

Toppan Printing Co., Ltd.
Information Communication Division

Green Procurement Standards
for
Financial & Securities Type Products

Ver. 10.0

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Toppan Printing Co., Ltd.

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1. Objective

This "Green Procurement Standards for Financial & Securities Type Products" (hereinafter referred to as the "Management Standards") was established for the purpose to prevent inclusion of any chemical substances, of which inclusion is restricted by laws and / or corporate rules, in every material, parts, components, etc. (hereinafter referred to as the "Applicable Materials") to be used for financial and securities type products manufactured by Information Communication Division of Toppan Printing Co., Ltd. Its objective is to provide safe and harmless products to the market through strict observation of such standards by our suppliers and vendors.

2. Scope

Such "Management Standards" are to be applied to all Applicable Materials that are used for production of financial and securities type products by Information Communication Division. The Applicable Materials are as follows:

- 1) Materials that compose products (e.g. ink, varnish, adhesive, magnetic stripe, various foils, etc.)
- 2) Packing materials (e.g. corrugated carton box, case, card board, cushioning material, Scotch tape, bundling band, etc.)
- 3) Components (e.g. IC chip, inlet, etc.)
- 4) Equipment, consumables (e.g. press plate, blanket, dampening roller, processing materials, various rollers, solvent, etc.)
- 5) Storing and conveying tools (e.g. box, shelves, etc.)
- 6) User's manuals, catalogues, etc.

3. Terminology and Their Definitions

(1) Inclusion prohibited chemical substances (Rank A)

Chemical substances of which manufacture or usage is prohibited or restricted by domestic or overseas laws or regulations and that may largely give negative effects to the environment in particular (side effect). It is prohibited to use them in manufacturing processes or to include in products.

However, in the event that no alternative substance is available, that usage is legally permitted and that there is no risk that its dissemination into the environment will not harm human and growth of living things, there may be a case to permit the usage after discussion with Information Communication Division of Toppan Printing Co., Ltd.

(2) Inclusion managed chemical substances (Rank B)

Substances of which density and locations within the procured Applicable Materials are grasped. In case that density of the chemical substance in the Applicable Material exceeds the pre-determined threshold, its contents should be disclosed.

(3) Inclusion

This means to include, fill or attach certain chemical substance intentionally in order to provide products with a special function or quality. It is deemed to be "included" regardless of the included volume.

As for impurities, in case of chemical substances that intentional addition is prohibited, it is regarded as "included" regardless of its density. Chemical substances that have "threshold value" are regarded as "included" if the density exceeds the threshold.

(4) Intentional addition

It indicates to use chemical substance in the process of forming Applicable Materials in case that continuous addition is desirable in order provide s particular property, appearance or quality.

(5) Impurities

Chemical substances that are included in the natural raw materials and that cannot be eliminated by the current refining technologies. Also, it includes the chemical substances, except for intentionally added substances, that are generated through a chemically composing or reaction process as well as residue of catalyst that cannot be removed by the current refining process.

(6) Inclusion density

Inclusion density is the ratio between the mass of the homogeneous Applicable Material and the mass of the inclusion prohibited chemical substance that is contained in the Applicable Material.

(7) Threshold (max. allowed density)

The maximum allowed value of the inclusion density of the chemical substance that is contained in the Applicable Material.

(8) Homogeneous Applicable Materials

Material or part that cannot be decomposed further when the Applicable Material is decomposed.

4. Request to Suppliers

1) Establishment of the Environment Management System and the Chemical Substance Management System

In order to ensure "Management of Inclusion Prohibited Substances" that is described in the subsequent clause, we request all suppliers to build up and operate the following environment management system, etc.:

- Environment Management System: The item of standards required by ISO 14001: 2015
- Chemical Substance Management System: JAMP*¹ "Guideline for Management of Chemical Substances Included in Products"*²
- "Management of Chemical Substances Included in Products: Principles and Guideline JIS Z 7201"

*1. JAMP: Joint Article Management Promotion Consortium

Site URL: <http://www.jamp-info.com>

*2. Site URL: <http://www.jamp-info.com/dl>

2) Management of chemical substances Rank A and Rank B

(1) "Rank A" is for the chemical substances enlisted in the "Attachment 1-1" while "Rank B" is for the ones enlisted in the "Attachment 1-2."

* The chemical substances of the Ranks A and B are determined by referring to standards of the domestic electronic / electric manufacturers as well as domestic and overseas laws and regulations.

(2) Inclusion prohibited chemical substances are not allowed to be used in the manufacturing process and in the Applicable Materials. Moreover, among chemical substances other than ones enlisted in the above "Attachment 1-1," any chemical substances that are prohibited by domestic or overseas laws, regulations or treaty are also not permitted to be included.

(3) Depending on purpose of using chemical substance, there are cases that exempt the application. They are shown in the Attachment 2.

(4) As for RoHS*³ chemical substances (see the table below), our suppliers are required to submit "Included Substance Analysis Data" (See Note 1 below).

	Prohibited Substance	Remarks
1	Cadmium and cadmium compound	
2	Lead and lead compound	
3	Mercury and mercury compound	
4	Chromium(VI) compounds	
5	Polybrominated biphenyl (PBB)	
6	Polybrominated diphenyl ether (PBDE)	
7	Bis(2-ethylhexyl) phthalate (DEHP)	
8	Benzyl butyl phthalate (BBP)	
9	Dibutyl phthalate (DBP)	
10	Diisobutyl phthalate (DIBP)	

*3. RoHS; The restriction of the use of certain hazardous substance in electrical and electronic equipment

[Notes] There are several methods to analyze included chemical substances and to pre-treat samples as described below. Please select an appropriate method and conduct analysis.

(1) Pre-treatment methods

The typical methods are shown below. Please completely dissolve the samples to be analyzed.

- 1) Ashing method with sulfuric acid (for cadmium, lead, hexavalent chromium)
- 2) Pressured acid decomposition method using an enclosed chamber (for cadmium, lead, hexavalent chromium)
- 3) Acid decomposition method with nitric acid or hydrogen peroxide water or hydrochloric acid (for cadmium, lead, hexavalent chromium)
- 4) Wet decomposition method with sulfuric acid or nitric acid or hydrogen peroxide water (for cadmium, lead, hexavalent chromium)
- 5) Wet decomposition method with sulfuric acid or hydrogen peroxide water (for lead)
- 6) Pressured acid decomposition method using an enclosed chamber (for mercury)
- 7) Evaporation by heating method (for mercury)
- 8) Wet decomposition method with sulfuric acid or nitric acid by using a decomposition flask with a reflux condenser (i.e. Kjeldahl method) (for mercury)

(2) Analysis methods

The typical methods are shown below:

- 1) Inductive coupling: Plasma emission spectrometry (ICP-AES)
- 2) Atomic absorption spectrometry (AAS)
- 3) Inductive coupling: Plasma mass spectrometry (ICP-MS)
- 4) Cold vapor ICP emission spectrometry (ICP-OES)
- 5) Cold vapor atomic absorption spectrometry (AAS, FLAAS)
- 6) Heating vaporization: Cold atomic absorption spectrometry (for mercury)

* Minimum limits of determination is 5 ppm for cadmium, 30 ppm for lead and 5 ppm for gross chromium.

5. Documents to be Submitted

Our suppliers are required to submit the following documents before the designated date:

(1) "Prohibited Chemical Substance Non-inclusion Warranty" (See the Attachment 3)

This is the document to guarantee that the Applicable Materials to be delivered to Toppan Printing do not contain any inclusion prohibited chemical substance.

- In case that such substance is included for some reason, please clarify the reason, contained volume, reduction plan, etc.
- It is required to put the corporate seal and to show the names of the manager and individual together with their individual seals put.

(2) Component report such as SDS (updated version)

(3) Contained substance analysis data

Concerning the 10 substances of RoHS stated in 2) (4) of the above clause 2, please submit "Contained Substances Analysis Data" (clarify the pre-treatment method as well).

