sodium dichromate Sodium bichromate	10588-01-9	Na ₂ Cr ₂ O ₇	Colorant, corrosior prevention, photographs, tanning
重クロム酸カリウム	Potassium dichromate Potassium bichromate	7778-50-9	K ₂ Cr ₂ O ₇	Colorant, photographs, battery, plating, tanning
重クロム酸アンモニウム	Ammonium dichromate ammonium bichromate	7789-09-5	(NH ₄) ₂ Cr ₂ O ₇	Colorant, photographs, catalysts
重クロム酸カルシウム	Calcium dichromate calcium bichromate	14307-33-6	CaCr ₂ O ₇	Corrosion prevention, catalysts
重クロム酸亜鉛	Zinc dichromate zinc bichromate	14018-95-2	ZnCr ₂ O ₇	Colorant
その他の六価クロム化合物	Other hexavalent chromium compounds			

A-11 : Asbestos

Substance Name	English Name	CAS No.	Formula	Application
石綿;アスベスト(総称)	Asbestos	1332-21-4; 132207-32-0; 132207-33-1		Insulator filler friction material
クロシドライト	Crocidolite	12001-28-4	Na ₂ Fe ₅ (Si ₈ O ₂₂)(OH) ₂	electric insulator
クリソタイル	Chrysotile	12001-29-5	Mg ₃ Si ₂ O ₅ (OH) ₄	heat insulator
アモサイト	Amosite	12172-73-5	(Mg,Fe) ₇ Si ₈ O ₂₂ (OH) ₂	pigment
アンソフィライト	Anthophyllite	77536-67-5	(Mg,Fe ₂) ₇ Si ₈ O ₂₂ (OH) ₂	paint
トレモライト	Tremolite	77536-68-6	C ₂₂ Mg ₅ Si ₈ O ₂₂ (OH) ₂	
アクチノライト	Actinolite	77536-66-4	Ca ₂ (Mg,Fe) ₅ Si ₈ O ₂₂ (OH) ₂	

A-12 : Dichloro-diphenyl-trichloroethane (DDT)

Substance Name	English Name	CAS No.	Formula	Application
クロロフェノタン; DDT; ジクロロジフェニルトリクロロエタン	Chlorophenotane	50-29-3	C ₁₄ H ₉ Cl ₅	Pesticide insect repellent

A-13 : Chlordanes

Substance Name	English Name	CAS No.	Formula	Application
クオルデン及びヘプタクロル; 1,2,4,5,6,7,8,8-オクタクロル-2,3,3a-4,7,7a-ヘキサヒドロ-4,7-メタン-1H-インデン	Chlordane ; 1,2,4,5,6,7,8,8-Octachloro-2,3,3A4,7,7A-Hexahydro-4.7-methano-1H-indene	57-74-9	C ₁₀ H ₆ Cl ₈	Pesticide, insect repellent

A-14 : Tributyl tin oxide (TBTO)

Substance Name	English Name	CAS No.	Formula	Application
ビス(トリブチルスズ)＝オキシド; トリブチルスズオキシド; ビス(トリブチルスズ)オキサイド	Tributyl tin oxide; Bis (tributyltin) oxide; Distannoxane, Hexabutyl-	56-35-9	O(Sn(C ₄ H ₉) ₃) ₂ C ₂₄ H ₅₄ OSn ₂	Preservatives, fungicides, paint, colorant

A-15 : Tributyl tins (TBTs)/Triphenyl tins (TPTs)

Substance Name	English Name	CAS No.	Formula	Application
トリブチルスズブロミド; 臭化トリ-n-ブチルスズ	Tributyl tin bromide	1461-23-0	(C ₄ H ₉) ₃ SnBr	Stabilizer antioxidant disinfectant fungicides antifoulant
トリフェニルスズ	Triphenyl tin	668-34-8	(C ₆ H ₅) ₃ Sn	
トリフェニルスズ＝クロリド; トリフェニルスズクロライド; 塩化トリフェニルスズ	Triphenyl tin chloride; Bis(tributyltin oxide); Distannoxane, hexabutyl-	639-58-7	(C ₆ H ₅) ₃ SnCl	
トリフェニルスズ＝ヒドロキシド; トリフェニルスズヒドロキシド; ヒドロキシトリフェニルスズ; 水酸化トリフェニルスズ	Triphenyltin hydroxide; Fentin hydroxide; Stannane, hydroxytriphenyl-	76-87-9	(C ₆ H ₅) ₃ SnOH	
トリフェニルスズ＝N, N'-ジメチルジチオカルバマート; トリフェニルスズジメチルジチオカルバミン酸塩; ジメチルジチオカルバミン酸トリフェニルスズ; [(ジメチルチオカルバモイル)チオ]トリフェニルスタナン	Triphenyl tin N, N' - Dimethyldithiocarbamate; Stannane, [[(dimethylamino)Thiomethyl]thio]triphenyl-	1803-12-9	(C ₆ H ₅) ₃ Sn (CH ₃) ₂ NCS ₂	
トリフェニルスズ＝フルオリド; トリフェニルスズフロライド; フッ化トリフェニルスズ; フルオロトリフェニルスタナン	Triphenyltin fluoride; Fentin fluoride	379-52-2	(C ₆ H ₅) ₃ SnF	
トリフェニルスズ＝アセタート; 酢酸トリフェニルスズ; (アセチルオキシ)トリフェニルスタナン	Triphenyl tin acetate; Fentin acetate; Stannane, (acetyloxy) triphenyl-	900-95-8	(C ₆ H ₅) ₃ SnOCOCH ₃	
トリフェニルスズ脂肪酸塩 (脂肪酸の炭素数が9,10又は11のものに限る)	Triphenyl tin fatty acid salts	18380-71-7 18380-72-8 47672-31-1 94850-90-5		
トリフェニルスズクロロアセタート; トリフェニルスズモノクロロアセテート; [(クロロアセチル)オキシ]アトリフェニルスタナン	Triphenyltin chloroacetate; (Chloroacetoxy) triphenylstannane	7094-94-2	(C ₆ H ₅) ₃ SnOCOCH ₂ Cl	

Substance Name	English Name	CAS No.	Formula	Application
トリブチルスズ＝メタクリレート； メタクリル酸トリブチルスズ	Tributyl tin methacrylate； Tributyl (methacryloyloxy) stannane； Stannane, tributyl[(2-methyl-1- Oxo-2-propenyl)oxy]-	2155-70-6	(C4H9)3 SnC4H5O2	
ビス(トリブチルスズ)フマレート	Bis (tributyl tin) fumarate	6454-35-9 24291-45-0	C2H2(COO)2 ([C4H9]3Sn)2	
トリブチルスズフルオリド	Tributyl tin fluoride	1983-10-4 7304-48-5	(C4H9)3SnF	
ビス(トリブチルスズ)＝2, 3- ジブロモスクシナート	Bis (tributyl tin) 2, 3- Dibromosuccinate	31732-71-5	((C4H9)3Sn)2C2H2 (BR)2(COO)2	
トリブチルスズアセタート； 酢酸トリブチルスズ	Tributyl tin acetate	56-36-0	(C4H9)3 SnOCOCH3	
トリブチルスズ＝ラウレート； トリブチルスズラウレート； トリブチル[(1-オキソドデシル) オキシ]スタンナン	Tributyltin laurate； Tributyl (lauroyloxy) stannane	3090-36-6	(C4H9)3 SnC12H23O2	
ビス(トリブチルスズ)＝フタ ラート；トリブチルスズフタレート； (フタロイルジオキシ)ビス[トリブチルスズ]	Bis (tributyl tin) phthalate； [(Phthaloylbis(oxy)) bis (tributylstannane)	4782-29-0	(C6H4)(COO)2 ([C4H9]3Sn)2	
トリブチルスズ＝スルファマート； トリブチルスズスルファマート； スルファミン酸トリブチルヒドロキシスタンナン	Tributyl tin sulfamate； Stannane, [(aminosulfonyl)oxy] tributyl-	6517-25-5	(C4H9)3 SnSO3NH2	
ビス(トリブチルスズ)＝マレ アート	Bis (tributyl tin) maleate	14275-57-1 24291-45-0	C28H56O4Sn2	
トリブチルスズ＝クロリド； トリ-n-ブチルスズクロライド	Tributyl tin chloride； Tributylchlorostannane； Stannane, tributylchloro-	1461-22-9 7342-38-3	(C4H9)3SnCl	
トリブチルスズ＝シクロペンタン カルボキシレート及びこの類縁 化合物の混合物； トリブチルスズナフテート； ナフテン酸トリブチルスズ	Mixture of tributyl tin cyclopentanecarboxylate and its analogs； Stannane, tributyl-mono (naphthenoy loxy) derivs； Tributyltin naphthenate	85409-17-2		
トリブチルスズ ＝1, 2, 3, 4, 4a, 4b, 5, 6, 10, 10a, -デカヒドロ-7-イソプロピ ルー1, 4a-ジメチル-1-フェ ナントレンカルボキシレート及び この類縁化合物の混合物； トリブチルスズロジン塩； トリブチルスズロジネート	[1R-(1alpha, 4a.beta., 4b.alpha., 10a. alpha.)]-tributyl[[[1, 2, 3, 4, 4a, 4b, 5, 6, 10, 10a, -decahydro-7-iso propyl-1, 4a-dimethyl-1-phen anthryl]carbonyl]oxy]stannane	26239-64-5	C32H56O2Sn	
アルキル＝アクリレート-メチル ＝メタクリレート-トリブチルスズ ＝メタクリレート共重合体(アル キル＝アクリレートのアルキル 基の炭素数が8のものに限る)； アクリル酸オクチル-メタクリル 酸メチル-メタクリル酸トリブチル スズ共重合体	Octyl acrylate-Methyl methacrylate-Tributyltin methacrylate copolymer (alkyl; C=8)	67772-01-4		

A-16 : Azo compounds (generating the specific amines)

Substance Name	English Name	CAS No.	Formula	Application
アゾ化合物	Azo compound		R-N=N-R'	Colorant pigment stainer

A-17 : 2, 4, 6-Tri-t-butylphenol

Substance Name	English Name	CAS No.	Formula	Application
TTBP; 2,4,6-トリ- <i>t</i> -ブチルフェノール	2,4,6-Tri- <i>t</i> -butylphenol	732-26-3	C ₁₈ H ₃₀ O	Antioxidant lubricant

A-18 : Arsenic and its compounds

Substance Name	English Name	CAS No.	Formula	Application
砒素	Arsenic	7440-38-2	As	Breaching for glass pigment, paint dye, flame retardant semi-conductor element, ink
ガリウム砒素	Gallium arsenide	1303-00-0	GaAs	
五酸化砒素	Arsenic pentoxide	1303-28-2	As ₂ O ₅	
三酸化砒素	Arsenic trioxide	1327-53-3	As ₂ O ₃	
その他の砒素化合物	Other arsenic compounds			

A-19 : Aldrin

Substance Name	English Name	CAS No.	Formula	Application
1, 2, 3, 4, 10, 10-ヘキサクロロ-1, 4, 4a, 5, 8, 8a-ヘキサヒドロ-1, 4-エンド-5, 8-ジメタナフタレン	Aldrin; 1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-1, 4-endo, exo-5, 8-dimethanonaphthalene	309-00-2	C ₁₂ H ₈ Cl ₆	Wood preservatives, insect repellent, fungicides, paint

A-20 : Endrin

Substance Name	English Name	CAS No.	Formula	Application
1, 2, 3, 4, 10, 10-ヘキサクロロ-6, 7-エポキシ-1, 4, 4a, 5, 6, 7, 8, 8a-オクタヒドロ-1, 4-エンド-5, 8-ジメタナフタレン	Endrin; 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro, endo-5, 8-dimethanonaphthalene	72-20-8	C ₁₂ H ₃ Cl ₆ O	Insect repellent, Pesticide

A-21 : Dieldrin

Substance Name	English Name	CAS No.	Formula	Application
1, 2, 3, 4, 10, 10-ヘキサクロロ-6, 7-エポキシ-1, 4, 4a, 5, 6, 7, 8, 8a-オクタヒドロ-1, 4-エンド-5, 8-ジメタナフタレン	Dieldrin; 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo, exo-5, 8-dimethanonaphthalene	60-57-1	C ₁₂ H ₈ Cl ₆ O	Wood preservatives insect repellent paint

A-22 : Radioactive substances

Substance Name	English Name	CAS No.	Formula	Application
ウラン	Uranium	7440-61-1	U	Nuclear fuel
プルトニウム	Plutonium		Pu	Nuclear reactor fuel, nuclear weapon
ラドン	Radon	10043-92-2	Rn	
アメリシウム	Americium		Am	
トリウム	Thorium	7440-29-1	Th	Magnetron optical glass
セシウム	Cesium	7440-46-2	Cs	Light-sensitive tube
ストロンチウム	Strontium	7440-24-6	Sr	Copper alloy deoxidizing agent
その他放射性物質	Other radioactive substances			

A-23 : Hexachlorobenzene

Substance Name	English Name	CAS No.	Formula	Application
ヘキサクロロベンゼン	Hexachlorobenzene	118-74-1	C ₆ Cl ₆	Preservatives fungicides

A-24 : N, N'-ditolyl-p-phenyldiamine, N-tolyl-N'-xylyl-p-phenyldiamine and N,N'-dixylyl-p-phenyldiamine

Substance Name	English Name	CAS No.	Formula	Application
PDA-Z2; N,N'-ジトルル-パラ-フェニレンジアミン, N-トリル-N'-キシリル-パラ-フェニレンジアミン又はN,N'-ジキシリル-パラ-フェニレンジアミン	N, N'-ditolyl-p-phenyldiamine, N-tolyl-N'-xylyl-p-phenyldiamine and N, N'-dixylyl-p-phenyldiamine	27417-40-9 28726-30-9 70290-05-0		Rubber age resister

A-25 : Toxaphene camphechloro octachlorocamphene polychlorocamphene

Substance Name	English Name	CAS No.	Formula	Application
カンフェクロル	Toxaphene; Camppechlor; Allatox; Chlorinated camphene; Polychlorocamphene	8001-35-2	C ₁₀ H ₁₀ Cl ₈	Pesticide

A-26 : Yellow phosphorus

Substance Name	English Name	CAS No.	Formula	Application
黄リンマッチ	Yellow phosphorus	7723-14-0	P ₄	Matches

A-27 : 4-nitrodiphenyl and its salt

Substance Name	English Name	CAS No.	Formula	Application
4-ニトロジフェニル及びその塩	4-Nitrodiphenyl; 4-nitro-1, 1'-biphenyl;	92-93-3	C ₁₂ H ₉ NO ₂	Synthetic intermediate

A-28 : Bis (Chloromethyl) ether

Substance Name	English Name	CAS No.	Formula	Application
ビス(クロロメチル)エーテル	BIS (Chloromethyl) Ether; 2, 2'-Dichlorodimether	542-88-1	C ₂ H ₄ Cl ₂ O	Methylating agent dye, colorant

