

Miki Pulley Group

Green Procurement Standard

Version 6.0

March 18, 2022

Miki Pulley Co., Ltd.

1. Purpose

The purpose of this standard is to clarify the prohibited chemical substances and the management criteria for chemical substances contained in raw materials and parts that make up the green products sold by the Miki Pulley Group, in order to contribute to society by reducing the environmental impact of Miki Pulley products.

2. Scope

This standard applies to the green products sold by Miki Pulley Group and to all raw materials, parts, and other articles that make up such green products

3. Definition of terms

3.1 Green products

Green products refer to the products that guarantee not containing the chemical substances shown in "Table 2 Prohibited Chemical Substances", as well as the regulation-compliant products that Miki Pulley Group supplies globally.

Green products are specified in drawings and BOM (Bill Of Materials), as "Green product", and "Management G" (G is the initial of Green), etc.

3.2 Prohibited chemical substances

Prohibited chemical substances refer to the chemical substances that are prohibited from being used in the raw materials and parts that make up the products, as well as prohibited from being contained in excess of the threshold value.

3.3 Chemical substances

Chemical substances refer to chemical elements as well as their compounds.

(e.g., lead (chemical element), lead oxide (compound), polyvinyl chloride (compound))

3.4 Non-inclusion Warranty of the Prohibited Chemical Substances

"Non-inclusion Warranty of the Prohibited Chemical Substances" refers to a document that guarantees that the raw materials, parts, and purchased products that the supplier has delivered or is to deliver to the Miki Pulley Group do not contain any prohibited chemical substances.

3.5 Homogeneous material

Homogeneous material refers to a material that cannot be mechanically separated. The term "homogeneous" is understood as "of uniform composition throughout".

4. Materials to be investigated and managed

The specific examples of materials to be investigated and managed are listed in "Table 1 Materials to be investigated and Managed".

5. Procurement Standards for Chemical Substances

5.1 Prohibited chemical substances

(1) Prohibited chemical substances are shown in "Table 2 Prohibited Chemical Substances", and the thresholds of which are also listed in the same table.

The examples of the prohibited chemical substances are listed in "Table 6 Examples of Prohibited Chemical Substances".

(2) The applications shown in "Table 5 EU RoHS Directive ANNEX III Exemptions" are permitted even if the relative prohibited chemical substances are contained.

5.2 Declarable Substances

(1) Declarable substances are shown in "Table 3 Declarable Substances", and the thresholds of which are also shown in the same table.

The examples of the Declarable substances are shown in "Table 7 Examples of Declarable Substances in detail".

(2) Although Declarable substances are not prohibited, we request all the suppliers to report us whether they are contained or not, as well as its content.

5.3 Substances required providing information

(1) In response to requests from customers, to provide the following information on substances in your supplies might be required:

(a) Candidate List of substances of very high concern for Authorisation of the EU REACH Regulation;

(b) chemSHERPA;

(c) Other specific chemical substances

Please refer to the following site concerning chemSHERPA.

<https://chemsherpa.net/chemSHERPA/>

6. Chemical Substances Content Investigation

6.1 Chemical substances investigation

In order to understand the actual situation of chemical substances in materials to be investigated and managed, we will investigate the existence, content, parts containing the the substances, purpose of use, etc..

The chemical substances to be investigated are shown in "Table 2 Prohibited Chemicals " and "Table 3 Declarable Substances".

The "Chemical Substances Investigation Form Ver.6.0" (04-00107 Form-G) is to be used to investigate the materials that make up the products and the sub-materials that may directly adhere to the products / parts.

The "Chemical Substances Investigation Form (Package) Ver.6.0" (04-00107 Form-H) is to be used to investigate the packaging materials that do not make up the products.

If necessary (e.g. in response to a customer request), we will implement investigation for "Substances required providing information" mentioned in 5.3.

We may also investigate the usage of chemical substances in the manufacturing process of delivered items.

6.2 Chemical composition analysis investigation

We may request chemical composition analysis investigation for the prohibited chemical substances.