Exhibit 1-1 : Prohibited chemical substances (A rank) list

No.	Chemical name < alias or substantially name	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added	Threshold		
1	Cadmium/Cadmium compounds	Supplement1		all	Ban	Less than 100ppm (Note 3)		
2	Lead/Lead compounds	Supplement2		all	Ban	Less than 100ppm (Note 3)		
3	Mercury/Mercury compounds	Supplement3		all	Ban	Less than 100ppm (Note 3)		
4	Chromium (VI) compounds	Supplement4		all	Ban	Less than 100ppm (Note 3)		○
5	Cobalt compounds	Supplement26		all	Ban	Non-detection		
6	Tributyltin oxide<TBTO>	Supplement5	56-35-9	all	Ban	Non-detection		
7	Tri-substituted organostannic compounds (including Tributyltin compounds (TBTs) , Triphenyltin compounds (TPTs))	Supplement6		all	Ban	Non-detection		
8	Nickel/Nickel compounds			Thing for a long period of time in contact with the skin	Ban	Less than 1000ppm		
9	Arsenic/Arsenic compounds	Supplement7		all	Ban	Less than 1000ppm		
10	Beryllium oxide		1304-56-9	all	Ban	Non-detection		
11	Aldrin		309-00-2	all	Ban	Non-detection		
12	Short chain chlorinated paraffins (C=10~13) <CP>	Supplement8	85535-84-8	all	Ban	Non-detection		
13	Endrin		72-20-8	all	Ban	Non-detection		
14	Chlordanes		57-74-9	all	Ban	Non-detection		
15	1,2-Dichloroethane < Ethylene dichloride >		107-06-2	all	Ban	Non-detection		
16	1,1-Dichloroethylene < Vinylidene chloride >		75-35-4	all	Ban	Non-detection		
17	cis-1,2-Dichloroethylene		156-59-2	all	Ban	Non-detection		
18	1,3-Dichloropropene < D-D >		542-75-6	all	Ban	Non-detection		
19	Dichloromethane < Methylene chloride >		75-09-2	all	Ban	Non-detection		
20	Dioxines		1746-01-6	all	Ban	Non-detection		
21	DDT		50-29-3	all	Ban	Non-detection		
22	Dieldrin		60-57-1	all	Ban	Non-detection		
23	Tetrachloroethylene < Perchlene >		127-18-4	all	Ban	Non-detection		
24	1,2,3,4,5,5,6,7,8,9,10,10-Dodecachloropentacyclo [5.3.0.0(2,6).0(3,9).0(4,8)] decane < Mirex >		2385-85-5	all	Ban	Non-detection		
25	1,1,2-Trichloroethane		79-00-5	all	Ban	Non-detection		
26	Trichloroethylene < TCE >		79-01-6	all	Ban	Non-detection		
27	Bis(chloromethyl) ether		542-88-1	all	Ban	Non-detection		
28	Hexachlorobenzene < HCB >		118-74-1	all	Ban	Non-detection		
29	Polychlorinated terphenyls < PCTs >	Supplement10		all	Ban	Non-detection		
30	Polychlorinated naphthalenes (Cl≥1) < PCNs >	Supplement11		all	Ban	Non-detection		
31	Polychlorinated biphenyls < PCBs > and specific substitutes	Supplement12		all	Ban	Non-detection		
32	Polyvinyl chloride < PVC > and vinyl chloride copolymers			all	Ban	Non-detection		○

Exhibit 1-1 : Prohibited chemical substances (A rank) list

No.	Chemical name < alias or substantially name >	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added	Threshold		
33	Polychloro-2,2-dimethyl-3-methylidenebicyclo[2,2,1]heptane <Toxaphene >		8001-35-2	all	Ban	Non-detection		
34	Polybrominated biphenyls <PBBs >	Supplement13		all	Ban	Less than 1000ppm		
35	Polybrominated diphenyl ether <PBDEs >	Supplement14		all	Ban	Less than 1000ppm		
36	Perfluorooctanesulfonic acid <PFOS > and its salts, derivatives	Supplement15		all	Ban	Non-detection		
37	Perfluorooctanesulfonyl fluoride <PFOSF >		307-35-7	all	Ban	Non-detection		
38	Ozone depleting substances	Supplement16		all	Ban	Non-detection		
39	Polycyclic aromatic hydrocarbons <PAH >	Supplement33		all	Ban	Non-detection		
40	Fluorinated greenhouse gases (HFC,PFC,SF6)	Supplement17		all	Ban	Non-detection		
41	4-Aminodiphenyl and its salts			all	Ban	Non-detection		
42	Asbestos	Supplement18		all	Ban	Non-detection		
43	White phosphorus		12185-10-3	all	Ban	Non-detection		
44	N,N'-Dixylyl-p-phenylenediamine		27417-40-9	all	Ban	Non-detection		
45	Azocolourants and azodyes which form certain aromatic amines	Supplement19		all	Ban	Non-detection		
46	2,4,6-Tri-tert-butylphenol <TTBP >		732-26-3	all	Ban	Non-detection		
47	4-Nitrobiphenyl and its salts		92-93-3	all	Ban	Non-detection		
48	β -Naphthylamine <2-Naphthylamine > and its salts			all	Ban	Non-detection		
49	Radioactive substances	Supplement20		all	Ban	Non-detection		
50	Formaldehyde		50-00-0	all	Ban	Non-detection		
51	Phthalates	Supplement21		all	Ban	Non-detection		
52	Benzidine and its salts		92-87-5	all	Ban	Non-detection		
53	Benzene		71-43-4	all	Ban	Non-detection		
54	Benzotriazoles	Supplement22		all	Ban	Non-detection		
55	Dimethyl fumarate		624-49-7	all	Ban	Non-detection		
56	Perchlorates	Supplement23	7791-03-9	all	Ban	Non-detection		○
57	Vinyl chloride <Chloroethylene >		75-01-4	For food packaging	Ban	Dissolution test 1ppm		
58	Hexabromocyclododecane <HBCDD >	Supplement24	25637-99-4他	all	Ban	Less than 1000ppm		
59	Tris(2-chloroethyl) phosphate <TCEP > / Tris(1-methyl-2-chloroethyl) phosphate <TCPP > / Tris(1,3-dichloro-2-propyl) phosphate <TDCPP >		115-96-8 / 13674-84-5 / 13674-87-8	Plastics, resins, fibers, flame retardant application to cloth material	Ban	Less than 1000ppm		
60	Perfluorooctanoic acid <PFOA > and its salts, derivatives	Supplement25		all	Ban	Non-detection		
61	Dibutyltin compounds <DBTs >	Supplement30		all	Ban	Less than 1000ppm		

Exhibit 1-1 : Prohibited chemical substances (A rank) list

No.	Chemical name < alias or substantially name	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added	Threshold		
62	Diocetyl tin compounds <DOTs>	Supplement31		all	Ban	Less than 1000ppm		
63	Boric acid and its salts	Supplement27		all	Ban	Less than 1000ppm		
64	Kelthane		115-32-2	all	Ban	Non-detection		
65	Hexachlorobuta-1,3-diene		87-68-3	all	Ban	Non-detection		
66	Pentachlorobenzene		608-93-5	all	Ban	Non-detection		
67	α-Hexachlorocyclohexane / β-Hexachlorocyclohexane / γ-Hexachlorocyclohexane		319-84-6/319-85-7/58-89-9	all	Ban	Non-detection		
68	Chlordecone		143-50-0	all	Ban	Non-detection		
69	Tris(2,3-dibromopropyl) phosphate <TRIS>		126-72-7	all	Ban	Non-detection		
70	1,2-Dichloropropane		78-87-5	all	Ban	Non-detection		
71	Aluminosilicate Refractory Ceramic Fibres			all	Ban	Less than 1000ppm		
72	Zirconia Aluminosilicate Refractory Ceramic Fibres			all	Ban	Less than 1000ppm		
73	Tri(1-aziridinyl)phosphine oxide <TEPA, TAPO>		545-55-1	Fiber products and components in contact with the skin	Ban	Non-detection		
74	Endosulfan		115-29-7	all	Ban	Non-detection		
75	Hydrochlorofluorocarbons <HCFCs>			all	Ban	Non-detection		
76	Benzenamine, N-phenyl-, Reaction Products with Styrene and 2,4,4-Trimethylpentene <BNST>		68921-45-9	all	Ban	Non-detection		
77	2-benzotriazol-2-yl-4,6-di-tert-butylphenol <UV-320 >		3846-71-7	all	Ban	Less than 1000ppm		
78	Halogen compounds and polymers (Brominated compounds, Chlorinated compounds, Fluoropolymers, Fluorinated compounds)			all	Ban	Non-detection		○
79	Chlorinated flame retardants			all	Ban	Less than 1000ppm		
80	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene <BNST>			all	Ban	Non-detection		
81	Pentachlorophenol Pentachlorophenol-salts Pentachlorophenol-esters			all	Ban	Non-detection		
82	Red phosphorus		7723-14-0	all	Ban	Non-detection		
83	4,4'-isopropylidenediphenol <bisphenol A>		80-05-7	Thermal paper	Ban	Less than 200ppm	○	

Note 1 : In this revised edition , chemicals (○ mark) which was newly added.