A-29 : Benzene

Substance Name	English Name	CAS No.	Formula	Application
ベンゼン(のり)	Benzene; Benzole	71-43-2	C ₆ H ₆	Solvent adhesives

A-30 : Formaldehyde

Substance Name	English Name	CAS No.	Formula	Application
ホルムアルデヒド(モノマー); ホルマリン	Formaldehyde; formalin; Formic aldehyde; formol	50-00-0	HCHO	Preservatives monomer (e.g. phenol resin and melamine resin)

A-31 : Polivinyllchloride

Substance Name	English Name	CAS No.	Formula	Application
PVCおよびPVC化合物; ポリ塩化ビニルおよびポリ塩化ビニル混合物	PVC and PVC blends; Polivinyllchloride and Polivinyllchloride blends	e.g. 9002-86-2	(C ₂ H ₃ Cl) _x	Vinyl chloride resin

A-32 : Chlorinated paraffins

Substance Name	English Name	CAS No.	Formula	Application
塩化パラフィン; 塩素化パラフィン; クロロパラフィン 炭素数10-13, 塩素48wt%以上	Short-chain Chlorinated paraffin C10-13, C1 \geq 48wt%	e.g. 85535-84-8		PVC plasticizer Flame retardant

A-33 : Ozone depleting substances

Substance Name	English Name	CAS No.	Formula	Application	
CFC類 (フロン類)	CFC-11 CFC-12 CFC-13 CFC-111 CFC-112 CFC-113 CFC-114 CFC-115 CFC-211 CFC-212 CFC-213 CFC-214 CFC-215 CFC-216 CFC-217	CFC-11 CFC-12 CFC-13 CFC-111 CFC-112 CFC-113 CFC-114 CFC-115 CFC-211 CFC-212 CFC-213 CFC-214 CFC-215 CFC-216 CFC-217	75-69-4 75-71-8 75-72-9 354-56-3 28605-74-5 76-13-1 76-14-2 76-15-3 422-78-6 3182-26-1 134237-31-3 29255-31-0 1599-41-3 661-97-2 422-86-6	CFCl ₃ CF ₂ Cl ₂ CF ₃ Cl C ₂ FCl ₅ C ₂ F ₂ Cl ₄ C ₂ F ₃ Cl ₃ C ₂ F ₄ Cl ₂ C ₂ F ₅ Cl C ₃ FCl ₇ C ₃ F ₂ Cl ₆ C ₃ F ₃ Cl ₅ C ₃ F ₄ Cl ₄ C ₃ F ₅ Cl ₃ C ₃ F ₆ Cl ₂ C ₃ F ₇ Cl	Cooling agent solvent cleaning agent
特定ハロン類	ハロン-1211 ハロン-1301 ハロン-2402	Halon-1211 Halon-1301 Halon-2402	353-59-3 75-63-8 124-73-2	CF ₂ BrCl CF ₃ Br C ₂ F ₄ Br ₂	Digester,
四塩化炭素	Carbon tetrachloride	56-23-5	CCl ₄	Solvent, degreasing agent	
1, 1, 1-トリクロロエタン	1, 1, 1-Trichloroethane	71-55-6	C ₂ H ₃ Cl ₃	Solvent, degreasing agent	
ブロモクロロメタン	Bromochloromethane	74-97-5	CH ₂ BrCl	Digester	
臭化メチル; ブロモメタン	Methylbromide	74-83-9	CH ₃ Br	Pesticide, disinfectants	
HBFC (ハイドロ ブロモフル オロカー ボン)	ジブロモフルオロメタン ブロモジフルオロメタン トリブロモジフルオロメタン ブロモテトラフルオロエタン ジブロモジフルオロエタン ジブロモフルオロエタン ブロモフルオロエタン ペンタブロモジフルオロプロパン トリブロモテトラフルオロプロパン ブロモヘキサフルオロプロパン テトラブロモジフルオロプロパン ジブロモテトラフルオロプロパン テトラブロモフルオロプロパン ジブロモトリフルオロプロパン トリブロモフルオロプロパン ブロモトリフルオロプロパン ジブロモフルオロプロパン ブロモフルオロメタン テトラブロモフルオロエタン ジブロモトリフルオロエタン トリブロモフルオロエタン ブロモトリフルオロエタン ブロモジフルオロエタン ヘキサブロモフルオロプロパン	Dibromodifluoromethane Bromodifluoromethane Tribromodifluoroethane Bromotetrafluoroethane Dibromodifluoroethane Dibromodifluoroethane Bromofluoroethane Pentabromodifluoropropane Tribromotetrafluoropropane Bromohexafluoropropane Tetrabromodifluoropropane Dibromotetrafluoropropane Tetrabromofluoropropane Dibromotrifluoropropane Tribromofluoropropane Bromotrifluoropropane Dibromofluoropropane Bromofluoromethane Tetrabromofluoroethane Dibromotrifluoroethane Tribromofluoroethane Bromotrifluoroethane Bromodifluoroethane Hexabromofluoropropane	1868-53-7 1511-62-2 124-72-1 75-82-1 358-97-4 762-49-2 2252-79-1 70192-83-5 75372-14-4 421-46-5 373-52-4 306-80-9 354-04-1 421-06-7 359-07-9	CHFBr ₂ CHF ₂ Br C ₂ HF ₂ Br ₃ C ₂ HF ₄ Br C ₂ H ₂ F ₂ Br ₂ C ₂ H ₃ FBr ₂ C ₂ H ₄ FBr C ₃ HF ₂ Br ₅ C ₃ HF ₄ Br ₃ C ₃ HF ₆ Br C ₃ H ₂ F ₂ Br ₄ C ₃ H ₂ F ₄ Br ₂ C ₃ H ₃ FBr ₄ C ₃ H ₃ F ₃ Br ₂ C ₃ H ₄ FBr ₃ C ₃ H ₄ F ₃ Br C ₃ H ₅ F ₂ Br CH ₂ FBr C ₂ HFBr ₄ C ₂ HF ₃ Br ₂ C ₂ H ₂ FBr ₃ C ₂ H ₂ F ₃ Br C ₂ H ₃ F ₂ Br C ₃ HFBr ₆	Digester (Alternative Halon)

Substance Name	English Name	CAS No.	Formula	Application
テトラブロモトリフルオロプロパン	Tetrabromotrifluoropropane		C ₃ HF ₃ Br ₄	
ジブロモペンタフルオロプロパン	Dibromopentafluoropropane	431-78-7	C ₃ HF ₅ Br ₂	
ペンタブロモフルオロプロパン	Pentabromofluoropropane		C ₃ H ₂ FBr ₅	
トリブロモトリフルオロプロパン	Tribromotrifluoropropane		C ₃ H ₂ F ₃ Br ₃	
ブロモペンタフルオロプロパン	Bromopentafluoropropane	460-88-8	C ₃ H ₂ F ₅ Br	
トリブロモジフルオロプロパン	Tribromodifluoropropane	70192-80-2	C ₃ H ₃ F ₂ Br ₃	
ブロモテトラフルオロプロパン	Bromotetrafluoropropane	679-84-5	C ₃ H ₃ F ₄ Br	
ジブロモジフルオロプロパン	Dibromodifluoropropane	460-25-3	C ₃ H ₄ F ₂ Br ₂	
ジブロモフルオロプロパン	DibromoFluoropropane	51584-26-0	C ₃ H ₅ FBr ₂	
ブロモフルオロプロパン	Bromofluoropropane	352-91-0	C ₃ H ₆ FBr	

A-34 : Dioxins

Substance Name	English Name	CAS No.	Formula	Application
1,2,3,4,6,7,8,9-オクタクロロジベンゾジオキシン	1,2,3,4,6,7,8,9-Octachlorodibenzodioxin	3268-87-9	C ₁₂ Cl ₈ O ₂	Unintentional product
1,2,3,4,6,7,8,9-オクタクロロジベンゾフラン	1,2,3,4,6,7,8,9-Octachlorodibenzofurane	39001-02-0	C ₁₂ Cl ₈ O	
1,2,3,4,6,7,8,-ヘプタクロロジベンゾフラン	1,2,3,4,6,7,8,-heptachlorodibenzofurane	67562-39-4	C ₁₂ HCl ₇ O	(By-product of waste incineration)
1,2,3,4,6,7,9-ヘプタクロロジベンゾフラン	1,2,3,4,6,7,9-heptachlorodibenzofurane	70648-25-8		
1,2,3,4,7,8,-ヘキサクロロジベンゾジオキシン	1,2,3,4,7,8,-Hexachlorodibenzo[b,e][1,4]dioxin	39227-28-6	C ₁₂ H ₂ Cl ₆ O ₂	(By-product of metal refining)
1,2,3,4,7,8,-ヘキサクロロジベンゾフラン	1,2,3,4,7,8,-Hexachlorodibenzofurane	70648-26-9	C ₁₂ H ₂ Cl ₆ O	
1,2,3,6,7,8-ヘキサクロロジベンゾジオキシン	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	C ₁₂ H ₂ Cl ₆ O ₂	(By-product of metal refining)
1,2,3,6,7,8-ヘキサクロロジベンゾフラン	1,2,3,6,7,8-Hexachlorodibenzofurane	57117-44-9	C ₁₂ H ₂ Cl ₆ O	
1,2,3,6,7,8-ヘキサブロモジベンゾジオキシン	1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6		
1,2,3,7,8,9-ヘキサクロロジベンゾジオキシン	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	C ₁₂ H ₂ Cl ₆ O ₂	
1,2,3,7,8,9-ヘキサクロロジベンゾフラン	1,2,3,7,8,9-Hexachlorodibenzofurane	72918-21-9	C ₁₂ H ₂ Cl ₆ O	
1,2,3,7,8,9-ヘキサブロモジベンゾジオキシン	1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7		
1,2,3,7,8-ペンタクロロジベンゾジオキシン	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	C ₁₂ H ₃ Cl ₅ O ₂	
1,2,3,7,8-ペンタクロロジベンゾフラン	1,2,3,7,8-Pentachlorodibenzofurane	57117-41-6	C ₁₂ H ₃ Cl ₅ O	
1,2,3,7,8-ペンタブロモジベンゾジオキシン	1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8		
1,2,3,7,8-ペンタブロモジベンゾフラン	1,2,3,7,8-Pentabromodibenzofurane	107555-93-1		
2,3,4,6,7,8-ヘキサクロロジベンゾフラン	2,3,4,6,7,8-Hexachlorodibenzofurane	60851-34-5	C ₁₂ H ₂ Cl ₆ O	
2,3,4,7,8-ペンタクロロジベンゾフラン	2,3,4,7,8-Pentachlorodibenzofurane	57117-31-4	C ₁₂ H ₃ Cl ₅ O	
2,3,4,7,8-ペンタブロモジベンゾフラン	2,3,4,7,8-Pentabromodibenzofurane	131166-92-2		
2,3,7,8-テトラクロロジベンゾジオキシン	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	C ₁₂ H ₄ Cl ₄ O ₂	
2,3,7,8-テトラクロロジベンゾフラン;TCDF	2,3,7,8-Tetrachlorodibenzofurane	51207-31-9	C ₁₂ H ₄ Cl ₄ O	
2,3,7,8-テトラブロモジベンゾジオキシン	2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6		
2,3,7,8-テトラブロモジベンゾフラン	2,3,7,8-Tetrabromodibenzofurane	67733-57-7		
その他のダイオキシン	Other dioxin			

A-35 : Hydrofluorocarbon (HFC)

Substance Name	English Name	CAS	Formula	Application
1,1,1,2,2-ペンタフルオロエタン	HFC-125	354-33-6	CHF ₂ CF ₃ , C ₂ HF ₅	Refrigerant
1,1,2,2-テトラフルオロエタン	HFC-134	359-35-3	CHF ₂ CHF ₂	Blowing agent
1,1,1,2-テトラフルオロエタン	HFC-134a	811-97-2	CH ₂ FCF ₃	Cleaning agent
1,1,2-トリフルオロエタン	HFC-143	430-66-0	CHF ₂ CH ₂ F	
1,1,1-トリフルオロエタン	HFC-143a	420-46-2	CH ₃ CF ₃	
1,1,-ジフルオロエタン	HFC-152a	75-37-6	CH ₃ CHF ₂	
1,1,1,2,3,3,3-ヘプタフルオロプロパン	HFC-227ea	431-89-0	CF ₃ CHFCF ₃ , C ₃ HF ₇	
トリフルオロメタン	HFC-23	75-46-7	CHF ₃	
1,1,1,3,3,3-ヘキサフルオロプロパン	HFC-236fa	690-39-1	C ₃ H ₂ F ₆	
1,1,2,2,3-ペンタフルオロプロパン	HFC-245ca	679-86-7	C ₃ H ₃ F ₅	
ジフルオロメタン	HFC-32	75-10-5	CH ₂ F ₂	
フルオロメタン	HFC-41	593-53-3	CH ₃ F	
1,1,1,2,2,3,4,5,5,5-デカフルオロペンタン	HFC-43-10mee	138495-42-8	C ₅ H ₂ F ₁₀	

A-36 : Perfluorocarbon (PFC)

Substance Name	English Name	CAS	Formula	Application
テトラフルオロメタン	PFC-14	75-73-0	CF ₄	Solvent
ヘキサフルオロエタン	PFC-116	76-16-4	C ₂ F ₆	Cleaning agent
オクタフルオロプロパン	PFC-218	76-19-7	C ₃ F ₈	
デカフルオロブタン	PFC-31-10	355-25-9	C ₄ F ₁₀	
ドデカフルオロペンタン	PFC-41-12	678-26-2	C ₅ F ₁₂	
テトラデカフルオロヘキサン	PFC-51-14	355-42-0	C ₆ F ₁₄	
オクタフルオロシクロブタン	PFC-c318	115-25-3	C ₄ F ₈	

A-37 : Perfluorooctane sulfonate (PFOS) and its analogues

Substance Name	English Name	CAS	Formula	Application
パーフルオロオクタンスルホン 酸塩及び類縁化合物	Perfluorooctane sulfonate (PFOS)	e.g. 2795-39-3	C ₈ F ₁₇ SO ₂ X	Water repellant Oil repellant

A-38 : Kelthane (Dicofol)

Substance Name	English Name	CAS	Formula	Application
2,2,2-トリクロロ-1,1-ビス(4-クロ ロフェニル)エタノール	Kelthane or dicofol	115-32-2	C(C ₆ H ₄ Cl) ₂ CCl ₃ OH	Miticide

A-39 : Hexachlorobutadiene (HCBD)

Substance Name	English Name	CAS	Formula	Application
ヘキサクロロブタ-1,3-ジエン	Hexachlorobutadiene	87-68-3	C ₄ Cl ₆	Solvent