7. Submission of Non-inclusion Warranty of the Prohibited Chemical Substances

About the products supplied to Miki Pulley Group, the suppliers are required to investigate the content of the prohibited chemical substances in advance and submit the "Non-inclusion Warranty of the Prohibited Chemical Substances".

Please respond to the investigated products listed in "Non-inclusion Warranty of the Prohibited Chemical Substances Ver.6.0" (04-00107 Form-G) or "Non-inclusion Warranty of the Prohibited Chemical Substances (Package) Ver.6.0" (04-00107 Form-H).

8. Compliance with laws and regulations and other requirements

Miki Pulley Group complies with legal and regulatory requirements, as well as requirements from specified customers in preference to this procurement standard.

Miki Pulley Group requires the suppliers to comply with relevant laws and regulations regarding products and materials delivered to Miki Pulley Group on their own responsibility.

In response to a customer request, we may add investigated substances and prohibited chemical substances separately for each

product, and require a Non-inclusion Warranty for the added substances.

9. Review and Revision

(1) Review and Revision

This standard will be regularly reviewed once a year in general or whenever it is necessary.

(2) Revision Management

This standard will be revised when the management criteria of the chemical substances (substances, thresholds, etc.).

(Investigation Form)

1. 04-00107-G Form-G(E) Non-inclusion Warranty of the Prohibited Chemical Substances in Products and Investigation Form Ver.6.0
2. 04-00107-H Form-H(E) Non-inclusion Warranty of the Prohibited Chemical Substances in Products and Investigation Form Ver.6.0 (Package)

(Supplementary provisions)

1. Revised Date: March 18, 2022
2. Effective Date: March 18, 2022

Table 1 Materials to be investigated and Managed

Classification	Type		Examples
Materials to be investigated and Managed	Product Component Materials & Sub-Materials	product component materials (materials used as part of products)	raw materials, parts, epoxy resin, solder, flux, rust-inhibiting oils, rust inhibitors, adhesives, diluents, inks, paints, greases, screw locking adhesives, model labels, etc.
		sub-materials always packed together with products (sub-materials incorporated in the BOM (Bill Of Materials))	packing materials, identifying labels, plastic bags, paints, instruction manuals, guides for instruction manuals
	Sub-materials Used to Transport or Protect Products	sub-materials used to transport or protect products (Sub-materials not incorporated in the BOM (Bill Of Materials))	packing tapes, cushioning materials, Scotch tape, PP-bands, rubber bands, PP-band clamps, sealing needles, wooden crate
	Sub-materials Used for Production Activities	sub-materials likely to adhere directly to products (sub-materials used in the machining / assembly of products / parts or used in equipment maintenance, and the work environment)	cutting oils, cutting liquids, cleaning liquids, rust-inhibiting oils, separating materials, mold-release agents, plating solutions, solvents, oil mist (released into the air), etc.
Materials out of the Scope of Management	Others	equipment, jigs and tools with almost no possibility of adhesion to products (goods used for the environment and equipment during product / parts processing / assembly)	equipment, jigs, tools, cutting tools, chips (blades), measuring instruments, carts, part boxes, storage containers, containers, part storage bags, returnable boxes, cotton swabs, brushes