Note 2 : the exemption matters chemicals (○ mark) . Attachment 2 See .

Note 3 :

cadmium , lead , mercury , the allowable concentration of heavy metals and hexavalent chromium (threshold) , the members constituting the packaging (material , ink , paint) in each , a total of heavy metals is less than 100ppm . However , plastics (including rubber) , paint , cadmium at the site of the ink , the allowable concentration of lead , cadmium and cadmium compounds , also satisfied that the provisions of lead and lead compounds . Hexavalent chromium , and analysis as the total amount of chromium , and less than 100ppm in the four elements total . However , lead in the case of more than 100ppm at 4 element total content of mercury was confirmed to be the sum 100ppm , further hexavalent chromium to make sure that it is not detected .

Exhibit 1-2: list management chemical substance (B rank)

No.	Chemical name < alias or substantially name >	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added (Note 4)	Threshold		
1	Brominated flame retardants (other than PBBs or PBDEs)	Supplement9		all	—	Less than 1000ppm		
2	Anthracene and Anthracene oil	Supplement28		all	—	Less than 1000ppm		
3	4,4'-Diaminodiphenylmethane		101-77-9	all	—	Less than 1000ppm		
4	5-tert-Butyl-2,4,6-trinitro-m-xylene< Musk xylene >		81-15-2	all	—	Less than 1000ppm		
5	Antimony/ Antimony compounds	Supplement29		For food packaging and toys	—	Dissolution test		
6	2,4-Dinitrotoluene		121-14-2	all	—	Less than 1000ppm		
7	Acrylamide		79-06-1	all	—	Less than 1000ppm		
8	2-Methoxyethanol		109-86-4	all	—	Less than 1000ppm		
9	2-Ethoxyethanol		110-80-5	all	—	Less than 1000ppm		
10	2-Ethoxyethyl acetate		111-15-9	all	—	Less than 1000ppm		
11	Hydrazine and Hydrazine hydrate		302-01-2 7803-57-8	all	—	Less than 1000ppm		
12	1-Methyl-2-pyrrolidone<N-Methyl-2-pyrrolidone >		872-50-4	all	—	Less than 1000ppm		
13	1,2,3-Trichloropropane		96-18-4	all	—	Less than 1000ppm		
14	Pitch, coal tar, high temp.		65996-93-2	all	—	Less than 1000ppm		
15	[4-[4,4'-Bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)		548-62-9	all	—	Less than 1000ppm		
16	1,3,5-Tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione< β -TGIC >		59653-74-6	all	—	Less than 1000ppm		
17	1,2-Bis(2-methoxyethoxy)ethane (TEGDME, Triglyme)		112-49-2	all	—	Less than 1000ppm		
18	4,4'-Bis(dimethylamino)-4''-(methylamino)trityl alcohol with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)		561-41-1	all	—	Less than 1000ppm		
19	1,2-Dimethoxyethane; ethylene glycol dimethyl ether < EGDME >		110-71-4	all	—	Less than 1000ppm		
20	α,α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)		6786-83-0	all	—	Less than 1000ppm		
21	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione <TGIC >		2451-62-9	all	—	Less than 1000ppm		
22	4,4'-bis(dimethylamino)benzophenone<Michler's ketone >		90-94-8	all	—	Less than 1000ppm		
23	N,N,N',N'-tetramethyl-4,4'-methylenedianiline <Michler's base >		101-61-1	all	—	Less than 1000ppm		
24	[4-[[4-Anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)		2580-56-5	all	—	Less than 1000ppm		

Exhibit 1-2: list management chemical substance (B rank)

No.	Chemical name < alias or substantially name >	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added (Note 4)	Threshold		
25	Formamide		75-12-7	all	—	Less than 1000ppm		
26	4-(1,1,3,3-Tetramethylbutyl)phenol<POP>		140-66-9	all	—	Less than 1000ppm		
27	N,N-Dimethylacetamide		127-19-5	all	—	Less than 1000ppm		
28	Phenolphthalein		77-09-8	all	—	Less than 1000ppm		
29	Formaldehyde, oligomeric reaction products with aniline		25214-70-4	all	—	Less than 1000ppm		
30	Diethylene glycol dimethyl ether <2,5,8-Trioxanone>		111-96-6	all	—	Less than 1000ppm		
31	2,2'-Dichloro-4,4'-methylenedianiline		101-14-4	all	—	Less than 1000ppm		
32	4-Nonylphenol (branched and linear) and its ethoxylate			all	—	Less than 1000ppm		
33	o-Anisidine		90-04-0	all	—	Less than 1000ppm		
34	Azodicarbonamide		123-77-3	all	—	Less than 1000ppm		
35	1,2-Cyclohexanedicarboxylic anhydride		85-42-7 13149-00-3 14166-21-3	all	—	Less than 1000ppm		
36	Hexahydromethylphthalic anhydride		25550-51-0 19438-60-9 48122-14-1 57110-29-9	all	—	Less than 1000ppm		
37	4-(1,1,3,3-Tetramethylbutyl)phenol ethoxylate			all	—	Less than 1000ppm		
38	Methoxyacetic acid		625-45-6	all	—	Less than 1000ppm		
39	N,N-Dimethylformamide		68-12-2	all	—	Less than 1000ppm		
40	Methyloxirane <Propylene oxide>		75-56-9	all	—	Less than 1000ppm		
41	1,2-Diethoxyethane <Ethylene glycol diethyl ether>		629-14-1	all	—	Less than 1000ppm		
42	Furan		110-00-9	all	—	Less than 1000ppm		
43	Diethyl Sulfate		64-67-5	all	—	Less than 1000ppm		
44	Dimethyl Sulfate		77-78-1	all	—	Less than 1000ppm		
45	3-Ethyl-2-methyl-2-(3-methylbutyl)-oxazolidine		143860-04-2	all	—	Less than 1000ppm		
46	Dinoseb <6-sec-Butyl-2,4-dinitrophenol>		88-85-7	all	—	Less than 1000ppm		
47	4,4'-Methylenebis-o-toluidine <4,4'-Diamino-3,3'-dimethyldiphenylmethane>		838-88-0	all	—	Less than 1000ppm		
48	4,4'-Oxydianiline and its salts		101-80-4	all	—	Less than 1000ppm		
49	4-Aminoazobenzene		60-09-3	all	—	Less than 1000ppm		
50	4-Methyl-m-phenylenediamine		95-80-7	all	—	Less than 1000ppm		
51	6-methoxy-m-toluidine		120-71-8	all	—	Less than 1000ppm		
52	4-Aminobiphenyl		92-67-1	all	—	Less than 1000ppm		
53	o-Aminoazotoluene		97-56-3	all	—	Less than 1000ppm		
54	o-Toluidine		95-53-4	all	—	Less than 1000ppm		
55	N-Methylacetamide		79-16-3	all	—	Less than 1000ppm		

Exhibit 1-2: list management chemical substance (B rank)