A-40 : Specific benzotriazole

Substance Name	English Name	CAS	Formula	Application
2-(2H-1,2,3-ベンゾトリアゾール-2-イル) -4,6-ジ-tert-ブチルフェノール	Specific benzotriazole	3846-71-7	C ₂₀ H ₂₅ N ₃ O	Ultraviolet protective agent Ultraviolet absorber

Banned substances in a manufacturing process

Substance Name	English Name	CAS No.	Formula	Application
Ozone depleting substance	Refer to A-33 (P.13).			Solvents cleaning agent raw material
トリクロロエチレン(トリクレン)	Trichloroethylene	79-01-6	C ₂ HCl ₃	
テトラクロロエチレン	Tetrachloroethylene	127-18-4	C ₂ Cl ₄	
ジクロロメタン(塩化メチレン)	Dichloromethane (methylene chloride)	75-09-2	CH ₂ Cl ₂	
1, 2-ジクロロエタン	1, 2-Dichloro ethane	107-06-2	C ₂ H ₄ Cl ₂	
1, 1-ジクロロエチレン	1, 1-Dichloroethylene; Vinylidene chloride	75-35-4	C ₂ H ₂ Cl ₂	
シス-1, 2-ジクロロエチレン	cis-1, 2-Dichloroethylene	156-59-2	C ₂ H ₂ Cl ₂	
1, 1, 2-トリクロロエタン	1, 1, 2-Trichloroethane	79-00-5	C ₂ H ₂ Cl ₃	
1, 3-ジクロロプロペン	1, 3-Dichloropropene	542-75-6	C ₃ H ₄ Cl ₂	

3. Banned Substances and Applicable Laws and Regulations

Substances	Laws and Regulations	
Polybrominated biphenyl (PBBs)*	RoHS Directive, German Dioxin Decree 07/15/1994, North Euro IT ECO Declaration	
Polybrominated biphenyl ethers (PBDEs)*	RoHS Directive ,76/769/EEC(+2003/11/EC), German Dioxin Decree 07/15/1994	
Polychlorinated biphenyl (PCB)	Kashinhou**, 76/769/EEC, Germany Chemicals Prohibition Ordinance	
Polychlorinated terphenyl (PCT)	Kashinhou**, 76/770/EEC, North Euro IT ECO Declaration	
Polychlorinated naphthalene (PCN)	Kashinhou**, 76/771/EEC	
Mirex	Kashinhou** POPs	
Cadmium and its compounds	RoHS Directive, 76/769/EEC, EU Batteries Directive 91/157/EEC, Germany Chemicals Prohibition Ordinance, ELV	EU Directive 94/62/EC on packaging and packaging waste New York State and other 16 states in the US. Regulations on Heavy Metals in Packaging Materials
Lead and its compounds	US California State Law (Proposition65), RoHS Directive, EU Batteries Directive 91/157/EEC, ELV, 76/769/EEC	
Mercury and its compounds	Regulation in Netherlands, Denmark, Sweden, RoHS Directive, Regulation on Battery Products in China, ELV, 76/769/EEC	
Hexavalent chromium and its compounds	EU Directive, EU RoHS Directive, ELV, 76/769/EEC	
Asbestos	Industrial Safety and Health Law, Air Pollution Control Law, Germany Chemicals Prohibition Ordinance	
DDT	Kashinhou**, POPs	
Chlordanes	Kashinhou**, POPs	
Bis(tri-n-butyltin) oxide (TBTO)	Kashinhou**	
Tributyl Tins (TBTs)	Kashinhou**, Germany Chemicals Prohibition Ordinance	
Triphenyl Tins (TPTs)	Kashinhou**, Germany Chemicals Prohibition Ordinance	
Azo compounds (which generate the specified amines)	EU Directive, 76/769/EEC, Germany Consumer Goods Ordinance, Germany Chemicals Prohibition Ordinance	
2,4,6-tri-tert-butylphenol	Kashinhou**	
Arsenic and its compounds	Poisonous Material Control Law, Water Pollution Control Law, 76/769/EEC-89/677/EEC	
Aldrin	Kashinhou**, POPs	
Endrin	Kashinhou**, POPs	
Dieldrin	Kashinhou**, POPs	
Radioactive substance	Law for the Regulation of Nuclear Source Material, Fuel Material Reactors 1986	
Hexachlorobenzene	Kashinhou**, POPs	
N,N'-dytril-para-phenylenediamine, N-tolyl-N'-xylyl-para-phenylenediamine, and N,N'-dixylil-para-phenylenediamine	Kashinhou**	
Chlorinated Camphene	Kashinhou**, POPs	
Yellow phosphorus match	Japan Industrial Safety and Health Law	
4-nitrodiphenyl and its salt	Kashinhou**, POPs	
Bis-(chloromethyl)ether	Industrial Safety and Health Law, Waste Disposal Law, Canadian Toxic Substances Management Policy Criteria	
Benzen(glue)	Industrial Safety and Health Law, Germany Chemicals Prohibition Ordinance	
Formaldehyde	Germany Chemicals Prohibition Ordinance, Denmark Danish Statutory Order No. 289, Air Pollution Control Law	
Vinyl chloride,polymer;polyvinyl chloride	2000/53/EC reviewing use of PVC	
Chlorinated paraffins	Germany Blue Angel Eco Label, TC095 and others, EU76/769/EEC(+91/689/EC)	
Ozone depleting substances	Ozone Layer Protection Law, Montreal Protocol, 76/769/EEC(+94/60/EEC,+97/64/EEC)	
Dioxin	Air Pollution Control Law, Dioxin Decree07/15/1994, POB	
Hydrofluorocarbon (HFC)	EU regulation 2006/842/EC, Denmark directive No. 552,	
Perfluorocarbon (PFC)	Switzerland Ordinance on Risk Reduction related to Chemical Products (ORRChem)	
Perfluorooctane sulfonate and its analogues (PFOS)	76/769/EEC (+2006/122/EC), POPs	
Kelthane (Dicofol)	Kashinhou**	
Hexachlorobutadiene (HCBd)	Kashinhou**	
Specific benzotriazole (2-(2'-Hydroxy-3',5'-di-tert-butylphenyl)	Kashinhou**	
Trichloroethylene	Kashinhou**, Water Pollution Control Law, Air Pollution Control Law	
Tetrachloroethylene	Kashinhou**, Water Pollution Control Law	
Methylene chloride	Water Pollution Control Law, Air Pollution Control Law	
1,2-Dichloroethane	Water Pollution Control Law, Air Pollution Control Law	
1,1-dichloroethylene	Water Pollution Control Law, Waste Disposal Law, Germany Chemicals Prohibition Ordinance,76/769/EEC	
cis-1,2-dichloroethylene	Water Pollution Control Law	
1,1,2-Trichloroethane	Water Pollution Control Law, Germany Chemicals Prohibition Ordinance, 76/769/EEC	
1,3-Dichloropropene	Water Pollution Control Law	

** Kashinhou=Japan Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances

4. Method of Measuring Banned Substances

4-1: Overview

Substance	Measurement Method
Polybrominated biphenyl (PBBs) Polybrominated biphenyl ethers (PBDEs)	Dissolve → extract → HRGCMS, FT-IR
Polychlorinated biphenyl (PCB)	Dissolve → extract → HRGCMS
Polychlorinated terphenyl (PCT)	Dissolve → extract → GCMS
Polychlorinated naphtalene (PCN) = Number of chlorines is three or more.	Dissolve → extract → HRGCMS
Mirex	Dissolve → extract → GCMS
Cadmium and its compounds	Decompose → ICP-AES or ICP-MS or AAS
Lead and its compounds	Decompose → ICP or ICP-MS
Mercury and its compounds	Dissolve → ICP-AES or ICP-MS or AAS, FLAAS
Hexavalent chromium and its compounds	Dissolution test → diphenylcarbazide, IC, UV-VIS
Asbestos	Grind → XRD
DDT	Dissolve → extract → GCMS
Chlordanes	Dissolve → extract → GCMS
Bis (tri-n-butyltin) oxide (TBTO) Tributyl Tins (TBTs) Triphenyl Tins (TPTs)	Dissolve → extract → derivatization method → GCMS
Azo compounds	Standardized test. Dissolve → extract → derivatization method → GCMS
2,4,6-tri-tert-butylphenol	Dissolve → extract → GCMS
Arsenic and its compounds	Decompose → ICP-AES
Aldrin Endrin Dieldrin	Dissolve → extract → GCMS
Hexachlorobenzene	Dissolve → extract → GCMS
<i>N,N'</i> -dytril- <i>para</i> -phenylenediamine, <i>N-tolyl-N'</i> -xylyl- <i>para</i> -phenylenediamine, or <i>N,N'</i> -dixylil- <i>para</i> -phenylenediamine	Dissolve → extract → GCMS
Chlorinated Camphene	Dissolve → extract → GCMS
Yellow phosphorus match	Dissolve → extract → GCMS
4-nitrodiphenyl and its salt	Dissolve → extract → GCMS
Bis-(chloromethyl)ether	Dissolve → extract → GCMS
Benzen(glue)	Dissolve → extract → GCMS
Formaldehyde	Solvent extract-derivatization method/HPLC
Vinyl chloride,polymer;polyvinyl chloride	THF dissolution/IR spectroscopy
Chlorinated paraffins	Dissolve → extract → HRGCMS
Ozone depleting substances	Emit, desorb → catch GC, GCMS
Dioxin	Emit, desorb → catch → extract HPLC
Hydrofluorocarbon (HFC) Perfluorocarbon (PFC)	
Perfluorooctane sulfonate and its analogues (PFOS)	Solid phase extraction → LC/MS
Kelthane (Dicofol)	
Hexachlorobutadiene (HCBd)	
Specific benzotriazole	Solvent extract → LC/MS

HRGCMS: High Resolution Gas Chromatography Mass Spectrometry

GCMS: Gas Chromatography Mass Spectrometry

FT-IR: Fourier Transform Infrared Spectroscopy

ICP-AES: Inductively Coupled Plasma Atomic Emission Spectroscopy

ICP-MS: Inductively Coupled Plasma Mass Spectrometry

AAS: Atomic Absorption Spectroscopy

FLAAS: Flameless Atomic Absorption Spectrometry

GC: Gas Chromatography

HPLC: High Performance Liquid Chromatography

IC: Ion Chromatography

XRD: X-ray Diffraction Analysis

XRF: X-Ray Fluorescence Analysis

UV-VIS: UV-Visible Spectroscopy

LS-MS: High performance Liquid Chromatography/
Mass Spectrometry

4-2: Detail

Method to measure cadmium and its compounds

- 1) Screening Analysis
 - X-Ray Fluorescence Analysis
- 2) Precision Analysis
 - (1) Preconditioning
 - X-Ray Fluorescence Analysis
 - Incineration under the existence of sulfuric acid;
 - A pressurized acid decomposition method done in a sealed container (a microwave decomposition method [e.g. EPA3052:1996, EN13346:2000])
 - An acid decomposition method under the existence of nitric acid, hydrogen-peroxide water and hydrochloric acid (e.g. EPA3050B Rev.2:1996); and
 - A wet decomposition method under the existence of sulfuric acid, nitric acid, and hydrogen-peroxide water (e.g. BS EN1122:2001)
 - * In the process of preconditioning, sediments must be completely dissolved by some technical means (e.g. alkali fusion).
- (2) Measurement methods
 - Inductively Coupled-Plasma-Atomic (Optical) Emission Spectroscopy (ICP-AES[IC-OES]) (e.g. EN ISO 11885:1998);
 - Atomic Absorption Spectroscopy (AAS) (e.g. EN ISO5961:1995)
 - Inductively Coupled-Plasma Mass Spectroscopy (ICP-MS).
- * Both cadmium and lead can be simultaneously analyzed by each of the measurement methods except for AAS.

Method to measure Lead and its compounds

- 1) Screening Analysis
 - X-Ray Fluorescence Analysis
- 2) Precision Analysis
 - (1) Preconditioning
 - X-Ray Fluorescence Analysis
 - Incineration under the existence of sulfuric acid;
 - A pressurized acid decomposition method done in a sealed container (a microwave decomposition method [e.g. EPA3052:1996, EN13346:2000])
 - An acid decomposition method under the existence of nitric acid, hydrogen-peroxide water and hydrochloric acid (e.g. EPA3050B Rev.2:1996); and
 - A wet decomposition method under the existence of sulfuric acid, nitric acid, and hydrogen-peroxide water (e.g. BS EN1122:2001)
 - * In the process of preconditioning, sediments must be completely dissolved by some technical means (e.g. alkali fusion).
- (2) Measurement methods
 - Inductively Coupled-Plasma-Atomic (Optical) Emission Spectroscopy (ICP-AES[IC-OES]) (e.g. EN ISO 11885:1998);
 - Atomic Absorption Spectroscopy (AAS) (e.g. EN ISO5961:1995)
 - Inductively Coupled-Plasma Mass Spectroscopy (ICP-MS).
- * Both cadmium and lead can be simultaneously analyzed by each of the measurement methods except for AAS.

Method to measure Mercury and its compounds

1) Screening Analysis

X-Ray Fluorescence Analysis

2) Precision Analysis

(1) Preconditioning

- A pressurized acid decomposition method done in a sealed container (a microwave decomposition method [e.g. EPA 3052:1996])
- A heating evaporation-cold-vapor mercur-atomic-absorption method
- A wet decomposition method (e.g. Kjeldahl method) in which a decomposition flask with a reflux condenser is used to decompose mercury by sulfuric acid or nitric acid.

* In the process of preconditioning, particular attention is required to avoid mercury sublimation, and sediments must be completely dissolved by some technical means.

(2) Measurement Method

- Inductively Coupled-Plasma-Atomic (Optical) Emission Spectroscopy (ICP-AES[IC-OES]) (e.g. EN ISO 11885:1998);
- Atomic Absorption Spectroscopy (AAS) (e.g. EN ISO5961:1995)
- Inductively Coupled-Plasma Mass Spectroscopy (ICP-MS).

* When the mercury concentration is expected to be low, it is recommended to use one of the following methods.

- A reduction-evaporation atom-absorption method
- ICP-AES (ICP-OES) method with a hydride-generation apparatus
- ICP-MS method with a hydride-generation apparatus

Method to measure Hexavalent Chromium and its compounds

1) Screening Analysis

Total Chromium determination by X-Ray Fluorescence Analysis

2) Precision Analysis

(1) Preconditioning

- Extraction methods such as boiling water extraction and alkaline extraction (e.g. EPA3060A, JISH8625)

(2) Measurement method

- Ultraviolet-Visible (UV/VIS) Spectroscopy (e.g. EPA 7196A, JISH8625)

Method to decompose Azo compounds (generating the specific amines)

Test methods (for reference)

The methods to decompose azo compounds and extract amines are as follows:

EN 14362-1:2003, CEN ISO-TS 17234:2003, EN 14362-2:2003

Method to measure Formaldehyde

Standard Value (emission content): The value can be obtained by any one of the following methods.