Table 2 Prohibited Chemical Substances

No	Chemical Substances	Threshold	Ref. Laws, Standards	Examples of Use
A1	Asbestos	intentionally added	2, 6	brake lining / pads, insulators, fillers, friction materials, electrical insulation materials, pigments / paints, talc, heat insulation materials
A2	Cadmium (Cd) / Cadmium Compounds	0.01wt% in homogeneous materials	1, 2, 9	pigments, corrosion-resistant surface treatment, electrical and electronic materials, optical glass, stabilizers, plating materials, pigments, fluorescent lamps, electrodes, solder materials, contacts
		for packaging materials (see Remark 1)	4	
A3	Hexavalent Chromium Compounds (Cr(VI))	0.1wt% in homogeneous materials	1, 2, 9	pigments, paints, inks, catalysts, plating, anticorrosion surface treatment, dyes, paint desiccants, surface treatment, chromate treatment, paint adhesion improvement, rust inhibition
		for packaging materials (see Remark 1)	4	
A4	Lead (Pb) / Lead Compounds	0.1wt% in homogeneous materials	1, 2, 9	rubber hardeners, pigments, paints, lubricants, plastic stabilizers, battery materials, free-cutting alloy materials, optical materials, X-ray shielding, electric solder materials, mechanical solder materials, rubber vulcanizing agents, ferroelectric materials, plating materials, alloy components, resin additives, colorants
		for packaging materials (see Remark 1)	4	
A5	Mercury (Hg) / Mercury Compounds	0.1wt% in homogeneous materials	1, 2, 9	fluorescent lamps, electrical contact materials, pigments, corrosion inhibitors, switches, high-efficiency light emitters, antibacterial treatment
		for packaging materials (see Remark 1)	4	
A6	Ozone Depleting Substances (CFSS, HCFCs, HBFCs, Carbon tetrachloride)	intentionally added	7	refrigerants, foaming agents, Fire extinguishers, cleaning agents
A7	Polybrominated Biphenyls (PBBs)	0.1wt% in homogeneous materials	1, 2, 3, 5	flame retardants
A8	Polybrominated Diphenyl Ethers (PBDEs)	0.1wt% in homogeneous materials	1, 2, 3, 5	flame retardants
A9	Polychlorinated Biphenyls (PCBs)	intentionally added	3, 5	insulating oil, lubricating oil, electrical insulating medium, solvent, electrolyte
A10	Polychlorinated Terphenyls (PCTs)	0.005wt% in a material	2	lubricants, paints, stabilizers (electrical properties, flame resistance, water resistance), insulating materials, flame retardants
A11	Polychloronaphthalenes	intentionally added	3, 5	lubricants, paints, plastic stabilizers (electrical properties, flame resistance, water resistance), electrical insulators, flame retardants
A12	Short Chain Chlorinated Paraffins (C10-13)	intentionally added and 0.1wt% in an article	3, 5	PVC plasticizers, flame retardants
A13	Tri-substituted Organnostannic Compounds (TBTs / TPTs, etc.)	intentionally added or 0.1wt% of Tin in a part	2, 5	stabilizers, antioxidants / anti-deterioration agents, antibacterial / antifungal agents, antifouling agents
A14	Tributyl Tin Oxide (TBTO)	0.1wt% of Tin in a part	2, 5	preservatives, antifungal agents, paints, pigments, antifouling pigments, refrigerants, foaming agents, fire extinguishers, cleaning agents
A15	Dibutyltin Compounds (DBT)	0.1wt% of Tin in a part	2	stabilizers for PVC, curing catalyst for silicone resin / urethane resin
A16	Diocetyl tin Compounds (DOT) (skin contact, 2-component room temperature vulcanizing kit (RTV-2))	0.1wt% of Tin in a part	2	stabilizers for PVC, curing catalyst for silicone resin / urethane resin