No.	Chemical name < alias or substantially name >	Illustrated Chemical substance (Not all exhaustive)	CASNo.	Target	Threshold level		A new Chemistry material (Note 1)	Exemption (Note 2)
					Intentionally added (Note 4)	Threshold		
56	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) <C.I. Direct Red 28 >		573-58-0	all	—	Less than 1000ppm		
57	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate <C.I. Direct Black 38 >		1937-37-7	all	—	Less than 1000ppm		
58	Imidazolidine-2-thione <2-imidazoline-2-thiol >		96-45-7	all	—	Less than 1000ppm		
59	Trixylyl phosphate		25155-23-1	all	—	Less than 1000ppm		
60	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate <DOTE >		15571-58-1	all	—	Less than 1000ppm		
64	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)			all	—	Less than 1000ppm		
62	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] covering any of the individual isomers of [1] and [2] or any combination thereof			all	—	Less than 1000ppm		
63	Nitrobenzene		98-95-3	all	—	Less than 1000ppm		
64	1,3-propanesultone		1120-71-4	all	—	Less than 1000ppm		
65	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol <UV-327 >		3864-99-1	all	—	Less than 1000ppm		
66	2-(2H-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol <UV-328 >		25973-55-1	all	—	Less than 1000ppm		
67	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol <UV-350 >		36437-37-3	all	—	Less than 1000ppm		
68	4,4'-Isopropylidenediphenol (Bisphenol A)		80-05-7	all	—	Less than 1000ppm		
69	p-(1,1-Dimethylpropyl)phenol		80-46-6	all	—	Less than 1000ppm		
70	4-Heptylphenol, branched and linear			all	—	Less than 1000ppm		
71	Perfluorohexanesulfonic acid and its salts			all	—	Less than 1000ppm		
72	Tris(aziridinyl)phosphin oxide		545-55-1	textile articles	—	—	○	
73	Di-μ-oxo-di-n-butylstanniohydroxyborane (Dibutyltin hydrogen borate ; DBB)		75113-37-0	all	—	Less than 1000ppm	○	
74	Trichlorobenzene		120-82-1	all	—	Less than 1000ppm	○	

Note 1 : In this revised edition , chemicals (○ mark) which was newly added.

Note 2 : "-" chemicals that have been notation , but is available , it is recommended reduction and alternative .

Note 3 :Applicable to substances containing 0.1% or more of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2).

Attachment 2: Exemptions for Particular Applications

No.	Chemical substance	Exempted applications
4	Hexavalent chromium and its compound	Plating, etching, photoresist application
32	Polyvinyl chloride (PVC) and its compound	Binder for resin Polyvinyl chloride copolymer, material that uses blend of polyvinyl chloride and other polymer
58	Perchlorates	Other than batteries
81	Halogen compounds and polymers (Brominated compounds, Chlorinated compounds, Fluoropolymers, Fluorinated compounds)	Other than packaging materials used for Canon delivered products

Supplement 1 Cadmium and its compounds

Cadmium and its compounds	CAS No.
Cadmium	7440-43-9
Cadmium(II) oxide	1306-19-0
Cadmium sulfide	1306-23-6
Cadmium(II) chloride	10108-64-2
Cadmium salt of sulfuric acid (1:1)	10124-36-4, 31119-53-6
Cadmium(II) fluoride	7790-79-6
Other cadmium compounds	-

Supplement 2 Lead and its compounds

Lead and its compounds	CAS No.
Lead	7439-92-1
Sulfuric acid, lead(2+) salt (1:1)	7446-14-2
Carbonic acid, lead(2+) salt (1:1)	598-63-0
Dicarbonato(dihydroxy)trilead	1319-46-6
Lead(II) acetate	301-04-2
Lead compounds, organic	6080-56-4
Trilead bis(orthophosphate)	7446-27-7
Lead selenide	12069-00-0
Lead dioxide	1309-60-0
Trilead tetraoxide	1314-41-6
Lead sulfide	1314-87-0
Lead oxide	1317-36-8
Dicarbonato(dihydroxy)trilead	1319-46-6
Bis[carbonato(2-)]dihydroxytrilead	1344-36-1
Trilead bis(orthophosphate)	7446-27-7
Lead(II) tetraoxidochromate	7758-97-6
Lead titanium trioxide	12060-00-3
Sulphuric acid, lead salt	15739-80-7
Dilead oxide sulfate	12036-76-9
Tetralead trioxide sulfate	12202-17-4
Pentalead tetraoxide sulfate	12065-90-6
Lead(II) distearate	1072-35-1
Trilead(II) bis(arsenate)	3687-31-8
Lead(II) hydrogenarsenate	7784-40-9
Lead(II) dimethanesulfonate	17570-76-2
Lead(II) diazide	13424-46-9
Lead(II) dipicrate	6477-64-1
Lead(II) 2,4,6-trinitrobenzene-1,3-diolate	15245-44-0
Lead dinitrate	10099-74-8
Lead bis(tetrafluoroborate)	13814-96-5
Lead titanium zirconium trioxide	12626-81-2
Silicic acid, lead salt	11120-22-2
Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped	68784-75-8
Acetic acid, lead salt, basic	51404-69-4
Dioxo(phthalato)trilead	69011-06-9
Dioxo(distearato)trilead	12578-12-0
Fatty acids, C16-18, lead salts	91031-62-8
Cyanamide, lead(2+) salt (1:1)	20837-86-9
C.I. Pigment Yellow 41	8012-00-8
Sulfurous acid, lead salt, dibasic	62229-08-7
Tetraethyllead	78-00-2
Trilead dioxide phosphonate	12141-20-7
Other Lead compounds	-

Supplement 3 Mercury and its compounds

Mercury and its compounds	CAS No.
Mercury	7439-97-6
Mercuric chloride<Cyclohexylmethyl mercury(II) chloride>	33631-63-9
Mercury dichloride	7487-94-7
Mercury sulphate	7783-35-9
Mercury dinitrate	10045-94-0
Mercury oxide	21908-53-2
Mercury(II) sulfide	1344-48-5
Other Mercury compounds	-

Supplement 4 Hexavalent chromium compound

Hexavalent chromium compound	CAS No.
Chromium trioxide	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Lead(II) tetraoxidochromate	7758-97-6
Disodium tetraoxidochromate	7775-11-3
Disodium heptaoxidodichromate	10588-01-9
Disodium heptaoxidodichromate dihydrate	7789-12-0
Strontium tetraoxidochromate	7789-06-2
Dipotassium heptaoxidodichromate	7778-50-9
Diammonium heptaoxidodichromate	7789-09-5
Dipotassium tetraoxidochromate	7789-00-6
Zinc chromate	13530-65-9
C.I. Pigment Red 104	12656-85-8
C.I. Pigment Yellow 34	1344-37-2
Dihydrogen(tetraoxidochromate)	7738-94-5
Dihydrogen(heptaoxidodichromate)	13530-68-2
Pentazinc(II) chromate octahydroxide	49663-84-5
Zinc hydroxychromate	-
Potassium dizinc(II) bis(chromate) hydroxide	11103-86-9
Potassium hydroxyzinc chromate	-
Oligomers of chromic acid and dicromic acid	-
Dichromium tris(chromate)	-
Other Hexavalent chromium compounds	-

Supplement 5 Tributyltin oxide

Tributyltin oxide	CAS No.
1,1,1,3,3,3-Hexabutyldistannoxane	56-35-9

Supplement 6 Tributyltins (TBTs), Triphenyltins (TPTs)