(1) Chamber Method

Concentration in the air: Equal to or less than 0.1 ppm (or 0.124 mg/m³) in an air-tight chamber whose volume is 12m³, 1m³, or 0.0225m³.

(2) Perforator Method

- Equal to or less than 6.5 mg in 100g of a particleboard without a surface treatment (the average value of six months)
- Equal to or less than 7.0 mg in 100g of a fiberboard without a surface treatment (the average value of six months)
- Equal to or less than 8.0 mg in 100g of a particleboard/fiberboard without a surface treatment (the value derived from the one-time measurement based on EN120)

(3) Desiccator's method

- Average content: 0.5 mg/l or less, Maximum content: 0.7 mg/l or less (Use N=2 to check the average and maximum values.)

5. Restricted Substances in Detail

	Substance	CAS No.
B-1 Organic phosphorous compounds	1,2-dibromo-2,2-dichloroethyl dimethyl phosphate; naled; BRP	300-76-5
	2-chloro-1-(2,4-dichlorophenyl)vinyl diethyl phosphate; chlorfenvinphos; CVP	470-90-6
	O-4-cyanophenyl O,O-dimethyl phosphorothioate; cyanophos; CYAP	2636-26-2
	Dimethyl 2,2-dichlorovinyl phosphate; dichlorvos; DDVP	62-73-7
	Dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate; trichlorfon; DEP	52-68-6
	S-(2,3-dihydro-5-methoxy-2-oxo-1,3,4-thiadiazol-3-yl)methyl O,O-dimethyl phosphorodithioate; methidathion; DMTP	950-37-8
	O-2,4-dichlorophenyl O,O-diethyl phosphorothioate; dichlofenthion; ECP	97-17-6
	O-ethyl S,S-diphenyl phosphorodithioate; edifenphos; EDDP	17109-49-8
	O-ethyl O-4-nitrophenyl phenylphosphonothioate; EPN	2104-64-5
	S-benzyl O,O-diisopropyl phosphorothioate; iprobenfos; IBP	26087-47-8
	O,O-dimethyl O-3-methyl-4-nitrophenyl phosphorothioate; fenitrothion; MEP	122-14-5
	O,O-dimethyl O-3-methyl-4-(methylthio)phenyl phosphorothioate; fenthion; MPP	55-38-9
	O-ethyl O-(6-nitro-m-tolyl) sec-butylphosphoramidothioate; butamifos	36335-67-8
	PAP/Fenthoate; O,O-Dimethyl S-(1-ethoxycarbonyl-1-phenyl) methylphosphorodithioate	2597-03-7
	O,O-diethyl O-5-phenyl-3-isoxazolyl phosphorothioate; isoxathion	18854-01-8
	S,S'-methylene O,O,O',O'-tetraethyl bis(phosphorodithioate); ethion	563-12-2
	O,O-diethyl S-2-(ethylthio)ethyl phosphorodithioate; ethylthiometon; disulfoton	298-04-4
	O,O-diethyl O-2-quinoxalanyl phosphorothioate; quinalphos	13593-03-8
	2-amino-4-[hydroxy(methyl)phosphinoyl]butyric acid; glufosinate	51276-47-2
	O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate; chlorpyrifos	2921-88-2
	O-3,5,6-trichloro-2-pyridyl O,O-dimethyl phosphorothioate; chlorpyrifos-methyl	5598-13-0
	O,O-diethyl S-(6-chloro-2,3-dihydro-2-oxobenzoxazolanyl)methyl phosphorodithioate; phosalone	2310-17-0
	O,O-dimethyl S-(N-methylcarbamoyl)methyl phosphorodithioate; dimethoate	60-51-5
	O-2,4-dichlorophenyl O-ethyl S-propyl phosphorodithioate; prothiofos	34643-46-4
	O-ethyl O-4-(methylthio)phenyl S-n-propyl phosphorodithioate; sulprofos	35400-43-2
	S-2-(ethylthio)ethyl O,O-dimethyl phosphorodithioate; thiometon	640-15-3
	1-chloro-diethylcarbamoyl-1-propen-2-yl dimethyl phosphate; Phosphamidon	13171-21-6
	2-chloro-1-(2,4-dichlorophenyl)vinyl dimethyl phosphate; dimethylvinphos	2274-67-1
	O,O-diethyl O-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate; diazinon	333-41-5
	O,O-diethyl O-6-oxo-1-phenyl-1,6-dihydro-3-pyridazinyl phosphorothioate; pyridaphenthion	119-12-0
	O,O-dimethyl S-2-[1-(N-methylcarbamoyl)ethylthio]ethyl phosphorothioate; vamidothion	2275-23-2
	O-1-(4-chlorophenyl)-4-pyrazolyl O-ethyl S-propyl phosphorothioate; pyraclofos	77458-01-6
	O-4-bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate; profenofos	41198-08-7
	O,O,O',O'-Tetraethyl pyrophosphate	107-49-3
	Parathion; Diethyl-paranitrophenyl- thiophosphate	56-38-2
	O,O-dimethyl S-1,2-bis(ethoxycarbonyl)ethyl phosphorodithioate; malathon; malathion	121-75-5
	Dimethylethylmercapto ethylthiophosphate; Methyl Demeton	8022-00-2
	Dimethylparanitrophenyl thiophosphate; Methyl Parathion	298-00-0
	Dimethyl (E)-1-methyl-2-(N-methylcarbamoyl)vinyl phosphate; monocrotophos	6923-22-4
	Tri-n-butyl phosphate	126-73-8
	Tris(dimethylphenyl) phosphate	25155-23-1
	Tris(2-chloroethyl) phosphate	115-96-8
	Tetrachlorvinphos; CVMP	22248-79-9
	Isophenphos; O-ethyl O-2-isopropoxycarbonylphenyl N-isopropylphosphoramidothioate	25311-71-1
	Tris(2-ethylhexyl)phosphate	78-42-2
	Octamethyl- pyrophosphoramidate; Schradan	152-16-9
	Tris(1-aziridinyl)phosphine oxide	545-55-1
Hexamethylphosphoric triamide; HMPA	680-31-9	
Bis(2,3-dibromopropyl)phosphate; BBP	5412-25-9	
Other organic phosphorous compound		

Substance Name		CAS No.	
B-2	Tetramethylthiuram disulfide; thiram	137-26-8	
B-3	2-chloro-4,6-bis (ethylamino) -1,3,5-triazine; shimazine; CAT	122-34-9	
B-4	Thiobencarb; S-p-Chlorobenzyl diethylthio-carbamate	2824977-6	
B-5	Selenium and its compounds	Selenium	7782-49-2
		Selenium dioxide	7446-08-4
		Selenium disulfide	7488-56-4
		Selenium hexafluoride	7783-79-1
		Selenious acid	7783-00-8
		Hydrogen selenide	7783-07-5
		Selenic acid	7783-08-6
		Selenium sulfide	7446-34-6
	Selenium	7782-49-2	
B-6	Carbon dioxide	124-38-9	
B-7	Methane	74-82-8	
B-8	Dinitrogen monoxide	10024-97-2	
B-9	Sulphur hexafluoride	2551-62-4	
B-10	Chloroform	67-66-3	
B-11	Halogenated resin additives (excluding A-1, A-2)	TBA, TBBA	e.g. 79-94-7
		2,4,6-Tribromoaniline	147-82-0
		Allyl Tribromophenyl Ether	3278-89-5
		2,4,6-tribromophenol	118-79-6
		2,3-Dibromopropanol	96-13-9
		Tris (2,3-dibromopropyl) isocyanurate	52434-90-9
		Tris (2,3-Dibromopropyl) Phosphate	126-72-7
		Tris (2,4-dibromophenyl) phosphate	7046-64-2
		Hexabromocyclododecane	
		Cyclododecane, 1,2,5,6,9,10-hexabromo-	3194-55-6
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R*,2S*,5R*,6S*,9R*,10S*)-	4736-49-6
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R*,2S*,5R*,6S*,9S*,10R*)-	65701-47-5
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2R,5S,6R,9R,10S)-rel-	134237-50-6
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2S,5R,6R,9R,10S)-rel-	134237-51-7
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2R,5R,6S,9S,10R)-rel-	134237-52-8
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2R,5R,6S,9S,10S)-	138257-17-7
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, [1R-(1R*,2R*,5R*,6S*,9R*,10S*)]-	138257-18-8
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, [1S-(1R*,2R*,5S*,6R*,9R*,10S*)]-	138257-19-9
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, [1R-(1R*,2S*,5S*,6S*,9S*,10R*)]-	169102-57-2
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R*,2S*,5R*,6S*,9S*,10R*)-	678970-15-5
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2S,5R,6S,9S,10S)-	678970-16-6
		Cyclododecane, 1,2,5,6,9,10-hexabromo-, (1R,2R,5R,6S,9S,10R)-	678970-17-7
		Hexabromobenzene	87-82-1
		1,1,2,2,-Tetrabromoethane	79-27-6
		Tetrabromophthalic anhydridem, 4,5,6,7-Tetrabromo-1,3-isobenzofurandione	632-79-1
		Poly (dibromophenylene oxide)	69882-11-7
		Tetradecabromo-1,4-diphenoxybenzene	58965-66-5
		1,2-Bis (2,4,6-Tribromophenoxy) Ethane	37853-59-1
		Tetrabromobisphenol A (TBBA-epichlorhydrin oligomer)	40039-93-8
		Tetrabromobisphenol A (TBBA-diglycidyl-ether oligomer)	70682-74-5
		Tetrabromobisphenol A (TBBA carbonate oligomer)	28906-13-0
		TBBA carbonate oligomer, phenoxy end capped	94334-64-2
		TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2		
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2		
TBBA-bis-(allyl-ether)	25327-89-3		
TBBA-dimethyl-ether	37853-61-5		
Tetrabromo-bisphenol S	39635-79-5		
TBBS-bis-(2,3-dibromo-propyl- ether)	42757-55-1		

Substance Name		CAS No.	
B-11	Halogenated resin additives (excluding A-1, A-2)	2,4-dibromo-phenol	615-58-7
		Pentabromo-phenol	608-71-9
		Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
		Tetrabromo-chyclo-octane	31454-48-5
		1,2-Dibromo-4-(1,2 dibromo- methyl)-cyclo-hexane	3322-93-8
		Bis (methyl) tetrabromo-phtalate	55481-60-2
		Bis (2-ethylhexyl) tetrabromo- phthalate	26040-51-7
		2-hydroxy-propyl-2- (2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
		2,3-dibromo-2-butene-1,4-diol	3234-02-4
		Dibromo-neopentyl-glycol	3296-90-0
		Tribromo-neopentyl-alcohol	36483-57-5
		Poly tribromo-styrene	57137-10-7
		Tribromo-styrene	61368-34-1
		Poly-dibromo-styrene	31780-26-4
		Bromo-/Chloro-paraffins	68955-41-9
		Bromo-/Chloro-alpha-olefin	82600-56-4
		Vinyl bromide	593-60-2
		Tris (2,4-Dibromo-phenyl) phosphate	49690-63-3
		Tris (tribromo-neopentyl) phosphate	19186-97-1
		Pentabromo-toluene	87-83-2
		Pentabromo-benzyl bromide	38521-51-6
		Pentabromo-benzyl-acrylate, monomer	59447-55-1
		Pentabromo-benzyl-acrylate, polymer	59447-57-3
		Decabromo-diphenyl-ethane	61262-53-1
		1,2-Bis (pentabromophenyl) ethane	84852-53-9
		TBBA-bisphenol A-phosgenepolymer	32844-27-2
		Brominated epoxy resinend-capped with tribromophenol	139638-58-7
		Brominated epoxy resinend-capped with tribromophenol	135229-48-0
		TBPA glycol-and propylene-oxide esters	75790-69-1
		TBPA Na salt	25357-79-3
		N,N'-Ethylene bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene bis85,6-dibromo-norbomane-2,3-dicarboximide	52907-07-0		
Dibromo-styrene grafted PP	171091-06-8		
Chlorinated and brominated phosphate ester	125997-20-8		
1,3-Butadiene homopolymer,brominated	68441-46-3		
Tribromo-bisphenyl-maleinimide	59789-51-4		
Other Brominated Flame Retardant			
B-12	Antimony and its compounds	Antimony	7440-36-0
		Antimony (III) fluoride, Antimony trifluoride	7783-56-4
		Antimony (III) iodide, Antimonyiodide	7790-44-5
		Antimony (V)-pentachloride	7647-18-9
		Antimony pentafluoride	7783-70-2
		Sodium antimonate	—
		Antimony pentoxide	1314-60-9
		Antimony pentasulfide	1315-04-4
		Antimony trichloride	10025-91-9
		Antimony trioxide	1309-64-4
		Antimony trisulfide	1345-04-6
		Antimony potassium tartrate, trihydrate; Antimony (III) potassium tartrate trihydrate	28300-74-5
		Stibine	7803-52-3
		Other antimony compounds	

Substance Name		CAS No.	
B-13	Beryllium and its compounds	Beryllium	7440-41-7
		Beryllium chloride	7787-47-5
		Beryllium silicate	15191-85-2
		Beryllium oxide	1304-56-9
		Beryllium fluoride	7787-49-7
		Beryllium sulfate	13510-49-1
		Beryllium sulfate tetrahydrate	7787-56-6
		Other beryllium compounds	
B-14	Bismuth and its compounds	Bismuth	7440-69-9
		Bismuth trioxide	1304-76-3
		Bismuth nitrate	10361-44-1
		Other bismuth compounds	
B-15	Chromium and its compounds (excluding A-10)	Chromium	7440-47-3
		Basic Chromic Sulfate	64093-79-4
		Chromium(III) acetate n-hydrate	1066-30-4
		Other Chromium Compounds	
B-16	Cobalt and its compounds	Cobalt	7440-48-4
		Cobalt hydrocarbonyl	16842-03-8
		Cobalt (II) acetate tetrahydrate	6147-53-1
		Cobalt (II) oxide	1307-96-6
		Cobalt (II) nitrate hexahydrate	10026-22-9
		Cobalt (II) carbonate, basic	513-79-1
		Cobalt oxide (II, III); Cobalt oxide	1308-06-1
		Other Cobalt Compounds	
B-17	Nickel and its compounds	Nickel	7440-02-0
		Nickel (II) acetate tetrahydrate	6018-89-9
		Nickel (II) oxide	1313-99-1
		Nickel nitrate	13138-45-9
		Nickel (II) hydroxide	12054-48-7
		Nickel carbonate	3333-67-3
		Nickel carbonyl	13463-39-3
		Bis (dimethyldithiocarbamate) nickel complex	15521-65-0
		Nickel sulfide	12035-72-2
		Nickel (II) sulphate	7786-81-4
		Nickel chloride	7718-54-9
Other Nickel Compounds			
B-18	Organic tin and its compounds (excluding A-14)	Dibutyltin compounds	
		Diphenyltin compounds	
		Other Tin compounds (excluding Tributyltins and Triphenyltins)	
B-19	Tellurium and its compounds	Tellurium	13494-80-9
		Dimethyl tellurium	593-80-6
		Tellurium dioxide	149081-89-0
		Tellurium trioxide	
		Tellurium Hexafluoride	7783-80-4
		Tellurium tetrachloride	
		Hydrogen telluride	7783-09-7
Other Tellurium Compounds			
B-20	Thallium and its compounds	Thallium	7440-28-0
		Thallium (III) oxide	1314-12-1
		Thallium (I) nitrate	10102-45-1
		Thallosulfate	7446-18-6
		Other Thallium Compounds	
B-21	Azo compounds (excluding A-16)		