No	Chemical Substances	Threshold	Ref. Laws, Standards	Examples of Use
A17	Perfluorooctane Sulfates (PFOS) and its Salts	intentionally added and below 0.1wt% in semifinished products, articles, or parts	3, 5	water repellents, antifouling agent,s Teflon coating dispersants, photo, semiconductor, metal plating
A18	Perfluorooctanoic Acid (PFOA), its Salts and PFOA-related Substances	for PFOA and its salts: 25ppb, for PFOA-related substances: 1,000ppb, in mixtures or articles	3, 5	fluoropolymer auxiliary agents, flame retardants, stain proof, oil repellents, water repellents
A19	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) (UV-320)	intentionally added	5, 8	UV absorbers for resins, adhesives, paints, printing inks, plastics, ink ribbons
A20	Cobalt Dichloride (CoCl ₂)	included as an indicator in desiccant	2, 12	silica gel indicator
A21	Hexabromocyclododecane (HBCDD) and its Isomers	intentionally added and 0.01wt% in articles	3, 5	flame retardants used for expanded polystyrene, etc.
A22	4 Specific Phthalates: Bis(2-ethylhexyl) Phthalate (DEHP); Benzyl Butyl Phthalate (BBP); Dibutyl Phthalate (DBP); Diisobutyl Phthalate (DIBP)	0.1wt% in homogeneous materials	1	plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
		below 0.1wt% in any combination (see Remark 2)	2	
A23	Phenol, Isopropylated Phosphate (3:1) (PIP 3:1)	intentionally added or included as an impurity	10	flame retardants, plasticizers, lubricants, hydraulic oils, adhesives and sealants
A24	Pentachlorothiophenol (PCTP)	1wt% in mixtures or articles	10	rubber peptizers
A25	Linear and Branched Perfluorocarboxylic Acids of the Formula C _n F _{2n+1} -C(=O)OH where n = 8, 9, 10, 11, 12, or 13 (C9-C14 PFCAs), including their Salts, and related substances	for C9-C14 PFCA and their salts: below 25ppb, for any combination of C9-C14 PFCA related substances: below 260ppb, in mixtures or articles	2	flame retardants, water repellents, semiconductors, metal plating, fluoropolymer synthetic aids, alternatives to PFOA

(Remark 1) For packaging materials, there shall be no intentional use of lead, cadmium, hexavalent chromium, and mercury, and the total content reference values of them in each part, material, and sub-material shall be no more than 0.01wt%

(Remark 2) The total concentration of the 4 substances in plasticized materials shall be less than 0.1wt% (1000ppm), except the products subjected to Directive 2011/65/EU (RoHS Directive).

Table 3 Declarable Substances

No	Chemical Substances	Threshold	Ref. Laws, Standards	Examples of Use
B1	Phthalates (except Table 2 Prohibited Chemical Substances)	intentionally added or 0.1wt% in parts	2, 8	plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
B2	Brominated Flame Retardants (except Table 2 Prohibited Chemical Substances)	0.1wt% in the plastic materials	11	flame retardants
B3	Chlorinated Flame Retardants (except Table 2 Prohibited Chemical Substances)	0.1wt% in the plastic materials	11	flame retardants
B4	Polyvinyl Chloride (PVC) and its mixtures	0.1wt% in the plastic materials	12	insulating materials, binding band, heat shrink tube

Table 4 Reference Laws, Standards, etc.

No	Laws, Standards, etc.
1	RoHS Directive 2011/65/EU and its amendments
2	REACH Regulation (EC) No.1907/2006 ANNEX XVII (Restriction)
3	Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
4	EU Package Directive 94/62/EC
5	Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Japanese CSCL)
6	Industrial Safety and Health Act
7	Act on the Protection of the Ozone Layer Through the Control of Specified Substances, etc. and Other Measures
8	Article 33 and Article 7(2) of REACH Regulation (EC) No.1907/2006 (Candidate List of SVHC for Authorisation)
9	2011/37/EC (EU ELV Directive)
10	Toxic Substances Control Act (TSCA)
11	Standard IEC62474
12	Requirement from Specific Customers

Table 5 EU RoHS Directive ANNEX III Exemptions

EU RoHS Directive Exemptions List URL
https://ec.europa.eu/environment/topics/waste-and-recycling/rohs-directive/implementation-rohs-directive_en

Exemptions in this standard comply with the RoHS Directive ANNEX III issued at any time as decisions of the European Commission.

If the EU authorities deliberate on the validity of the extension application and other matters of an exemption, and an extension is not granted, the exemption for which an extension is pending will become unavailable 12 to 18 months after the date of the decision.

Please confirm the latest exemption information published by the EU authorities from the URL in Table 5.

Table 6 Examples of Prohibited Chemical Substances

This detailed list is examples of the prohibited chemical substances (groups) and does not cover all applicable chemical substances.