Tributyltins (TBTs), Triphenyltins (TPTs)	CAS No.
Triphenylstannyl dimethyldithiocarbamate	1803-12-9
Fluoro(triphenyl)stannane	379-52-2
Triphenylstannyl acetate	900-95-8
Chloro(triphenyl)stannane	639-58-7
Triphenylstannanol	76-87-9
Triphenylstannyl carboxylate (C=9~11)	-
Triphenylstannyl chloroacetate	7094-94-2
Tributan-1-ylstannyl methacrylate	2155-70-6
Bis(tributan-1-ylstannyl) fumarate	6454-35-9
Tributan-1-yl(fluoro)stannane	1983-10-4
rel-(2R,3S)-Bis(tributan-1-ylstannyl) 2,3-dibromosuccinate	31732-71-5
Tributylstannyl acetate	56-36-0
Tributan-1-ylstannyl dodecanoate	3090-36-6
Bis(tributan-1-ylstannyl) phthalate	4782-29-0
Poly[(methyl methacrylate)-co-(octan-1-yl acrylate)-co-(tributan-1-ylstannyl methacrylate)]	67772-01-4
Tributan-1-ylstannyl sulfamate	6517-25-5
Bis(tributan-1-ylstannyl) maleate	14275-57-1
Tributan-1-yl(chloro)stannane	1461-22-9
Tributyltin cyclopentane carbonate = mixture	5409-17-2
Tributan-1-ylstannyl (1R,4aR,4bR,10aR)-7-isopropyl-1,4a-dimethyl-1,2,3,4,4a,4b,5,6,10,10a-decahydrophenanthrene-1-carboxylate	26239-64-5
Other Tributyltins (TBTs), Triphenyltins (TPTs)	-

Supplement 7 Arsenic and its compounds

Arsenic and its compounds	CAS. No.
Arsenic	7440-38-2
Gallium arsenide	1303-00-0
Calcium bis(arsenate)	7778-44-1
Tricalcium diarsenite	27152-57-4
Diarsenic pentaoxide	1303-28-2
Diarsenic trioxide	1327-53-3
Potassium arsonate	10124-50-2
Potassium dihydrogenarsenate	7784-41-0
Triethyl arsenate	15606-95-8
Arsenic acid	7778-39-4
Other Arsenic compounds	-

Supplement 8 Short-chain chlorinated paraffins

Short-chain chlorinated paraffins	CAS No.
Chloroalkane(C10-13)	85535-84-8
Alkanes, C10-12, chloro	108171-26-2
Alkanes, C12-13, chloro	71011-12-6
Alkanes, chloro	61788-76-9

Supplement 9 Brominated flame retardants(Except PBB compounds and PBDE compounds)

Brominated flame retardants (Except PBB compounds and PBDE compounds)	CAS. No.
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls) in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-
Phenol, 2,4(or 2,6)-dibromo-, homopolymer	69882-11-7
1,2,4,5-Tetrabromo-3,6-bis(pentabromophenoxy)benzene	58965-66-5
Benzene, 1,1'-[1,2-ethanediylbis(oxy)]bis[2,4,6-tribromo-Tetrabromobisphenol A	37853-59-1
Phenol, 4,4'-(1-methylethylidene)bis-, tetrabromo deriv.	79-94-7
Epoxy resin intermediate (Reaction products of 4,4'-(1-methylethylidene)bis(2,6-dibromophenol) and chloromethyloxirane)	30496-13-0
TBBA (TBBA-diglycidyl-ether oligomer)	40039-93-8
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol]	70682-74-5
TBBA carbonate oligomer, phenoxy end capped	28906-13-0
Bis(2,4,6-tribromophenyl) ester of polymer of phosgene / 4,4'-(isopropylidene)bis(2,6-dibromophenol)	94344-64-2
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[2,6-dibromophenol] and 4,4'-(1-methylethylidene)bis[phenol]	71342-77-3
Brominated epoxy resin end-capped with tribromophenol	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7
2,2-Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]propane	135229-48-0
2,2'-[(1-Methylethylidene)bis[(2,6-dibromo-4,1-	21850-44-2
1,1'-Isopropylidenebis[4-(allyloxy)-3,5-dibromobenzene]	4162-45-2
1,1'-(Propane-2,2-diyl)bis(3,5-dibromo-4-methoxybenzene)	25327-89-3
4,4'-Sulphonylbis[2,6-dibromophenol]	37853-61-5
Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl] sulphone	39635-79-5
2,4-Dibromophenol	42757-55-1
2,4,6-Tribromophenol	615-58-7
Pentabromophenol	118-79-6
2-(allyloxy)-1,3,5-tribromobenzene	608-71-9
Tribromo(allyloxy)benzene	3278-89-5
Bis(methyl)tetrabromo phthalate	26762-91-4
Phthalic acid, 3,4,5,6-tetrabromo-, bis(2-ethylhexyl) ester	55481-60-2
	26040-51-7

**Supplement 9 Brominated flame retardants
(Except PBB compounds and PBDE compounds) (continuation)**

Brominated flame retardants (Except PBB compounds and PBDE compounds)	CAS. No.
2-(2-hydroxyethoxy)ethyl 2-hydroxypropyl 3,4,5,6-tetrabromophthalate	20566-35-2
TBPA, diethylene glycol-and propylene glycol esters	75790-69-1
1H-Isoindole-1,3(2H)-dione, 2,2'-(1,2-ethanediyl)bis[4,5,6,7-tetrabromo-N,N'-(ethylene)bis[4,5-dibromohexahydro-3,6-methanophthalimide]	32588-76-4
2,3-Dibromo-2-butene-1,4-diol	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-2-4
2,2-bis(bromomethyl)propane-1,3-diol	3296-90-0
2,3-Dibromopropan-1-ol	96-13-9
3-Bromo-2,2-bis(bromomethyl)propan-1-ol	36483-57-5
Poly(tribromostyrene)	57137-10-7
Tribromostyrene	61368-34-1
Benzene, ethenyl-, ar-bromo derivs., polymers with propene, graft	171091-06-8
Dibromostyrene	31780-26-4
Alkanes, C10-18, bromo chloro	68955-41-9
Bromo-/Chloro- α -olefin	82600-56-4
Bromoethylene	593-60-2
1,3,5-tris(2,3-dibromopropyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione	52434-90-9
Tris(dibromophenyl) phosphate	49690-63-3
Tris[3-bromo-2,2-bis(bromomethyl)propan-1-yl] phosphate	19186-97-1
Phosphoric acid, mixed 3-bromo-2,2-dimethylpropyl and 2-bromoethyl and 2-chloroethyl esters	125997-20-8
2,3,4,5,6-Pentabromotoluene	87-83-2
1,2,3,4,5-Pentabromo-6-(bromomethyl)benzene	38521-51-6
1,3-Butadiene, homopolymer, brominated	68441-46-3
(Pentabromophenyl)methyl acrylate	59447-55-1
2-Propenoic acid, (2,3,4,5,6-pentabromophenyl)methyl ester,	59447-57-3
1,1'-(Ethane-1,2-diyl)bis[2,3,4,5,6-pentabromobenzene]	84852-53-9
1H-Pyrrole-2,5-dione, 1-(2,4,6-tribromophenyl)-	59789-51-4
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-, octabromo deriv.	155613-93-7
Other brominated flame retardants	-
Tetrabromocyclooctane	31454-48-5
1,2-dibromo-4-(1,2-dibromoethyl)cyclohexane	3322-93-8
Disodium tetrabromophthalate	25357-79-3
Phthalic anhydride, tetrabromo-	632-79-1

Supplement 10 Polychlorinated terphenyls(PCTs)

Polychlorinated terphenyls(PCTs)	CAS No.
Terphenyl, chlorinated (all isomers and congeners)	61788-33-8

Supplement 11 Polychlorinated naphthalenes (Cl \geq 1)

Polychlorinated naphthalenes	CAS No.
Naphthalene, chloro derivatives	70776-03-3
Other polychlorinated naphthalenes	-

Supplement 12 Polychlorinated biphenyls(PCBs) and Specific alternatives

Polychlorinated biphenyls and Specific alternatives	CAS No.
Polychlorobiphenyl	1336-36-3
Dichloro[(dichlorophenyl)methyl]methylbenzene	76253-60-6
Monomethyldichlorodiphenylmethane <Ugilec 121, Ugilec 21>	81161-70-8
Monomethyldibromodiphenylmethane <DBBT>	99688-47-8
Aroclor	12767-79-2
Aroclor 1260	11096-82-5
Chlorobiphenyl	27323-18-8
PCB 1254	11097-69-1
Terphenyl	26140-60-3

Supplement 13 Polybrominated Biphenyls (PBBs)