Substance Name		CAS No.	
B-22	Phthalate esters	Diisooctyl phthalate	27554-26-3
		Diisodecyl phthalate	26761-40-0
		Diisononyl phthalate	28553-12-0
		Diisobutyl phthalate	84-69-5
		Dicyclohexyl phthalate	84-61-7
		Di (2-ethylhexyl) phthalate	117-81-7
		Di-n-octyl phthalate	117-84-0
		Dibutyl phthalate	84-74-2
		Butyl benzyl phthalate	85-68-7
		Dimethyl terephthalate	120-61-6
		Di-n-heptyl phthalate	3648-21-3
		Diethyl phthalate	84-66-2
		Di-n-pentyl Phthalate	131-18-0
		Di-n-propyl Phthalate	131-16-8
		Di-n-hexyl Phthalate	84-75-3
		Other Phthalate Ester Compounds	
B-23	Bisphenol A	80-05-7	
B-25	VOC: Volatile Organic Compounds (Excluding A-33)	Formaldehyde (Refer to A-33.)	
		Toluene	108-88-3
		o-Xylene	95-47-6
		m-Xylene	108-38-3
		p-Xylene	106-42-3
		xylene	1330-20-7
		1,4-Dichlorobenzene	106-46-7
		Ethylbenzene	100-41-4
		Styrene	100-42-5
		Dibutyl phthalate	84-74-2
		Chlorpyrifos	2921-88-2
		n-Tetradecane	629-59-4
		Di (2-ethylhexyl) phthalate	117-81-7
		Diazinon	333-41-5
		Acetaldehyde	75-07-0
2-sec-butylphenyl N-methylcarbamate; fenobucarb; BPMC	3766-81-2		
B-26	Perfluorooctanoic acid	PFOA	

Substance Name			CAS No.	
Restricted Substances in Production Processes	HCFCs; Hydrochloro- Fluorocarbons (CFC's substitute)	HCFC-21	Dichlorofluoromethane; HCFC-21	75-43-4
		HCFC-22	Dichlorodifluoromethane; HCFC-22	75-45-6
		HCFC-31	Chlorofluoromethane; HCFC-31	593-70-4
		HCFC-121	Tetrachlorofluoroethane; HCFC-121	134237-32-4
		HCFC-122	Trichlorodifluoroethane; HCFC-122	41834-16-6
		HCFC-123	Dichlorotrifluoroethane; HCFC-123	134237-33-5
		HCFC-123*	2,2-dichloro-1,1,1-trifluoroethane; HCFC-123	306-83-2
		HCFC-124	Chlorotetrafluoroethane	63938-10-3
		HCFC-124*	2-chloro-1,1,1,2-tetrafluoroethane; HCFC-124	2837-89-0
		HCFC-131	Trichlorofluoroethane; HCFC-131	134237-34-6
		HCFC-132	Dichlorodifluoroethane; HCFC-132	25915-78-0
		HCFC-133	Chlorotrifluoroethane; HCFC-133	1330-45-6
		HCFC-141	Dichlorofluoroethane; HCFC-141	25167-88-8
		HCFC-141b*	1,1-dichloro-1-fluoroethane; HCFC-141b	1717-00-6
		HCFC-142	Chlorodifluoroethane; HCFC-142	25497-29-4
		HCFC-142b*	1-chloro-1,1-difluoroethane; HCFC-142b	75-68-3
		HCFC-151	1-Chloro-1-fluoroethane; HCFC-151	1615-75-4
		HCFC-221	Hexachlorofluoropropane; HCFC-221	134237-35-7
		HCFC-222	Pentachlorodifluoropropane; HCFC-222	134237-36-8
		HCFC-223	Tetrachlorotrifluoropropane; HCFC-223	134237-37-9
		HCFC-224	Tetrafluorotrifluoropropane; HCFC-224	134237-38-0
		HCFC-225	Dichloropentafluoropropane; HCFC-225	127564-92-5
		HCFC-225ca**	3,3-Dichloro-1,1,1,2,2-pentafluoropropane; HCFC-225ca	422-56-0
		HCFC-225cb**	1,3-Dichloro-1,1,2,2,3-pentafluoropropane; HCFC-225cb	507-55-1
		HCFC-226	Chlorohexafluoropropane; HCFC-226	134308-72-8
		HCFC-231	Pentachlorofluoropropane; HCFC-231	134190-48-0
		HCFC-232	Tetrachlorodifluoropropane; HCFC-232	134237-39-1
HCFC-233	Trichlorotrifluoropropane; HCFC-233	134237-40-4		
HCFC-234	Dichlorotetrafluoropropane; HCFC-234.	127564-83-4		
HCFC-235	Chloropentafluoropropane; HCFC-235	134237-41-5		
HCFC-241	Tetrachloropentafluoropropane; HCFC-241	134190-49-1		
HCFC-242	Trichlorodifluoropropane; HCFC-242	134237-42-6		
HCFC-243	Dichlorotrifluoropropane; HCFC-243	134237-43-7		
HCFC-244	Chlorotetrafluoropropane; HCFC-244	134190-50-4		
HCFC-251	Trichlorofluoropropane; HCFC-251	134190-51-5		
HCFC-252	Dichlorodifluoropropane; HCFC-252	134190-52-6		
HCFC-253	Chlorotrifluoropropane; HCFC-253	134237-44-8		
HCFC-261	Dichlorofluoropropane; HCFC-261	134237-45-9		
HCFC-262	Chlorodifluoropropane; HCFC-262	134190-53-7		
HCFC-271	Chlorofluoropropane; HCFC-271	134190-54-8		

*includes isomer

**These are the substances which are most likely used in the market.

6. Class 1 Specified Chemical Substances under the PRTR Law

The following list includes three kinds of substances; A: Banned Substances, B: Restricted Substances, and C: Controlled Substances. Substances which are not in the category of A or B are considered as C.

No.	Substance Name	English Name	CAS No.
1	亜鉛の水溶性化合物	Zinc compounds (water-soluble)	-
2	アクリルアミド	Acrylamide	79-06-1
3	アクリル酸	Acrylic acid	79-10-7
4	アクリル酸エチル	Ethyl acrylate	140-88-5
5	アクリル酸2-(ジメチルアミノ)エチル	2-(dimethylamino) ethyl acrylate	2439-35-2
6	アクリル酸メチル	Methyl acrylate	96-33-3
7	アクリロニトリル	Acrylonitrile	107-13-1
8	アクロレイン	Acrolein	107-02-8
9	アジピン酸ビス(2-エチルヘキシル)	Bis (2-ethylhexyl) adipate	103-23-1
10	アジポニトリル	Adiponitrile	111-69-3
11	アセトアルデヒド	Acetaldehyde	75-07-0
12	アセトニトリル	Acetonitrile	75-05-8
13	2,2'-アゾビスイソブチロニトリル	2,2'-azobisisobutyronitrile	78-67-1
14	o-アニシジン	o-anisidine	90-04-0
15	アニリン	Aniline	62-53-3
16	2-アミノエタノール	2-aminoethanol	141-43-5
17	N-(2-アミノエチル)-1,2-エタンジアミン(別名ジエチレントリアミン)	N-(2-aminoethyl)-1,2-ethanediamine; diethylenetriamine	111-40-0
18	5-アミノ-1-[2,6-ジクロロ-4-(トリフルオロメチル)フェニル]-3-シアノ-4-[(トリフルオロメチル)スルフィニル]ピラゾール(別名フィプロニル)	5-amino-1-[2,6-dichloro-4-(trifluoromethyl) phenyl]-3-cyano-4-[(trifluoromethyl) sulfinyl] pyrazole; fipronil	120068-37-3
19	3-アミノ-1H-1,2,4-トリアゾール(別名アミトロール)	3-amino-1H-1,2,4-triazole; amitrole	61-82-5
20	2-アミノ-4-[ヒドロキシ(メチル)ホスフィニル]酪酸(別名グルホシネート)	2-amino-4-[hydroxy (methyl) phosphinoyl] butyric acid ; glufosinate	51276-47-2
21	m-アミノフェノール	m-aminophenol	591-27-5
22	アリルアルコール	Allyl alcohol	107-18-6
23	1-アリルオキシ-2,3-エポキシプロパン	1-allyloxy-2,3-epoxypropane	106-92-3
24	直鎖アルキルベンゼンスルホン酸及びその塩(アルキル基の炭素数が10から14までのもの及びその混合物に限る。)	N-alkylbenzenesulfonic acid and its salts (alkyl C=10-14)	-
25	アンチモン及びその化合物	Antimony and its compounds	-
26	石綿	Asbestos	1332-21-4
27	3-イソシアナトメチル-3,5,5-トリメチルシクロヘキシルイソシアネート	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9
28	イソプレン	Isoprene	78-79-5
29	4,4'-イソプロピリデンジフェノール(別名ビスフェノールA)	4,4'-isopropylidenediphenol; bisphenol A	80-05-7
30	4,4'-イソプロピリデンジフェノールと1-クロロ-2,3-エポキシプロパンの重縮合物(別名ビスフェノールA型エポキシ樹脂)(液状のものに限る。)	Polymer of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (liquid); bisphenol A type epoxy resin (liquid)	25068-38-6
31	2,2'-[イソプロピリデンビス[(2,6-ジブromo-4,1-フェニレン)オキシ]]ジエタノール	2,2'-[isopropylidenebis [(2,6-dibromo-4,1-phenylene) oxy]] diethanol	4162-45-2
32	2-イミダゾリジンチオン	2-imidazolidinethione	96-45-7
33	1,1'-[イミノジ(オクタメチレン)]ジグアニジン(別名イミノクタジン)	1,1'-[iminodi(octamethylene)] diguanidine; iminooctadine	13516-27-3
34	エチル2-[4-(6-クロロ-2-キノキサリニルオキシ)フェノキシ]プロピオネート(別名キザロホップエチル)	Ethyl 2-[4-(6-chloro-2-quinoxalinyloxy) phenoxy] propionate; quizalofop-ethyl	76578-14-8
35	S-エチル2-(4-クロロ-2-メチルフェノキシ)チオアセテート(別名フェノチオール又はMCPAチオエチル)	S-ethyl 2-(4-chloro-2-methylphenoxy) thioacetate; phenothiol; MCPA-thioethyl	25319-90-8
36	O-エチルO-(6-ニトロ-m-トリアル)sec-ブチルホスホoramidothioate(別名ブタミφος)	O-ethyl O-(6-nitro-m-tolyl) sec-butylphosphoramidothioate; butamifos	36335-67-8
37	O-エチルO-4-ニトロフェニルフェニルホスホthioate(別名EPN)	O-ethyl O-4-nitrophenyl phenylphosphonothioate; EPN	2104-64-5
38	N-(1-エチルプロピル)-2,6-ジニトロ-3,4-キシリジン(別名ペンディメタリン)	N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine; pendimethalin	40487-42-1
39	S-エチルヘキサヒドロ-1H-アゼピン-1-カルボチオアート(別名モリネート)	S-ethyl hexahydro-1H-azepine-1-carbothioate; molinate	2212-67-1

No.	Substance Name	English Name	CAS No.
40	エチルベンゼン	Ethylbenzene	100-41-4
41	エチレンイミン	Ethyleneimine	151-56-4
42	エチレンオキシド	Ethylene oxide	75-21-8
43	エチレングリコール	Ethylene glycol	107-21-1
44	エチレングリコールモノエチルエーテル	Ethylene glycol monoethyl ether	110-80-5
45	エチレングリコールモノメチルエーテル	Ethylene glycol monomethyl ether	109-86-4
46	エチレンジアミン	Ethylenediamine	107-15-3
47	エチレンジアミン四酢酸	Ethylenediaminetetraacetic acid	60-00-4
48	N,N'-エチレンビス(ジチオカルバミン酸)亜鉛(別名ジネブ)	Zinc N,N'-ethylenebis (dithiocarbamate); zineb	12122-67-7
49	N,N'-エチレンビス(ジチオカルバミン酸)マンガン(別名マンネブ)	Manganese N,N'-ethylenebis (dithiocarbamate); maneb	12427-38-2
50	N,N'-エチレンビス(ジチオカルバミン酸)マンガンとN,N'-エチレンビス(ジチオカルバミン酸)亜鉛の錯化合物(別名マンコゼブ又はマンゼブ)	Complex compounds of manganese N,N'-ethylenebis (dithiocarbamate) and zinc N,N'-ethylenebis (dithiocarbamate); mancozeb	8018-01-7
51	1,1'-エチレン-2,2'-ビピリジニウム=ジプロミド(別名ジクアトジプロミド又はジクワット)	1,1'-ethylene-2,2'-bipyridinium dibromide; diquat dibromide	85-00-7
52	4'-エトキシアセトアニリド(別名フェナセチン)	4'-ethoxyacetanilide; phenacetin	62-44-2
53	5-エトキシ-3-トリクロロメチル-1,2,4-チアジアゾール(別名エクロメゾール)	5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole; echlomezol	2593-15-9
54	エピクロロヒドリン	Epichlorohydrin	106-89-8
55	2,3-エポキシ-1-プロパノール	2,3-epoxy-1-propanol	556-52-5
56	1,2-エポキシプロパン(別名酸化プロピレン)	1,2-epoxypropane; propylene oxide	75-56-9
57	2,3-エポキシプロピル=フェニルエーテル	2,3-epoxypropyl phenyl ether	122-60-1
58	1-オクタノール	1-octanol	111-87-5
59	p-オクチルフェノール	p-octylphenol	1806-26-4
60	カドミウム及びその化合物	Cadmium and its compounds	-
61	ε-カプロラクタム	ε-caprolactam	105-60-2
62	2,6-キシレノール	2,6-xylenol	576-26-1
63	キシレン	Xylene	1330-20-7
64	銀及びその水溶性化合物	Silver and its water-soluble compounds	-
65	グリオキサール	Glyoxal	107-22-2
66	グルタルアルデヒド	Glutaraldehyde	111-30-8
67	クレゾール	Cresol	1319-77-3
68	クロム及び3価クロム化合物	Chromium and chromium (III) compounds	-
69	6価クロム化合物	Chromium (VI) compounds	-
70	クロロアセチル=クロリド	Chloroacetyl chloride	79-04-9
71	o-クロロアニリン	o-chloroaniline	95-51-2
72	p-クロロアニリン	p-chloroaniline	106-47-8
73	m-クロロアニリン	m-chloroaniline	108-42-9
74	クロロエタン	Chloroethane	75-00-3
75	2-クロロ-4-エチルアミノ-6-イソプロピルアミノ-1,3,5-トリアジン(別名アトラジン)	2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine; atrazine	1912-24-9
76	2-クロロ-2'-エチル-N-(2-メトキシ-1-メチルエチル)-6'-メチルアセトアニリド(別名メトラクロール)	2-chloro-2'-ethyl-N-(2-methoxy-1-methylethyl)-6'-methylacetanilide; metolachlor	51218-45-2
77	クロロエチレン(別名塩化ビニル)	Chloroethylene; vinyl chloride	75-01-4
78	3-クロロ-N-(3-クロロ-5-トリフルオロメチル-2-ピリジル)-α,α,α-トリフルオロ-2,6-ジニトロ-p-トルイジン(別名フルアジナム)	3-chloro-N-(3-chloro-5-trifluoromethyl-2-pyridyl)-α,α,α-trifluoro-2,6-dinitro-p-toluidine; fluazinam	79622-59-6
79	1-({2-[2-クロロ-4-(4-クロロフェノキシ)フェニル]-4-メチル-1,3-ジオキサラン-2-イル}メチル)-1H-1,2,4-トリアゾール(別名ジフェノコナゾール)	1-({2-[2-chloro-4-(4-chlorophenoxy) phenyl]-4-methyl-1,3-dioxolan-2-yl}methyl)-1H-1,2,4-triazole; difenoconazole	119446-68-3
80	クロロ酢酸	Chloroacetic acid	79-11-8
81	2-クロロ-2',6'-ジエチル-N-(2-プロポキシエチル)アセトアニリド(別名プレチラクロール)	2-chloro-2',6'-diethyl-N-(2-propoxyethyl) acetanilide; pretilachlor	51218-49-6
82	2-クロロ-2',6'-ジエチル-N-(メトキシメチル)アセトアニリド(別名アラクロール)	2-chloro-2',6'-diethyl-N-(methoxymethyl) acetanilide; alachlor	15972-60-8
83	1-クロロ-2,4-ジニトロベンゼン	1-chloro-2,4-dinitrobenzene	97-00-7
84	1-クロロ-1,1-ジフルオロエタン(別名HCFC-142b)	1-chloro-1,1-difluoroethane; HCFC-142b	75-68-3
85	クロロジフルオロメタン(別名HCFC-22)	Chlorodifluoromethane; HCFC-22	75-45-6