No.	Chemical Substance Group	Substance	CAS №
A1	Asbestos	Actinolite	77536-66-4
		Amosite	12172-73-5
		Anthophyllite	77536-67-5
		Chrysotile	12001-29-5
		Crocidolite	12001-28-4
		Tremolite	77536-68-6
		Other asbestos	-
A2	Cadmium (Cd) / Cadmium Compounds	Cadmium	7440-43-9
		Cadmium oxide	1306-19-0
		Cadmium sulfide	1306-23-6
		Cadmium chloride	10108-64-2
		Cadmium sulfate	10124-36-4
		Cadmium carbonate	513-78-0
		Cadmium hydroxide	21041-95-2
		Cadmium nitrate	10325-94-7
		Cadmium selenide	1306-24-7
		Cadmium selenide sulfide	12214-12-9
		Cadmium stearate	2223-93-0
		Cadmium telluride	1306-25-8
		Other cadmium compounds	-
		A3	Hexavalent Chromium Compounds (Cr(VI))
Barium chromate	10294-40-3		
Calcium chromate	13765-19-0		
Chromium(VI) trioxide	1333-82-0		
Lead(II) chromate	7758-97-6		
Lead chromate molybdate sulphate red	12656-85-8		
Lead sulfochromate yulow	1344-37-2		
Sodium chromate	7775-11-3		
Sodium dichromate	10588-01-9		
Strontium chromate	7789-06-2		
Potassium dichromate	7778-50-9		
Potassium chromate	7789-00-6		
Zinc chromate	13530-65-9		
Pentazinic chromate octahydroxide	49663-84-5		
Potassium hydroxyoctaoxidizincatedichromate	11103-86-9		
Other hexavalent chromium compounds	-		
A4	Lead (Pb) / Lead Compounds		
		Lead(II) sulfate	7446-14-2
		Lead(II) carbonate	598-63-0
		Lead(II) chromate	7758-97-6
		Lead chromate molybdate sulphate red	12656-85-8
		Lead hydroxidcarbonate	1319-46-6
		Lead acetate	301-04-2
		Lead(II) acetate , trihydrate	6080-56-4
		Lead phosphate	7446-27-7
		Lead selenide	12069-00-0
		Lead(IV) oxide	1309-60-0
		Lead(II,IV) oxide	1314-41-6
		Lead(II) sulfide	1314-87-0
		Lead(II) oxide	1317-36-8
		Lead(II) carbonate basic	1319-46-6
		Lead hydroxidcarbonate	1344-36-1
		Lead(II) phosphate	7446-27-7
		Lead sulfochromate yulow	1344-37-2
		Lead(II) titanate	12060-00-3
		Lead sulfate,sulphuric acid, lead salt	15739-80-7
		Lead sulphate,tribasic	12202-17-4
		Lead stearate	1072-35-1
		Other lead compounds	-
A5	Mercury (Hg) / Mercury Compounds	Mercury	7439-97-6
		Mercuric chloride	33631-63-9
		Mercury(II) chloride	7487-94-7
		Mercuric sulfate	7783-35-9
		Mercuric nitrate	10045-94-0
		Mercury(II) oxide	21908-53-2
		Mercuric sulfate	1344-48-5
		Dimethylmercury	593-74-8
		Mercuruos oxide	15829-53-5
Mercury chloride	10112-91-1		