Polybrominated Biphenyls (PBBs)	CAS No.
FireMaster BP 6	59536-65-1
4,4'-Dibromobiphenyl	92-86-4
2-Bromobiphenyl	2052-7-5
3-bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
2,2',5-Tribromobiphenyl	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
2,2',4,4',5,5'-Hexabromobiphenyl	59080-40-9
Hexabromobiphenyl	36355-01-8
Heptabromo(phenoxybenzene)	68928-80-3
FireMaster FF 1	67774-32-7
Polybrominated Biphenyls (PBBs) & Polybrominated Diphenyl Ethers (PBDEs) (Heptabromobiphenyl)	35194-78-6
Octabromobiphenyl	61288-13-9
Nonabromo-1,1'-biphenyl	27753-52-2
Perbromobiphenyl	13654-09-6

Supplement 14 Polybrominated diphenyl ethers (PBDEs)

Polybrominated diphenyl ethers(PBDEs)	CAS No.
4-bromophenyl phenyl ether	101-55-3
p,p'-Dibromodiphenyl ether	2050-47-7
Diphenyl ether, tribromo derivative	49690-94-0
Decabromo-1,1'-oxybis(benzene)	1163-19-5
Tetrabromo(phenoxybenzene)	40088-47-9
Pentabromo(phenoxybenzene)	32534-81-9
Hexabromo(phenoxybenzene)	36483-60-0
Heptabromo(phenoxybenzene)	68928-80-3
Benzene, 1,1'-oxybis-, octabromo deriv.	32536-52-0
Pentabromo(tetrabromophenoxy)benzene	63936-56-1
Decabromo-1,1'-oxybis(benzene)	1163-19-5

Supplement 15 PFOS, its salt and Derivative

PFOS, its salt and Derivative	CAS No.
Perfluoro(octane-1-sulfonic acid)	1763-23-1
(Heptadecafluorooctanoic acid) <PFOS>	-
Perfluorooctane sulfonates and derivateves	-
C ₈ F ₁₇ SO ₂ X, X=O•NH ₄ , O•K, O•Na or other goups	-

**Supplement 16 Described chemical substances to the Montreal Protocol Annex
(ozone -depleting chemicals)**

Annex A

	Chemical name	CAS No.
Group I	Trichloro(fluoro)methane	75-69-4
	Dichloro(difluoro)methane	75-71-8
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
	1,1,1-Trichloro-2,2,2-trifluoroethane	354-58-5
	1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2
	1-Chloro-1,1,2,2,2-pentafluoroethane	76-15-3
Group II	Bromo(chloro)(difluoro)methane	353-59-3
	Bromo(trifluoro)methane	75-63-8
	1,2-Dibromo-1,1,2,2-tetrafluoroethane	124-73-2

Annex B

	Chemical name	CAS No.
Group I	Chloro(trifluoro)methane	75-72-9
	1,1,1,2,2-Pentachloro-2-fluoroethane	354-56-3
	1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0
	1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9
	Heptachlorofluoropropane <CFC-211>	422-78-6
	1,1,1,2,3,3,3-Heptachloro-2-fluoropropane <CFC-211ba>	422-81-1
	1,1,1,3,3,3-Hexachloro-2,2-difluoropropane	3182-26-1
	Pentachlorotrifluoropropane <CFC-213>	2354-06-5
	Tetrachloro(tetrafluoro)propane	29255-31-0
	1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane <CFC-214aa>	-
	1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane	2268-46-4
	1,2,2-Trichloro-1,1,3,3,3-pentafluoropropane	1599-41-3
	1,1,1-Trichloropentafluoropropane <CFC-215cb>	4259-43-2
	1,2,3-Trichloro-1,1,2,3,3-pentafluoropropane	76-17-5
	1,1,2-Trichloropentafluoropropane <CFC-215bb>	-
	1,1,3-Trichloropentafluoropropane <CFC-215ca>	-
	1,2-Dichloro-1,1,2,3,3,3-hexafluoropropane	661-97-2
1-Chloro-1,1,2,2,3,3,3-heptafluoropropane	422-86-6	
Group II	Tetrachloromethane	56-23-5
Group III	1,1,1-Trichloroethane	71-55-6

Annex C

	Chemical name	CAS No.
Group I	Dichloro(fluoro)methane	75-43-4
	Chloro(difluoro)methane	75-45-6
	Chlorofluoromethane <HCFC-31>	596-70-4
	1,1,2,2-Tetrachloro-1-fluoroethane	134237-32-4
	1,1,1,2-Tetrachloro-2-fluoroethane	354-11-0
	Trichlorodifluoroethane <HCFC-122>	
	1,1,2-Trichloro-1,2-difluoroethane	354-15-4
	1,1,1-Trichloro-2,2-difluoroethane <HCFC-122b>	354-12-1
	2,2-Dichloro-1,1,1-trifluoroethane	306-83-2
	1,2-Dichloro-1,1,2-trifluoroethane	354-23-4
	Dichloro-1,1,2-trifluoroethane	90454-18-5
	1,1-Dichloro-1,2,2-trifluoroethane	812-04-4
	Chloro(tetrafluoro)ethane	63938-10-3
	2-Chloro-1,1,1,2-tetrafluoroethane	2837-89-0
	1-Chloro-1,1,2,2-tetrafluoroethane	354-25-6
	1,1,2-Trichloro-2-fluoroethane	134237-34-6
	1,1,2-Trichloro-1-fluoroethane	811-95-0

1,1,1-Trichloro-2-fluoroethane	2366-36-1
Dichloro(difluoro)ethane	25915-78-0
1,1-Dichloro-2,2-difluoroethane <HCFC-132a>	471-43-2
1,2-Dichloro-1,1-difluoroethane	1649-08-7
1,1-Dichloro-1,2-difluoroethane <HCFC-132c>	1842-05-3
Chloro(trifluoro)ethane	1330-45-6
2-Chloro-1,1,1-trifluoroethane	75-88-7
1-Chloro-1,1,2-trifluoroethane	421-04-5
Dichloro(fluoro)ethane	25167-88-8
1,1-Dichloro-2-fluoroethane <HCFC-141a>	430-53-5
1,1-Dichloro-1-fluoroethane	1717-00-6
Chloro(difluoro)ethane	25497-29-4
1-Chloro-1,1-difluoroethane	75-68-3
1-Chloro-1,2-difluoroethane	338-64-7
Chloro(fluoro)ethane	110587-14-9
1-Chloro-1-fluoroethane	1615-75-4
Hexachloro(fluoro)propane	134237-35-7
1,1,1,2,2,3-Hexachloro-3-fluoropropane <HCFC-221ab>	422-26-4
Pentachloro(difluoro)propane	134237-36-8
1,1,1,3,3-Pentachloro-2,2-difluoropropane <HCFC-222ca>	422-49-1
1,2,2,3,3-Pentachloro-1,1-difluoropropane <HCFC-222aa>	422-30-0
1,1,3,3-Tetrachloro-1,2,2-trifluoropropane	134237-37-9
1,1,3,3-Tetrachloro-1,2,2-trifluoropropane <HCFC-223ca>	422-52-6
1,1,1,3-Tetrachloro-2,2,3-trifluoropropane <HCFC-223cb>	422-50-4
1,3,3-Trichloro-1,1,2,2-tetrafluoropropane	134237-38-0
1,3,3-Trichloro-1,1,2,2-tetrafluoropropane	422-54-8
1,1,3-Trichloro-1,2,2,3-tetrafluoropropane <HCFC-224cb>	422-53-7
1,1,1-Trichloro-2,2,3,3-tetrafluoropropane <HCFC-224cc>	422-51-7
Dichloro(pentafluoro)propane	127564-92-5
2,2-Dichloro-1,1,1,3,3-pentafluoropropane	128903-21-9
2,3-Dichloro-1,1,1,2,3-pentafluoropropane	422-48-0
1,2-Dichloro-1,1,2,3,3-pentafluoropropane	422-44-6
3,3-Dichloro-1,1,1,2,2-pentafluoropropane	422-56-0
1,3-Dichloro-1,1,2,2,3-pentafluoropropane	507-55-1
1,1-Dichloro-1,2,2,3,3-pentafluoropropane	13474-88-9
1,2-Dichloro-1,1,3,3,3-pentafluoropropane	431-86-7
1,3-Dichloro-1,1,2,3,3-pentafluoropropane	136013-79-1
1,1-Dichloro-1,2,3,3,3-pentafluoropropane	111512-56-2
2-Chloro-1,1,1,3,3,3-hexafluoropropane	134308-72-8
2-Chloro-1,1,1,3,3,3-hexafluoropropane	431-87-8
Pentachloro(fluoro)propane	134190-48-0
1,1,1,2,3-Pentachloro-2-fluoropropane <HCFC-231bb>	421-94-3
Tetrachloro(difluoro)propane	134237-39-1
1,1,1,3-Tetrachloro-3,3-difluoropropane <HCFC-232fc>	460-89-9
Trichloro(trifluoro)propane	134237-40-4
1,1,1-Trichloro-3,3,3-trifluoropropane <HCFC-233fb>	7125-83-9
Dichloro(tetrafluoro)propane	127564-83-4
1,2-Dichloro-1,2,3,3-tetrafluoropropane <HCFC-234db>	425-94-5
Chloro(pentafluoro)propane	134237-41-5
1-Chloro-1,1,3,3,3-pentafluoropropane	460-92-4
Tetrachloro(fluoro)propane	134190-49-1
1,1,2,3-Tetrachloro-1-fluoropropane <HCFC-241db>	666-27-3