No.	Substance Name	English Name	CAS No.
86	2-クロロ-1,1,1,2-テトラフルオロエタン(別名HCFC-124)	2-chloro-1,1,1,2-tetrafluoroethane; HCFC-124	2837-89-0
87	クロロトリフルオロエタン(別名HCFC-133)	Chlorotrifluoroethane; HCFC-133	-
88	クロロトリフルオロメタン(別名CFC-13)	Chlorotrifluoromethane; CFC-13	75-72-9
89	o-クロロトルエン	o-chlorotoluene	95-49-8
90	2-クロロ-4,6-ビス(エチルアミノ)-1,3,5-トリアジン(別名シマジン又はCAT)	2-chloro-4,6-bis(ethylamino)-1,3,5-triazine; shimazine; CAT	122-34-9
91	3-クロロプロペン(別名塩化アリル)	3-chloropropene; allyl chloride	107-05-1
92	4-クロロベンジル=N-(2,4-ジクロロフェニル)-2-(1H-1,2,4-トリアゾール-1-イル)チオアセチミダート(別名イミベンコナゾール)	4-chlorobenzyl N-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)thioacetimidate; imibenconazole	86598-92-7
93	クロロベンゼン	Chlorobenzene	108-90-7
94	クロロペンタフルオロエタン(別名CFC-115)	Chloropentafluoroethane; CFC-115	76-15-3
95	クロロホルム	Chloroform	67-66-3
96	クロロメタン(別名塩化メチル)	Chloromethane; methyl chloride	74-87-3
97	(4-クロロ-2-メチルフェノキシ)酢酸(別名MCP又はMCPA)	(4-chloro-2-methylphenoxy) acetic acid; MCP; MCPA	94-74-6
98	2-クロロ-N-(3-メトキシ-2-チエニル)-2',6'-ジメチルアセトアニリド(別名テニルクロール)	2-chloro-N-(3-methoxy-2-thienyl)-2',6'-dimethylacetanilide; thenylchlor	96491-05-3
99	五酸化バナジウム	Divanadium pentoxide	1314-62-1
100	コバルト及びその化合物	Cobalt and its compounds	-
101	酢酸2-エトキシエチル(別名エチレングリコールモノエチルエーテルアセテート)	2-ethoxyethyl acetate; ethylene glycol monoethyl ether acetate	111-15-9
102	酢酸ビニル	Vinyl acetate	108-05-4
103	酢酸2-メトキシエチル(別名エチレングリコールモノメチルエーテルアセテート)	2-methoxyethyl acetate; ethylene glycol monomethyl ether acetate	110-49-6
104	サリチルアルデヒド	Salicylaldehyde	90-02-8
105	α-シアノ-3-フェノキシベンジル=N-(2-クロロ-α,α,α-トリフルオロ-p-トリル)-D-バリナート(別名フルバリネート)	α-cyano-3-phenoxybenzyl N-(2-chloro-α,α,α-trifluoro-p-tolyl)-D-valinate; fluvalinate	102851-06-9
106	α-シアノ-3-フェノキシベンジル=2-(4-クロロフェニル)-3-メチルブチラート(別名フェンバレレート)	α-cyano-3-phenoxybenzyl 2-(4-chlorophenyl)-3-methylbutyrate; fenvalerate	51630-58-1
107	α-シアノ-3-フェノキシベンジル=3-(2,2-ジクロロビニル)-2,2-ジメチルシクロプロパンカルボキシラート(別名シペルメトリン)	α-cyano-3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; cypermethrin	52315-07-8
108	無機シアン化合物(錯塩及びシアン酸塩を除く。)	Inorganic cyanide compounds (except complex salts and cyanates)	-
109	2-(ジエチルアミノ)エタノール	2-(diethylamino) ethanol	100-37-8
110	N,N-ジエチルチオカルバミン酸S-4-クロロベンジル(別名チオベンカルブ又はベンチオカーブ)	S-4-chlorobenzyl N,N-diethylthiocarbamate; thiobencarb	28249-77-6
111	N,N-ジエチル-3-(2,4,6-トリメチルフェニルスルホニル)-1H-1,2,4-トリアゾール-1-カルボキサミド(別名カフェンストロール)	N,N-diethyl-3-(2,4,6-trimethylphenylsulfonyl)-1H-1,2,4-triazole-1-carboxamide; cafenstrole	125306-83-4
112	四塩化炭素	Tetrachloromethane	56-23-5
113	1,4-ジオキサン	1,4-dioxane	123-91-1
114	シクロヘキシルアミン	Cyclohexylamine	108-91-8
115	N-シクロヘキシル-2-ベンゾチアゾールスルフェンアミド	N-cyclohexyl-2-benzothiazolesulfenamide	95-33-0
116	1,2-ジクロロエタン	1,2-dichloroethane	107-06-2
117	1,1-ジクロロエチレン(別名塩化ビニリデン)	1,1-dichloroethylene; vinylidene dichloride	75-35-4
118	cis-1,2-ジクロロエチレン	cis-1,2-dichloroethylene	156-59-2
119	trans-1,2-ジクロロエチレン	trans-1,2-dichloroethylene	156-60-5
120	3,3'-ジクロロ-4,4'-ジアミノジフェニルメタン	3,3'-dichloro-4,4'-diaminodiphenylmethane	101-14-4
121	ジクロロジフルオロメタン(別名CFC-12)	Dichlorodifluoromethane; CFC-12	75-71-8
122	3,5-ジクロロ-N-(1,1-ジメチル-2-プロピニル)ベンズアミド(別名プロピザミド)	3,5-dichloro-N-(1,1-dimethyl-2-propynyl) benzamide; propyzamide	23950-58-5
123	ジクロロテトラフルオロエタン(別名CFC-114)	Dichlorotetrafluoroethane; CFC-114	-
124	2,2-ジクロロ-1,1,1-トリフルオロエタン(別名HCFC-123)	2,2-dichloro-1,1,1-trifluoroethane; HCFC-123	306-83-2
125	2',4'-ジクロロ-α,α,α-トリフルオロ-4'-ニトロ-m-トルエンスルホンアニリド(別名フルスルファミド)	2',4'-dichloro-α,α,α-trifluoro-4'-nitro-m-toluenesulfonamide; flusulfamide	106917-52-6
126	2-[4-(2,4-ジクロロ-m-トルイル)-1,3-ジメチル-5-ピラゾリルオキシ]-4-メチルアセトフェノン(別名ベンゾフェナップ)	2-[4-(2,4-dichloro-m-toluoyl)-1,3-dimethyl-5-pyrazolyl]oxy]-4-methylacetophenone; benzofenap	82692-44-2
127	1,2-ジクロロ-3-ニトロベンゼン	1,2-dichloro-3-nitrobenzene	3209-22-1

No.	Substance Name	English Name	CAS No.
128	1,4-ジクロロ-2-ニトロベンゼン	1,4-dichloro-2-nitrobenzene	89-61-2
129	3-(3,4-ジクロロフェニル)-1,1-ジメチル尿素(別名ジウロン又はDCMU)	3-(3,4-dichlorophenyl)-1,1-dimethylurea; diuron; DCMU	330-54-1
130	3-(3,4-ジクロロフェニル)-1-メトキシ-1-メチル尿素(別名リニユロン)	3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea; linuron	330-55-2
131	2,4-ジクロロフェノキシ酢酸(別名2,4-D又は2,4-PA)	2,4-dichlorophenoxyacetic acid; 2,4-D; 2,4-PA	94-75-7
132	1,1-ジクロロ-1-フルオロエタン(別名HCFC-141b)	1,1-dichloro-1-fluoroethane; HCFC-141b	1717-00-6
133	ジクロロフルオロメタン(別名HCFC-21)	Dichlorofluoromethane; HCFC-21	75-43-4
134	1,3-ジクロロ-2-プロパノール	1,3-dichloro-2-propanol	96-23-1
135	1,2-ジクロロプロパン	1,2-dichloropropane	78-87-5
136	3,4-ジクロロプロピオンアミド(別名プロパニール又はDCPA)	3,4-dichloropropionanilide; propanil; DCPA	709-98-8
137	1,3-ジクロロプロペン(別名D-D)	1,3-dichloropropene; D-D	542-75-6
138	3,3'-ジクロロベンジジン	3,3'-dichlorobenzidine	91-94-1
139	o-ジクロロベンゼン	o-dichlorobenzene	95-50-1
140	p-ジクロロベンゼン	p-dichlorobenzene	106-46-7
141	2-[4-(2,4-ジクロロベンゾイル)-1,3-ジメチル-5-ピラゾリルオキシ]アセトフェノン(別名ピラゾキシフェン)	2-[4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-pyrazolyloxy]acetophenone; pyrazoxyfen	71561-11-0
142	4-(2,4-ジクロロベンゾイル)-1,3-ジメチル-5-ピラゾリル=4-トルエンスルホナート(別名ピラゾレート)	4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-pyrazolyl 4-toluenesulfonate; pyrazolynate	58011-68-0
143	2,6-ジクロロベンズニトリル(別名ジクロベニル又はDBN)	2,6-dichlorobenzonitrile; dichlobenil; DBN	1194-65-6
144	ジクロロペンタフルオロプロパン(別名HCFC-225)	Dichloropentafluoropropane; HCFC-225	-
145	ジクロロメタン(別名塩化メチレン)	Dichloromethane; methylene dichloride	75-09-2
146	2,3-ジシアノ-1,4-ジチアアントラキノン(別名ジチアノン)	2,3-dicyano-1,4-dithiaanthraquinone; dithianon	3347-22-6
147	1,3-ジチオラン-2-イリデンマロン酸ジイソプロピル(別名イソプロチオラン)	Diisopropyl 1,3-dithiolan-2-ylidenemalonate; isoprothiolane	50512-35-1
148	ジチオリン酸O-エチル-S,S-ジフェニル(別名エディフェンホス又はEDDP)	O-ethyl S,S-diphenyl phosphorodithioate; edifenphos; EDDP	17109-49-8
149	ジチオリン酸S-2-(エチルチオ)エチル-O,O-ジメチル(別名チオメトン)	S-2-(ethylthio)ethyl O,O-dimethyl phosphorodithioate; thiometon	640-15-3
150	ジチオリン酸O-エチル-O-(4-メチルチオフェニル)-S-n-プロピル(別名スルプロホス)	O-ethyl O-4-(methylthio) phenyl S-n-propyl phosphorodithioate; sulprofos	35400-43-2
151	ジチオリン酸O,O-ジエチル-S-(2-エチルチオエチル)(別名エチルチオメトン又はジスルホトン)	O,O-diethyl S-2-(ethylthio) ethyl phosphorodithioate; ethylthiometon; disulfoton	298-04-4
152	ジチオリン酸O,O-ジエチル-S-[(6-クロロ-2,3-ジヒドロ-2-オキソベンゾオキサゾリニル)メチル](別名ホサロン)	O,O-diethyl S-(6-chloro-2,3-dihydro-2-oxobenzoxazoliny) methyl phosphorodithioate; phosalone	2310-17-0
153	ジチオリン酸O-2,4-ジクロロフェニル-O-エチル-S-プロピル(別名プロチオホス)	O-2,4-dichlorophenyl O-ethyl S-propyl phosphorodithioate; prothiofos	34643-46-4
154	ジチオリン酸S-(2,3-ジヒドロ-5-メトキシ-2-オキソ-1,3,4-チアジアゾール-3-イル)メチル-O,O-ジメチル(別名メチダチオン又はDMTP)	S-(2,3-dihydro-5-methoxy-2-oxo-1,3,4-thiadiazol-3-yl) methyl O,O-dimethyl phosphorodithioate; methidathion; DMTP	950-37-8
155	ジチオリン酸O,O-ジメチル-S-1,2-ビス(エトキシカルボニル)エチル(別名マラソン又はマラチオン)	O,O-dimethyl S-1,2-bis (ethoxycarbonyl) ethyl phosphorodithioate; malathon; malathion	121-75-5
156	ジチオリン酸O,O-ジメチル-S-[(N-メチルカルバモイル)メチル](別名ジメトエート)	O,O-dimethyl S-(N-methylcarbamoyl) methyl phosphorodithioate; dimethoate	60-51-5
157	ジニトロトルエン	Dinitrotoluene	25321-14-6
158	2,4-ジニトロフェノール	2,4-dinitrophenol	51-28-5
159	ジフェニルアミン	Diphenylamine	122-39-4
160	2-(ジ-n-ブチルアミノ)エタノール	2-(di-n-butylamino) ethanol	102-81-8
161	N-ジブチルアミノチオ-N-メチルカルバミン酸2,3-ジヒドロ-2,2-ジメチル-7-ベンゾ[b]フラニル(別名カルボスルファン)	2,3-dihydro-2,2-dimethyl-7-benzo[b]furyl N-(dibutylamino) thio-N-methylcarbamate; carbosulfan	55285-14-8
162	ジブロモテトラフルオロエタン(別名ハロン-2402)	Dibromotetrafluoroethane; halone-2402	-
163	2,6-ジメチルアニリン	2,6-dimethylaniline	87-62-7
164	3,4-ジメチルアニリン	3,4-dimethylaniline	95-64-7
165	N,N-ジメチルチオカルバミン酸S-4-フェノキシブチル(別名フェノチオカルブ)	S-4-phenoxybutyl N,N-dimethylthiocarbamate; phenothiocarb	62850-32-2
166	N,N-ジメチルドデシルアミン=N-オキシド	N,N-dimethyldodecylamine N-oxide	1643-20-5
167	ジメチル=2,2,2-トリクロロ-1-ヒドロキシエチルホスホナート(別名トリクロロホス又はDEP)	Dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate; trichlorfon; DEP	52-68-6