No.	Chemical Substance Group	Substance	CAS №
A6	Ozone Depleting Substances (CFSs, HCFCs, HBFCs, Carbon tetrachloride)	Other mercury compounds	-
		CFC-11	75-69-4
		CFC-12	75-71-8
		CFC-13	75-72-9
		CFC-111	354-56-3
		CFC-112	76-12-0
		CFC-112	76-12-0
		CFC-112a	76-11-9
		CFC-113	76-13-1
		CFC-113	76-13-1
		CFC-113a	354-58-5
		CFC-114	76-14-2
		CFC-115	76-15-3
		CFC-211	422-78-6
		CFC-211aa	135401-87-5
		CFC-211ba	422-78-6
		CFC-211ba	422-81-1
		CFC-212	3182-26-1
		CFC-213	2354-06-5
		CFC-213	134237-31-3
		CFC-214	29255-31-0
		CFC-214aa	2268-46
		CFC-214cb	-
		CFC-215	1599-41-3
		CFC-215aa	1599-41-3
		CFC-215ba	76-17-5
		CFC-215bb	-
		CFC-215ca	-
		CFC-215cb	4259-43-2
		CFC-216	661-97-2
		CFC-217	422-86-6
		Halon-1011	74-97-5
		Halon-1202	75-61-6
		Halon-1211	353-59-3
		Halon-1301	75-63-8
		Halon-2402	124-73-2
		Carbon tetrachloride	56-23-5
		Methylchloroform	71-55-6
		Methyl bromide	74-83-9
		Ethyl bromide	74-96-4
		n-propyl bromide	106-94-5
		Trifluoromethyl isodide	2314-97-8
		Methyl chloride	74-87-3
		HBFC-21 B2	1868-53-7
		HBFC-22 B1	1511-62-2
		HBFC-31 B1	373-52-4
		HBFC-121 B4	306-80-9
		HBFC-122 B3	-
		HBFC-123 B2	354-04-1
		HBFC-124 B1	124-72-1
		HBFC-131 B3	-
		HBFC-132 B2	75-82-1
		HBFC-133 B1	421-06-7
HBFC-141 B2	358-97-4		
HBFC-142 B1	420-47-3		
HBFC-151 B1	762-49-2		
HBFC-221 B6	-		
HBFC-222 B5	-		
HBFC-223 B4	-		
HBFC-224 B3	-		
HBFC-225 B2	431-78-7		
HBFC-226 B1	2252-78-0		
HBFC-231 B5	-		
HBFC-232 B4	-		
HBFC-233 B3	-		
HBFC-234 B2	-		
HBFC-235 B1	460-88-8		
HBFC-241 B4	-		
HBFC-242 B3	70192-80-2		
HBFC-243 B2	431-21-0		
HBFC-244 B1	679-84-5		
HBFC-251 B3	75372-14-4		

No.	Chemical Substance Group	Substance	CAS №
		HBFC-252 B2	460-25-3
		HBFC-253 B1	421-46-5
		HBFC-261 B2	51584-26-0
		HBFC-262 B1	-
		HBFC-271 B1	1871-72-3
		HCFC-21	75-43-4
		HCFC-22	75-45-6
		HCFC-31	593-70-4
		HCFC-121	134237-32-4
		HCFC-121	354-14-3
		HCFC-121a	354-11-0
		HCFC-122	41834-16-6
		HCFC-122	354-21-2
		HCFC-122a	354-15-4
		HCFC-122b	354-12-1
		HCFC-123	34077-87-7
		HCFC-123	306-83-2
		HCFC-123a	354-23-4
			90454-18-5
		HCFC-123b	812-04-4
		HCFC-124	63938-10-3
		HCFC-124	2837-89-0
		HCFC-124b	354-25-6
		HCFC-131	27154-33-2
			(134237-34-6)
		HCFC-131	359-28-4
		HCFC-131a	811-95-0
		HCFC-131b	2366-36-1
		HCFC-132	25915-78-0
		HCFC-132	431-06-1
		HCFC-132a	471-43-2
		HCFC-132b	1649-08-7
		HCFC-132c	1842-05-3
		HCFC-133	1330-45-6
			431-07-2
		HCFC-133	1330-45-6
		HCFC-133a	75-88-7
		HCFC-133b	421-04-5
		HCFC-141	1717-00-6
			(25167-88-8)
		HCFC-141	430-57-9
		HCFC-141a	430-53-5
		HCFC-141b	1717-00-6
		HCFC-142	25497-29-4
		HCFC-142	338-65-8
		HCFC-142b	75-68-3
		HCFC-142a	338-64-7
		HCFC-151	110587-14-9
		HCFC-151	762-50-5
		HCFC-151a	1615-75-4
		HCFC-221	134237-35-7
			29470-94-8
		HCFC-221ab	422-26-4
		HCFC-222	134237-36-8
		HCFC-222ca	422-49-1
		HCFC-222aa	422-30-0
		HCFC-223	134237-37-9
		HCFC-223ca	422-52-6
		HCFC-223cb	422-50-4
		HCFC-224	134237-38-0
		HCFC-224ca	422-54-8
		HCFC-224cb	422-53-7
		HCFC-224cc	422-51-7