Trichloro(difluoro)propane	134237-42-6
1,3,3-Trichloro-1,1-difluoropropane <HCFC-242fa>	460-63-9
Dichloro(trifluoro)propane	134237-43-7
1,1-Dichloro-1,2,2-trifluoropropane <HCFC-243cc>	7125-99-7
2,3-Dichloro-1,1,1-trifluoropropane <HCFC-243db>	338-75-0
3,3-Dichloro-1,1,1-trifluoropropane <HCFC-243fa>	460-69-5
Chloro(tetrafluoro)propane	134190-50-4
3-Chloro-1,1,2,2-tetrafluoropropane <HCFC-244ca>	679-85-6
1-Chloro-1,1,2,2-tetrafluoropropane <HCFC-244cc>	421-75-0
Trichloro(fluoro)propane	134190-51-5
1,1,3-Trichloro-1-fluoropropane	818-99-5
1,1,2-Trichloro-1-fluoropropane <HCFC-251dc>	421-41-0
Dichloro(difluoro)propane	134190-52-6
1,3-Dichloro-1,1-difluoropropane <HCFC-252fb>	819-00-1
Chloro(trifluoro)propane	134237-44-8
3-Chloro-1,1,1-trifluoropropane	460-35-5
Dichloro(fluoro)propane	134237-45-9
1,1-Dichloro-1-fluoropropane	7799-56-6
1,2-Dichloro-2-fluoropropane	420-97-3
Chloro(difluoro)propane	134190-53-7
1-Chloro-2,2-difluoropropane <HCFC-262ca>	420-99-5
2-Chloro-1,3-difluoropropane	102738-79-4
1-Chloro-1,1-difluoropropane <HCFC-262fc>	421-02-3
Chloro(fluoro)propane	134190-54-8
2-Chloro-2-fluoropropane <HCFC-271ba>	420-44-0
1-Chloro-1-fluoropropane <HCFC-271fb>	430-55-7
Group II	
Dibromofluoromethane	1863-53-7
Bromo(difluoro)methane	1511-62-2
Bromo(fluoro)methane	373-52-4
1,1,2,2-Tetrabromo-1-fluoroethane	306-80-9
Tribromodifluoroethane	-
1,2-Dibromo-1,1,2-trifluoroethane	354-04-1
2-Bromo-1,1,1,2-tetrafluoroethane	124-72-1
Tribromofluoroethane	-
1,2-Dibromo-1,1-difluoroethane	75-82-1
2-Bromo-1,1,1-trifluoroethane	421-06-7
1,2-Dibromo-1-fluoroethane	358-97-4
2-Bromo-1,1-difluoroethane	359-07-9
1-Bromo-2-fluoroethane	762-49-2
Hexabromofluoropropane	-
Pentabromodifluoropropane	-
Tetrabromotrifluoropropane	-
Tribromotetrafluoropropane	-
Dibromopentafluoropropane	431-78-7
1-Bromo-1,1,2,3,3,3-hexafluoropropane	2252-78-0
Pentabromofluoropropane	-
Tetrabromodifluoropropane	-
Tribromotrifluoropropane	-
Dibromotetrafluoropropane	-
Bromopentafluoropropane	460-88-8
Tetrabromofluoropropane	-
Tribromofluoropropane	70192-80-2
Dibromotrifluoropropane	431-21-0
Bromotetrafluoropropane	679-84-5
Tribromofluoropropane	75372-14-4

	Dibromodifluoropropane	51584-26-0
	Bromotrifluoropropane	421-46-5
	Dibromofluoropropane	51584-26-0
	Bromodifluoropropane	-
	Bromofluoropropane	1871-72-3
Group III	Bromo(chloro)methane	74-97-5

Annex E

	Chemical name	CAS No.
Group I	Bromomethane	74-83-9

Other

	Chemical name	CAS No.
	Dibromodifluoromethane	75-61-6
	Bromoethane	74-96-4
	1-Bromopropane	106-94-5
	Trifluoriodomethane	2314-97-8
	Methyl chloride	74-87-3

Supplement 17 Fluorine-based greenhouse gas - PFC, SF₆, HFC

Fluorine-based greenhouse gas	CAS No.
Tetrafluoromethane	75-73-0
Hexafluoroethane	76-16-4
1,1,1,2,2,3,3,3-Octafluoro-Propane	76-19-7
Decafluorobutane	355-25-9
Dodecafluoropentane	678-26-2
Tetradecafluorohexane	355-42-0
Octafluorocyclobutane	115-25-3
Sulfur hexafluoride <SF ₆ >	2551-62-4
Trifluoromethane	75-46-7
Difluoromethane <HFC-32>	1975-10-5
Fluoromethane	593-53-3
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	138495-42-8
Pentafluoro-Ethane	354-33-6
1,1,2,2-Tetrafluoroethane	359-35-3
1,1,1,2-Tetrafluoroethane	811-97-2
1,1-Difluoroethane	75-37-6
1,1,2-Trifluoroethane	430-66-0
1,1,1-Trifluoroethane	420-46-2
1,1,1,2,3,3,3-Heptafluoropropane	431-89-0
1,1,1,2,2,3-Hexafluoropropane <HFC-236cb>	677-56-5
1,1,1,2,3,3-Hexafluoropropane	431-63-0
1,1,1,3,3,3-Hexafluoropropane	690-39-1
1,1,2,2,3-Pentafluoropropane <HFC-245ca>	679-86-7
1,1,1,3,3-Pentafluoropropane	460-73-1
1,1,1,3,3-Pentafluoro-Butane	406-58-6

Supplement 18 Asbestos

Asbestos	CAS No.
Asbestos	1332-21-4
Actinolite	77536-66-4
Amosite	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6

Supplement 19 Specific amine

Specific amine	CAS No.
Biphenyl-4-ylamine	92-67-1
Benzidine	92-87-5
4-Chloro-2-methylaniline	95-69-2
2-Naphthylamine	91-59-8
2-Methyl-4-(2-tolyldiazenyl)aniline	97-56-3
2-Methyl-5-nitroaniline	99-55-8
4-Chloroaniline	106-47-8
4-Methoxy-1,3-phenylenediamine	615-05-4
4,4'-Methylenedianiline	101-77-9
3,3'-Dichlorobiphenyl-4,4'-diyldiamine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
4,4'-Methylenedi-o-toluidine	838-88-0
6-Methoxy-m-toluidine <p-cresidine>	120-71-8
4,4'-Methylenebis(2-chloro-amine) <2,2'-Dichloro-4,4'-methylenedianiline>	101-14-4
4,4'-Oxydianiline	101-80-4
4,4'-Thiodianiline <4,4'-Diaminodiphenylsulfide>	139-65-1
o-Toluidine	95-53-4
4-Methyl-1,3-phenylenediamine	95-80-7
2,4,5-Trimethylaniline	137-17-7
o-Anisidine <2-Methoxyaniline>	90-04-0
4-Aminoazobenzene	60-09-3
2,4-Dimethylaniline	95-68-1
Aniline, 2,6-dimethyl-	87-62-7

* By reductive cleavage of the azo group to apply only to certain azo dyes and pigments in which one or more of the aromatic amine of the above-mentioned 24 is generated .