No.	Substance Name	English Name	CAS No.
168	1,1'-ジメチル-4,4'-ビピリジニウム塩(次号に掲げるものを除く。)	1,1'-dimethyl-4,4'-bipyridinium salts (except paraquat dichloride)	4685-14-7
169	1,1'-ジメチル-4,4'-ビピリジニウム=ジクロリド(別名パラコート又はパラコートジクロリド)	1,1'-dimethyl-4,4'-bipyridinium dichloride; paraquat; paraquat dichloride	1910-42-5
170	N-(1,2-ジメチルプロピル)-N-エチルチオカルバミン酸S-ベンジル(別名エスプロカルブ)	S-benzyl N-(1,2-dimethylpropyl)-N-ethylthiocarbamate; esprocarb	85785-20-2
171	3,3'-ジメチルベンジジン(別名o-トリジン)	3,3'-dimethylbenzidine; o-tolidine	119-93-7
172	N,N-ジメチルホルムアミド	N,N-dimethylformamide	68-12-2
173	2-[(ジメトキシホスフィノチオイル)チオ]-2-フェニル酢酸エチル(別名フェントエート又はPAP)	Ethyl 2-[(dimethoxyphosphinothioyl) thio]-2-phenylacetate; phenthoate; PAP	2597-03-7
174	3,5-ジヨード-4-オクタノイルオキシベンゾニトリル(別名アイオキシニル)	3,5-diiodo-4-octanoyloxybenzotrile; ioxnyl octanoate	3861-47-0
175	水銀及びその化合物	Mercury and its compounds	-
176	有機スズ化合物	Organic tin compounds	-
177	スチレン	Styrene	100-42-5
178	セレン及びその化合物	Selenium and its compounds	-
179	ダイオキシン類	Dioxins	-
180	2-チオキソ-3,5-ジメチルテトラヒドロ-2H-1,3,5-チアジアジン(別名ダゾメット)	2-thioxo-3,5-dimethyltetrahydro-2H-1,3,5-thiadiazine; dazomet	533-74-4
181	チオ尿素	Thiourea	62-56-6
182	チオフェノール	Thiophenol	108-98-5
183	チオリン酸O-1-(4-クロロフェニル)-4-ピラゾリル-O-エチル-S-プロピル(別名ピラクロホス)	O-1-(4-chlorophenyl)-4-pyrazolyl O-ethyl S-propyl phosphorothioate; pyraclofos	77458-01-6
184	チオリン酸O-4-シアノフェニル-O,O-ジメチル(別名シアノホス又はCYAP)	O-4-cyanophenyl O,O-dimethyl phosphorothioate; cyanophos; CYAP	2636-26-2
185	チオリン酸O,O-ジエチル-O-(2-イソプロピル-6-メチル-4-ピリミジニル)(別名ダイアジノン)	O,O-diethyl O-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate; diazinon	333-41-5
186	チオリン酸O,O-ジエチル-O-(6-オキソ-1-フェニル-1,6-ジヒドロ-3-ピリダジニル)(別名ピリダフェンチオン)	O,O-diethyl O-6-oxo-1-phenyl-1,6-dihydro-3-pyridazinyl phosphorothioate; pyridaphenthion	119-12-0
187	チオリン酸O,O-ジエチル-O-2-キノキサリニル(別名キナルホス)	O,O-diethyl O-2-quinoxaliny phosphorothioate; quinalphos	13593-03-8
188	チオリン酸O,O-ジエチル-O-(3,5,6-トリクロロ-2-ピリジニル)(別名クロルピリホス)	O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate; chlorpyrifos	2921-88-2
189	チオリン酸O,O-ジエチル-O-(5-フェニル-3-イソキサゾリル)(別名イソキサチオン)	O,O-diethyl O-5-phenyl-3-isoxazolyl phosphorothioate; isoxathion	18854-01-8
190	チオリン酸O-2,4-ジクロロフェニル-O,O-ジエチル(別名ジクロフェンチオン又はECP)	O-2,4-dichlorophenyl O,O-diethyl phosphorothioate; dichlofenthion; ECP	97-17-6
191	チオリン酸O,O-ジメチル-S-[2-[1-(N-メチルカルバモイル)エチルチオ]エチル(別名バミドチオン)	O,O-dimethyl S-2-[1-(N-methylcarbamoyl) ethylthio] ethyl phosphorothioate; vamidothion	2275-23-2
192	チオリン酸O,O-ジメチル-O-(3-メチル-4-ニトロフェニル)(別名フェントロチオン又はMEP)	O,O-dimethyl O-3-methyl-4-nitrophenyl phosphorothioate; fenitrothion; MEP	122-14-5
193	チオリン酸O,O-ジメチル-O-(3-メチル-4-メチルチオフェニル)(別名フェンチオン又はMPP)	O,O-dimethyl O-3-methyl-4-(methylthio) phenyl phosphorothioate; fenthion; MPP	55-38-9
194	チオリン酸O-3,5,6-トリクロロ-2-ピリジニル-O,O-ジメチル(別名クロルピリホスメチル)	O-3,5,6-trichloro-2-pyridyl O,O-dimethyl phosphorothioate; chlorpyrifos-methyl	5598-13-0
195	チオリン酸O-4-ブロモ-2-クロロフェニル-O-エチル-S-プロピル(別名プロフェノホス)	O-4-bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate; profenofos	41198-08-7
196	チオリン酸S-ベンジル-O,O-ジイソプロピル(別名イプロベンホス又はIBP)	S-benzyl O,O-diisopropyl phosphorothioate; iprobenfos; IBP	26087-47-8
197	デカブロモジフェニルエーテル	Decabromodiphenyl ether	1163-19-5
198	1,3,5,7-テトラアザトリシクロ[3.3.1.1.7]デカン(別名ヘキサメチレンテトラミン)	1,3,5,7-tetraazatricyclo [3.3.1.1.7] decane; hexamethylenetetramine	100-97-0
199	テトラクロロイソフタロニトリル(別名クロロタロニル又はTPN)	Tetrachloroisophthalonitrile; chlorothalonil; TPN	1897-45-6
200	テトラクロロエチレン	Tetrachloroethylene	127-18-4
201	テトラクロロジフルオロエタン(別名CFC-112)	Tetrachlorodifluoroethane; CFC-112	-
202	テトラヒドロメチル無水フタル酸	Tetrahydromethylphthalic anhydride	11070-44-3
203	テトラフルオロエチレン	Tetrafluoroethylene	116-14-3

No.	Substance Name	English Name	CAS No.
204	テトラメチルチウラムジスルフィド(別名チウラム又はチラム)	Tetramethylthiuram disulfide; thiram	137-26-8
205	テレフタル酸	Terephthalic acid	100-21-0
206	テレフタル酸ジメチル	Dimethyl terephthalate	120-61-6
207	銅水溶性塩(錯塩を除く。)	Copper salts (water-soluble, except complex salts)	-
208	トリクロロアセトアルデヒド	Trichloroacetaldehyde	75-87-6
209	1,1,1-トリクロロエタン	1,1,1-trichloroethane	71-55-6
210	1,1,2-トリクロロエタン	1,1,2-trichloroethane	79-00-5
211	トリクロロエチレン	Trichloroethylene	79-01-6
212	2,4,6-トリクロロ-1,3,5-トリアジン	2,4,6-trichloro-1,3,5-triazine	108-77-0
213	トリクロロトリフルオロエタン(別名CFC-113)	Trichlorotrifluoroethane; CFC-113	-
214	トリクロロニトロメタン(別名クロロピクリン)	Trichloronitromethane; chloropicrin	76-06-2
215	2,2,2-トリクロロ-1,1-ビス(4-クロロフェニル)エタノール(別名ケルセン又はジコホル)	2,2,2-trichloro-1,1-bis (4-chlorophenyl) ethanol; kelthane; dicofol	115-32-2
216	(3,5,6-トリクロロ-2-ピリジル)オキシ酢酸(別名トリクロピル)	(3,5,6-trichloro-2-pyridyl) oxyacetic acid; tricopyr	55335-06-3
217	トリクロロフルオロメタン(別名CFC-11)	Trichlorofluoromethane; CFC-11	75-69-4
218	1,3,5-トリス(2,3-エポキシプロピル)-1,3,5-トリアジン-2,4,6(1H,3H,5H)-トリオン	1,3,5-tris (2,3-epoxypropyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione	2451-62-9
219	2,4,6-トリニトロトルエン	2,4,6-trinitrotoluene	118-96-7
220	α,α,α-トリフルオロ-2,6-ジニトロ-N,N-ジプロピル-p-トルイジン(別名トリフルラリン)	α,α,α-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine; trifluralin	1582-09-8
221	2,4,6-トリブロモフェノール	2,4,6-tribromophenol	118-79-6
222	トリブロモメタン(別名ブロモホルム)	Tribromomethane; bromoform	75-25-2
223	3,5,5-トリメチル-1-ヘキサノール	3,5,5-trimethyl-1-hexanol	3452-97-9
224	1,3,5-トリメチルベンゼン	1,3,5-trimethylbenzene	108-67-8
225	o-トルイジン	o-toluidine	95-53-4
226	p-トルイジン	p-toluidine	106-49-0
227	トルエン	Toluene	108-88-3
228	2,4-トルエンジアミン	2,4-toluenediamine	95-80-7
229	2-(2-ナフチルオキシ)プロピオンアニリド(別名ナプロアニリド)	2-(2-naphthyloxy) propionanilide; naproanilide	52570-16-8
230	鉛及びその化合物	Lead and its compounds	-
231	ニッケル	Nickel	7440-02-0
232	ニッケルO	Nickel compounds	-
233	ニトリロ三酢酸	Nitrilotriacetic acid	139-13-9
234	p-ニトロアニリン	p-nitroaniline	100-01-6
235	ニトログリコール	Nitroglycol	628-96-6
236	ニトログリセリン	Nitroglycerin	55-63-0
237	p-ニトロクロロベンゼン	p-nitrochlorobenzene	100-00-5
238	N-ニトロソジフェニルアミン	N-nitrosodiphenylamine	86-30-6
239	p-ニトロフェノール	p-nitrophenol	100-02-7
240	ニトロベンゼン	Nitrobenzene	98-95-3
241	二硫化炭素	Carbon disulfide	75-15-0
242	ノニルフェノール	Nonylphenol	25154-52-3
243	バリウム及びその水溶性化合物	Barium and its water-soluble compounds	-
244	ピクリン酸	Picric acid	88-89-1
245	2,4-ビス(エチルアミノ)-6-メチルチオ-1,3,5-トリアジン(別名シメトリン)	2,4-bis (ethylamino)-6-methylthio-1,3,5-triazine; simetryn	1014-70-6
246	ビス(8-キノリノラト)銅(別名オキシン銅又は有機銅)	Bis (8-quinolinolato)copper; oxine-copper	10380-28-6
247	3,6-ビス(2-クロロフェニル)-1,2,4,5-テトラジン(別名クロフェンチジン)	3,6-bis (2-chlorophenyl)-1,2,4,5-tetrazine; clofentezine	74115-24-5
248	ビス(ジチオリン酸)S,S'-メチレン-O,O',O'-テトラエチル(別名エチオン)	S,S'-methylene O,O',O'-tetraethyl bis (phosphorodithioate); ethion	563-12-2
249	ビス(N,N'-ジメチルジチオカルバミン酸)亜鉛(別名ジラム)	zinc bis (N,N'-dimethyldithiocarbamate); ziram	137-30-4
250	ビス(N,N'-ジメチルジチオカルバミン酸)N,N'-エチレンビス(チオカルバモイルチオ亜鉛)(別名ポリカーバメート)	N,N'-ethylenebis (thiocarbamoylthiozinc) bis (N,N'-dimethyldithiocarbamate); polycarbamate	64440-88-6
251	ビス(水素化牛脂)ジメチルアンモニウムクロリド	Bis (hydrogenated tallow) dimethylammonium chloride	61789-80-8
252	砒素及びその無機化合物	Arsenic and its inorganic compounds	-