No.	Chemical Substance Group	Substance	CAS No
		HCFC-225	127564-92-5
		HCFC-225aa	128903-21-9
		HCFC-225ba	422-48-0
		HCFC-225bb	422-44-6
		HCFC-225ca	422-56-0
		HCFC-225cb	507-55-1
		HCFC-225cc	13474-88-9
		HCFC-225cb	431-86-7
		HCFC-225ea	136013-79-1
		HCFC-225eb	111512-56-2
		HCFC-226	134308-72-8
		HCFC-226da	431-87-8
		HCFC-231	134190-48-0
		HCFC-231bb	421-94-3
		HCFC-232	134237-39-1
		HCFC-232fc	460-89-9
		HCFC-233	134237-40-4
		HCFC-233fb	7125-83-9
		HCFC-234	127564-83-4
		HCFC-234db	425-94-5
		HCFC-235	134237-41-5
		HCFC-235fa	460-92-4
		HCFC-241	134190-49-1
		HCFC-241db	666-27-3
		HCFC-242	134237-42-6
		HCFC-242fa	460-63-9
		HCFC-243	134237-43-7
		HCFC-243cc	7125-99-7
		HCFC-243db	338-75-0
		HCFC-243fa	460-69-5
		HCFC-244	134190-50-4
		HCFC-244ca	679-85-6
		HCFC-244cc	421-75-0
		HCFC-251	134190-51-5
		HCFC-252fb	818-99-5
		HCFC-251dc	421-41-0
		HCFC-252	134190-52-6
		HCFC-252fb	819-00-1
		HCFC-253	134237-44-8
		HCFC-253fb	460-35-5
		HCFC-261	134237-45-9
		HCFC-261fc	7799-56-6
		HCFC-261ba	420-97-3
		HCFC-262	134190-53-7
		HCFC-262ca	420-99-5
		HCFC-262da	102738-79-4
		HCFC-262fc	421-02-3
		HCFC-271	134190-54-8
		HCFC-271ba	420-44-0
		HCFC-271fb	430-55-7
A7	Polybrominated Biphenyls (PBBs)	Polybrominated Biphenyls	59536-65-1
		Dibromobiphenyl	92-86-4
		2-Bromobiphenyl	2052-07-5
		3-Bromobiphenyl	2113-57-7
		4-Bromobiphenyl	92-66-0
		Tribromobiphenyl	59080-34-1
		Tetrabromobiphenyl	40088-45-7
		Pentabromobiphenyl	56307-79-0
		Hexabromobiphenyl	59080-40-9
		Hexabromo-1,1-biphenyl	36355-01-8
		Firemaster FF-1	67774-32-7
		Heptabromobiphenyl	35194-78-6
		Ocrabromobiphenyl	61288-13-9
		Nonabromobiphenyl	27753-52-2
		Decabromobiphenyl	13654-09-6
A8	Polybrominated Diphenyl Ethers (PBDEs)	Bromobiphenyl ether	101-55-3
		Dibromobiphenyl ether	2050-47-7
		Tribromobiphenyl ether	49690-94-0
		Tetrabromobiphenyl ether	40088-47-9