Supplement 20 radioactive substances

radioactive substances	CAS No.
Uranium	7440-61-1
Plutonium	-
Radon	10043-92-2
Americium-241	14596-10-2
Thorium	7440-29-1
Cesium (Radioisotopes only)	7440-46-2 (Cs-137 010045-97-3)
Strontium (Radioisotopes only)	7440-29-6 (Sr-90 100098-97-2)
Other radioactive substances	-

*Except natural origin of things .

Supplement 21 Specific phthalates

Specific phthalic acid ester < Alias >	CAS No.
Bis(2-ethylhexyl) phthalate <DEHP>	117-81-7
Dibutyl phthalate <DBP>	84-74-2
n-Butyl benzyl phthalate <BBP>	85-68-7
Diisononyl phthalate <DINP>	28553-12-0 68515-48-0
Diisodecyl phthalate <DIDP>	26761-40-0 68515-49-1
Bis(n-octyl) phthalate	117-84-0
Di-n-hexyl phthalate <DNHP>	84-75-3
Diisobutyl phthalate <DIBP>	84-69-5
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	131-18-0
Dimethylphthalate	131-11-3
Diethyl phthalate	84-66-2
Bis(2-methoxyethyl) phthalate <DMEP>	117-82-8
Diisopentyl phthalate <DIPP>	605-50-5
Isopentyl pentyl phthalate	776297-69-9
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4 84-75-3
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with >= 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1

Supplement 22 Specific benzotriazole

Specific benzotriazole	CAS No.
2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol	3846-71-7
2-(3,5-Di-tert-butyl-2-hydroxyphenyl)benzotriazole	

Supplement 23 Perchlorate compound

Perchlorate compound	CAS No.
Lithium perchlorate	7791-3-9
Other perchlorates	-

Supplement 24 Hexabromocyclododecane (HBCDD)

HBCDD and all major diastereoisomers	CAS No.
Hexabromocyclododecane	25637-99-4 および3194-55-6
α -hexabromocyclododecane	134237-50-6
β -hexabromocyclododecane	134237-51-7
γ -hexabromocyclododecane	134237-52-8

Supplement 25 PFOA and its salts , derivatives (analogous compounds)

PFOA and its salts , derivatives (analogous compounds)	CAS. No.
Perfluorooctanoic acid <Pentadecafluorooctanoic acid, PFOA>	335-67-1
Perfluorooctanates and derivativees C7F15COX, X=O-NH4, O·K, O-Na or other groups	-(NH4塩(APFO)):B586

Supplement 26 Cobalt compound

Cobalt compound	CAS No.
Cobalt(II) chloride	7646-79-9
Cobalt(II) sulfate	10124-43-3
Cobalt(II) nitrate	10141-05-6
Cobalt(II) carbonate	513-79-1
Cobalt(II) acetate	71-48-7

Supplement 27 Boric acid and its salts

Boric acid and its salts	CAS. No.
Boric acid	10043-35-3
	11113-50-1
Sodium tetraborate decahydrate	1303-96-4
Sodium tetraborate (anhydrous)	1330-43-4
Tetraboron disodium heptaoxide pentahydrate	12179-04-3
Tetraboron disodium heptaoxide hydrate	12267-73-1
Diboron trioxide	1303-86-2
Sodium peroxometaborate	7632/4/4
Sodium perborate	

Supplement 28 Anthracene and its oil

Anthracene and anthracene oil	CAS. No.
Anthracene	120-12-7
Anthracene oil	90640-80-5
Anthracene oil, anthracene-low	90640-82-7
Anthracene oil, anthracene paste	90640-81-6
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2
Anthracene oil, anthracene paste, distillation lights	91995-17-4

Supplement 29 Antimony and its compounds

Antimony and its compounds	CAS. No.
Antimony	7440-36-0
Antimony trioxide	1309-64-4
Stibine<Antimony hydride>	7803-52-3

Supplement 30 Dibutyltin compounds (DBTs)

Dibutyltin compounds	CAS. No.
Dibutyltin oxide	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	1978/4/6
Dibutyltin dichloride<DBTC>	683-18-1
Other dibutyltin compounds	-

Supplement 31 Dioctyltin compound (DOTs)

Dioctyltin compound	CAS. No.
Dioctyltin oxide	870-08-6
Dioctyltin dilaurate	3648-18-8
Other dioctyltin compounds	-

Supplement 32 Perfluoro fatty acids(C=11-14)

Perfluoro fatty acids(C=11-14)	CAS. No.
Perfluoroundecanoic acid	2058-94-8
Perfluorododecanoic acid	307-55-1
Perfluorotridecanoic acid	72629-94-8
Perfluorotetradecanoic acid	376-06-7

Supplement 33 Polycyclic aromatic hydrocarbon <PAH>

Substances subject name (8 substances)	CAS. No.
Benzo[a]pyrene	50-32-8
Benzo[e]pyrene	192-97-2
Benz[a]anthracene	56-55-3
Chrysene	218-01-9
Benzo[e]acephenanthrylene	205-99-2
Benzo[j]fluoranthene	205-82-3
Benzo[k]fluoranthene	207-08-9
Dibenz[a,h]anthracene	53-70-3

To: Information Communication Division
 Toppan Printing Co., Ltd.

Submitted date	
Company name	<div style="border: 1px dashed black; padding: 5px; display: inline-block;">Corporate seal</div>
Responsible department	
Manager	<div style="border: 1px dashed black; border-radius: 50%; padding: 5px; display: inline-block;">Seal</div>
Department of the person in charge	
Person in charge	<div style="border: 1px dashed black; border-radius: 50%; padding: 5px; display: inline-block;">Seal</div>
Phone No. of the person in charge	
e-mail of the person in charge	

* Please put the corporate and individual seals.

Inclusion Prohibited Chemical Substance Non-inclusion Warranty

We hereby guarantee that the following material(s), that is (are) to be used for or in financial and securities type products to be manufactured by Information Communication Division of Toppan Printing Co., Ltd., does (do) not contain any inclusion prohibited chemical substance(s) that is (are) enlisted in the "Green Procurement Standards for Financial & Securities Type Product (Ver. 10.0)."

(* In case that some prohibited chemical substance(s) is (are) contained in your material(s), please state its reason, content, reduction plan, etc. in the "Remarks" column below.)

	Material Name	Model	Remarks
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Note: As for impurities, it is regarded "included" when its density exceeds the threshold value.

* If the number of the above columns is not enough, please add columns appropriately.

[Contact persons for inquiries]

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[The address of the web site that contains those standards]

http://www.toppan.co.jp/corporateinfo/our_suggestion/guideline/policy.html

[Revision History]

Version	Revised date	Revised contents
1.0	Jun 1, 2007	First publishing
1.1	Nov. 29, 2007	Revised words
1.2	Jan. 15, 2008	Revised words
2.0	Jul. 1, 2008	Added prohibited substances and managed substances
2.1	Jul. 1, 2009	Revised words
3.0	Jan. 20, 2010	Added prohibited substances and managed substances
4.0	Feb. 1, 2012	Added prohibited substances and managed substances
5.0	Apr. 1, 2013	Added prohibited substances and managed substances
6.0	Feb. 1, 2014	Added prohibited substances and managed substances
7.0	Mar. 10, 2015	Added prohibited substances and managed substances
8.0	Mar. 1, 2016	Added prohibited substances and managed substances . Changed exemptions. Added appendix. Revised words.
9.0	10-Mar-17	Added prohibited substances and managed substances . Changed exemptions. Added appendix. Revised words.
10.0	26-Mar-17	Added prohibited substances and managed substances .Exemptions for Particular Applications