No.	Substance Name	English Name	CAS No.
253	ヒドラジン	Hydrazine	302-01-2
254	ヒドロキノン	Hydroquinone	123-31-9
255	4-ビニル-1-シクロヘキセン	4-vinyl-1-cyclohexene	100-40-3
256	2-ビニルピリジン	2-vinylpyridine	100-69-6
257	1-(4-ビフェニルオキシ)-3,3-ジメチル-1-(1H-1,2,4-トリアゾール-1-イル)-2-ブタノール(別名ビテルタノール)	1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol; bitertanol	55179-31-2
258	ピペラジン	Piperazine	110-85-0
259	ピリジン	Pyridine	110-86-1
260	ピロカテコール(別名カテコール)	Pyrocatechol	120-80-9
261	フェニルオキシラン	Phenyloxirane	91-09-3
262	o-フェニレンジアミン	o-phenylenediamine	95-54-5
263	p-フェニレンジアミン	p-phenylenediamine	106-50-3
264	m-フェニレンジアミン	m-phenylenediamine	108-45-2
265	p-フェネチジン	p-phenetidine	156-43-4
266	フェノール	Phenol	108-95-2
267	3-フェノキシベンジル=3-(2,2-ジクロロビニル)-2,2-ジメチルシクロプロパンカルボキシラート(別名ペルメトリン)	3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; permethrin	52645-53-1
268	1,3-ブタジエン	1,3-butadiene	106-99-0
269	フタル酸ジ-n-オクチル	Di-n-octyl phthalate	117-84-0
270	フタル酸ジ-n-ブチル	Di-n-butyl phthalate	84-74-2
271	フタル酸ジ-n-ヘプチル	Di-n-heptyl phthalate	3648-21-3
272	フタル酸ビス(2-エチルヘキシル)	Bis (2-ethylhexyl) phthalate	117-81-7
273	フタル酸n-ブチル=ベンジル	n-butyl benzyl phthalate	85-68-7
274	2-tert-ブチルイミノ-3-イソプロピル-5-フェニルテトラヒドロ-4H-1,3,5-チアジアジン-4-オン(別名ブプロフェジン)	2-tert-butylimino-3-isopropyl-5-phenyltetrahydro-4H-1,3,5-thiadiazin-4-one; buprofezin	69327-76-0
275	N-tert-ブチル-N'-(4-エチルベンゾイル)-3,5-ジメチルベンゾヒドラジド(別名テブフェノジド)	N-tert-butyl-N'-(4-ethylbenzoyl)-3,5-dimethylbenzohydrazide; tebufenozide	112410-23-8
276	N-[1-(N-n-ブチルカルバモイル)-1H-2-ベンゾイミダゾリル]カルバミン酸メチル(別名ベノミル)	Methyl N-[1-(N-n-butylcarbamoyl)-1H-2-benzimidazolyl] carbamate; benomyl	17804-35-2
277	ブチル=(R)-2-[4-(4-シアノ-2-フルオロフェノキシ)フェノキシ]プロピオナート(別名シハロホップブチル)	Butyl (R)-2-[4-(4-cyano-2-fluorophenoxy) phenoxy] propionate; cyhalofop-butyl	122008-85-9
278	tert-ブチル=4-(((1,3-ジメチル-5-フェノキシ-4-ピラゾリル)メチリデン]アミノオキシ)メチル)ベンゾアート(別名フェンピロキシメート)	Tert-butyl 4-(((1,3-dimethyl-5-phenoxy-4-pyrazolyl) methylidene] aminoxy) methyl) benzoate; fenpyroximate	134098-61-6
279	2-(4-tert-ブチルフェノキシ)シクロヘキシル=2-プロピニル=スルフィット(別名プロパルギット又はBPPS)	2-(4-tert-butylphenoxy) cyclohexyl 2-propynyl sulfite; propargite; BPPS	2312-35-8
280	2-tert-ブチル-5-(4-tert-ブチルベンジルチオ)-4-クロロ-3(2H)-ピリダジノン(別名ピリダベン)	2-tert-butyl-5-(4-tert-butylbenzylthio)-4-chloro-3(2H)-pyridazinone; pyridaben	96489-71-3
281	N-(4-tert-ブチルベンジル)-4-クロロ-3-エチル-1-メチルピラゾール-5-カルボキサミド(別名テブフェンピラド)	N-(4-tert-butylbenzyl)-4-chloro-3-ethyl-1-methylpyrazole-5-carboxamide; tebufenpyrad	119168-77-3
282	N-(tert-ブチル)-2-ベンゾチアゾールスルフェンアミド	N-(tert-butyl)-2-benzothiazolesulfenamide	95-31-8
283	ふっ化水素及びその水溶性塩	Hydrogen fluoride and its water-soluble salts	-
284	N,N'-プロピレンビス(ジチオカルバミン酸)と亜鉛の重合体(別名プロピネブ)	Polymer of N,N'-propylenebis (dithiocarbamic acid) and zinc; propineb	12071-83-9
285	ブロモクロロジフルオロメタン(別名ハロン-1211)	Bromochlorodifluoromethane; halone-1211	353-59-3
286	ブロモトリフルオロメタン(別名ハロン-1301)	Bromotrifluoromethane; halone-1301	75-63-8
287	2-ブロモプロパン	2-bromopropane	75-26-3
288	ブロモメタン(別名臭化メチル)	Bromomethane; methyl bromide	74-83-9
289	ヘキサキス(2-メチル-2-フェニルプロピル)ジスタノキサン(別名酸化フェンブタズ)	Hexakis (2-methyl-2-phenylpropyl) distannoxane; fenbutatin oxide	13356-08-6
290	1,4,5,6,7,7-ヘキサクロロビスシクロ[2.2.1]-5-ヘプテン-2,3-ジカルボン酸(別名クロレンド酸)	1,4,5,6,7,7-hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid; chlorendic acid	115-28-6
291	6,7,8,9,10,10-ヘキサクロロ-1,5,5a,6,9,9a-ヘキサヒドロ-6,9-メタノ-2,4,3-ベンゾジオキサチエピン=3-オキシド(別名エンドスルファン又はベンゾエピン)	6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepine 3-oxide; endosulfan	115-29-7
292	ヘキサメチレンジアミン	Hexamethylenediamine	124-09-4
293	ヘキサメチレン=ジイソシアネート	Hexamethylene diisocyanate	822-06-0
294	ベリリウム及びその化合物	beryllium and its compounds	-
295	ベンジリジン=トリクロリド	Benzylidene trichloride	98-07-7

No.	Substance Name	English Name	CAS No.
296	ベンジリデン=ジクロリド	Benzylidene dichloride	98-87-3
297	ベンジル=クロリド(別名塩化ベンジル)	Benzyl chloride	100-44-7
298	ベンズアルデヒド	Benzaldehyde	100-52-7
299	ベンゼン	Benzene	71-43-2
300	1,2,4-ベンゼントリカルボン酸1,2-無水物	1,2,4-benzenetricarboxylic 1,2-anhydride	552-30-7
301	2-(2-ベンゾチアゾリロキシ)-N-メチルアセトアニリド(別名メフェナセツ)	2-(2-benzothiazolyloxy)-N-methylacetanilide; mefenacet	73250-68-7
302	ペンタクロロニトロベンゼン(別名キントゼン又はPCNB)	Pentachloronitrobenzene; quintozene; PCNB	82-68-8
303	ペンタクロロフェノール	Pentachlorophenol	87-86-5
304	ほう素及びその化合物	Boron and its compounds	-
305	ホスゲン	Phosgene	75-44-5
306	ポリ塩化ビフェニル(別名PCB)	Polychlorinated biphenyls; PCBs	1336-36-3
307	ポリ(オキシエチレン)=アルキルエーテル(アルキル基の炭素数が12から15までのもの及びその混合物に限る。)	Poly (oxyethylene) alkyl ether (alkyl C=12-15)	-
308	ポリ(オキシエチレン)=オクチルフェニルエーテル	Poly (oxyethylene) octylphenyl ether	9036-19-5
309	ポリ(オキシエチレン)=ノニルフェニルエーテル	Poly (oxyethylene) nonylphenyl ether	9016-45-9
310	ホルムアルデヒド	Formaldehyde	50-00-0
311	マンガン及びその化合物	Manganese and its compounds	-
312	無水フタル酸	Phthalic anhydride	85-44-9
313	無水マレイン酸	Maleic anhydride	108-31-6
314	メタクリル酸	Methacrylic acid	79-41-4
315	メタクリル酸2-エチルヘキシル	2-ethylhexyl methacrylate	688-84-6
316	メタクリル酸2,3-エポキシプロピル	2,3-epoxypropyl methacrylate	106-91-2
317	メタクリル酸2-(ジエチルアミノ)エチル	2-(diethylamino) ethyl methacrylate	105-16-8
318	メタクリル酸2-(ジメチルアミノ)エチル	2-(dimethylamino) ethyl methacrylate	2867-47-2
319	メタクリル酸n-ブチル	n-butyl methacrylate	97-88-1
320	メタクリル酸メチル	Methyl methacrylate	80-62-6
321	メタクリロニトリル	Methacrylonitrile	126-98-7
322	(Z)-2'-メチルアセトフェノン=4,6-ジメチル-2-ピリミジンヒドラゾン(別名フェリムゾン)	(Z)-2'-methylacetophenone 4,6-dimethyl-2-pyrimidinylhydrazone; ferimzone	89269-64-7
323	N-メチルアニリン	N-methylaniline	100-61-8
324	メチル=イソチオシアネート	Methyl isothiocyanate	556-61-6
325	N-メチルカルバミン酸2-イソプロピルフェニル(別名イソプロカルブ又はMIPC)	2-isopropylphenyl N-methylcarbamate; isoprocarb; MIPC	2631-40-5
326	N-メチルカルバミン酸2-イソプロポキシフェニル(別名プロポキスル又はPHC)	2-isopropoxyphenyl N-methylcarbamate; propoxur; PHC	114-26-1
327	N-メチルカルバミン酸2,3-ジヒドロ-2,2-ジメチル-7-ベンゾ[b]フラニル(別名カルボフラン)	2,3-dihydro-2,2-dimethyl-7-benzo[b]furanyl N-methylcarbamate; carbofuran	1563-66-2
328	N-メチルカルバミン酸3,5-ジメチルフェニル(別名XMC)	3,5-dimethylphenyl N-methylcarbamate; XMC	2655-14-3
329	N-メチルカルバミン酸1-ナフチル(別名カルバリル又はNAC)	1-naphthyl N-methylcarbamate; carbaryl; NAC	63-25-2
330	N-メチルカルバミン酸2-sec-ブチルフェニル(別名フェノブカルブ又はBPMP)	2-sec-butylphenyl N-methylcarbamate; fenobucarb; BPMP	3766-81-2
331	メチル=3-クロロ-5-(4,6-ジメトキシ-2-ピリミジンカルバモイルスルファモイル)-1-メチルピラゾール-4-カルボキシラート(別名ハロスルフロメチル)	Methyl 3-chloro-5-(4,6-dimethoxy-2-pyrimidinylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate; halosulfuron-methyl	100784-20-1
332	3-メチル-1,5-ジ(2,4-キシリル)-1,3,5-トリアザペンタ-1,4-ジエン(別名アミトラス)	3-methyl-1,5-di (2,4-xylyl)-1,3,5-triazapenta-1,4-diene; amitraz	33089-61-1
333	N-メチルジチオカルバミン酸(別名カーバム)	N-methyldithiocarbamic acid; carbam	144-54-7
334	6-メチル-1,3-ジチオ[4,5-b]キノキサリン-2-オン	6-methyl-1,3-dithiolo [4,5-b] quinoxalin-2-one	2439-01-2
335	α-メチルstyレン	α-methylstyrene	98-83-9
336	3-メチルピリジン	3-methylpyridine	108-99-6
337	S-1-メチル-1-フェニルエチル=ピペリジン-1-カルボチオアート(別名ジメピペレート)	S-1-methyl-1-phenylethyl 1-piperidinecarbothioate; dimepiperate	61432-55-1
338	メチル-1,3-フェニレン=ジイソシアネート(別名m-トリレンジイソシアネート)	Methyl-1,3-phenylene diisocyanate; m-tolylene diisocyanate	26471-62-5
339	2-(1-メチルプロピル)-4,6-ジニトロフェノール	2-(1-methylpropyl)-4,6-dinitrophenol	88-85-7
340	4,4'-メチレンジアニリン	4,4'-methylenedianiline	101-77-9

No.	Substance Name	English Name	CAS No.
341	メチレンビス(4,1-シクロヘキシレン)=ジイソシアネート	Methylenebis (4,1-cyclohexylene) diisocyanate	5124-30-1
342	N-(6-メトキシ-2-ピリジル)-N-メチルチオカルバミン酸O-3-tert-ブチルフェニル(別名ピリブチカルブ)	O-3-tert-butylphenyl N-(6-methoxy-2-pyridyl)-N-methylthiocarbamate; pyributicarb	88678-67-5
343	9-メトキシ-7H-フロ[3,2-g][1]ベンゾピラン-7-オン(別名メトキサレン)	9-methoxy-7H-furo [3,2-g] [1] benzopyran-7-one; methoxsalen	298-81-7
344	2-メトキシ-5-メチルアニリン	2-methoxy-5-methylaniline	120-71-8
345	メルカプト酢酸	Mercaptoacetic acid	68-11-1
346	モリブデン及びその化合物	Molybdenum and its compounds	-
347	りん酸2-クロロ-1-(2,4-ジクロロフェニル)ビニル=ジエチル(別名クロルフェンビノス又はCVP)	2-chloro-1-(2,4-dichlorophenyl) vinyl diethyl phosphate; chlorfenvinphos; CVP	470-90-6
348	りん酸2-クロロ-1-(2,4-ジクロロフェニル)ビニル=ジメチル(別名ジメチルビノス)	2-chloro-1-(2,4-dichlorophenyl) vinyl dimethyl phosphate; dimethylvinphos	2274-67-1
349	りん酸1,2-ジブromo-2,2-ジクロロエチル=ジメチル(別名ナレド又はBRP)	1,2-dibromo-2,2-dichloroethyl dimethyl phosphate; naleid; BRP	300-76-5
350	りん酸ジメチル=2,2-ジクロロビニル(別名ジクロロポス又はDDVP)	Dimethyl 2,2-dichlorovinyl phosphate; dichlorvos; DDVP	62-73-7
351	りん酸ジメチル=(E)-1-メチル-2-(N-メチルカルバモイル)ビニル(別名モノクロトポス)	Dimethyl (E)-1-methyl-2-(N-methylcarbamoyl) vinyl phosphate; monocrotophos	6923-22-4
352	りん酸トリス(2-クロロエチル)	Tris (2-chloroethyl) phosphate	115-96-8
353	りん酸トリス(ジメチルフェニル)	Tris (dimethylphenyl) phosphate	25155-23-1
354	りん酸トリ-n-ブチル	Tri-n-butyl phosphate	126-73-8

6. Revision History

1) Revision

We revise KGS Procurement Standard in accordance with changes in social situations, legal trends, or customers' requests. Along with this revision, we may request suppliers to cooperate on another survey.

2) Revision History

Edition	Revision date	Revision details
1	November 1, 2008	<p>First edition Reviewed the second edition of KGS Procurement Standard for making the following revisions. Then, issued Environmental Hazardous Substance Management Standard as the first annex to the third edition.</p> <ul style="list-style-type: none"> (1) Added six substances to (A) Banned Substance: HFC, PFC, PFOS, Kelthane, Hexachlorobutadiene, Specific benzotriazole (2) Removed Greenhouse gas HFC and PFC from (B) Restricted Substance (as they are now classified into (A) above) (3) Added Perfluorooctanoic acid (PFOA) to (A) Banned Substance (4) Reviewed the range of Lead to be banned classified into (A) Banned Substance (5) Reviewed the range of Polyvinyl chloride to be banned classified into (A) Banned Substance (6) Specified the restricted substances of Hexabromocyclododecane (HBCD) that is one of the Halogenated resin additives of (B) Restricted Substance (7) Reviewed the substances of (A) and (B) and numbered them consecutively.