No.	Chemical Substance Group	Substance	CAS No
		Pentabromobiphenyl ether	32534-81-9
		Hexabromobiphenyl ether	36483-60-0
		Heptabromobiphenyl ether	68928-80-3
		Octabromobiphenyl ether	32536-52-0
		Nonabromobiphenyl ether	63936-56-1
		Decabromobiphenyl ether	1163-19-5
A9	Polychlorinated Biphenyls (PCBs)	Polychlorinated biphenyls (all isomers & congeners)	1336-36-3
		Monomethyl-tetrachloro-diphenyl methane	76253-60-6
		Monomethyl-dichloro-diphenyl methane	81161-70-8
		Monomethyl-dibromo- diphenyl methane	99688-47-8
A10	Polychlorinated Terphenyls (PCTs)	Polychlorinated terphenyls	61788-33-8
A11	Polychloronaphthalenes	Naphthalene, chloro derivatives	70776-03-3
		Monochloronaphthalene	25586-43-0
		1-chloronaphthalene	90-13-1
		2-chloronaphthalene	91-58-7
		1,2-dichloronaphthalene	2050-69-3
		1,3-dichloronaphthalene	2198-75-6
		1,4-dichloronaphthalene	1825-31-6
		1,5-dichloronaphthalene	1825-30-5
		1,6-dichloronaphthalene	2050-72-8
		1,7-dichloronaphthalene	2050-73-9
		1,8-dichloronaphthalene	2050-74-0
		2,3-dichloronaphthalene	2050-75-1
		2,6-dichloronaphthalene	2065-70-5
		2,7-dichloronaphthalene	2198-77-8
		Dichloronaphthalene	28699-88-9
		Trichloronaphthalene	1321-65-9
		1,2,3-trichloronaphthalene	50402-52-3
		1,2,4-trichloronaphthalene	50402-51-2
		1,2,5-trichloronaphthalene	55720-33-7
		1,2,6-trichloronaphthalene	51570-44-6
		1,2,7-trichloronaphthalene	55720-34-8
		1,2,8-trichloronaphthalene	55720-35-9
		1,3,5-trichloronaphthalene	51570-43-5
		1,3,6-trichloronaphthalene	55720-36-0
		1,3,7-trichloronaphthalene	55720-37-1
		1,3,8-trichloronaphthalene	55720-38-2
		1,4,5-trichloronaphthalene	2437-55-0
		1,4,6-trichloronaphthalene	2737-54-9
		1,6,7-trichloronaphthalene	55720-39-3
		2,3,6-trichloronaphthalene	55720-40-6
		Tetrachloronaphthalene	1335-88-2
		1,2,3,4-tetrachloronaphthalene	20020-02-4
		1,2,3,5-tetrachloronaphthalene	53555-63-8
		1,2,3,6-tetrachloronaphthalene	149864-78-8
		1,2,3,7-tetrachloronaphthalene	55720-41-7
		1,2,3,8-tetrachloronaphthalene	149864-81-3
		1,2,4,5-tetrachloronaphthalene	6733-54-6
		1,2,4,6-tetrachloronaphthalene	51570-45-7
		1,2,4,7-tetrachloronaphthalene	67922-21-8
		1,2,4,8-tetrachloronaphthalene	6529-87-9
		1,2,5,6-tetrachloronaphthalene	67922-22-9
		1,2,5,7-tetrachloronaphthalene	67922-23-0
		1,2,5,8-tetrachloronaphthalene	149864-80-2
		1,2,6,7-tetrachloronaphthalene	149864-79-9
		1,2,6,8-tetrachloronaphthalene	67922-24-1
		1,2,7,8-tetrachloronaphthalene	149864-82-4
		1,3,5,7-tetrachloronaphthalene	53555-64-9
		1,3,5,8-tetrachloronaphthalene	31604-28-1
		1,3,6,7-tetrachloronaphthalene	55720-42-8
		1,3,6,8-tetrachloronaphthalene	150224-15-0
		1,4,5,8-tetrachloronaphthalene	3432-57-3
		1,4,6,7-tetrachloronaphthalene	55720-43-9
		2,3,6,7-tetrachloronaphthalene	34588-40-4
		Pentachloronaphthalene	1321-64-8
		1,2,3,4,5-pentachloronaphthalene	67922-25-2
		1,2,3,4,6-pentachloronaphthalene	67922-26-3
		1,2,3,5,6-pentachloronaphthalene	150224-18-3
		1,2,3,5,7-pentachloronaphthalene	53555-65-0
		1,2,3,5,8-pentachloronaphthalene	150224-24-1
		1,2,3,6,7-pentachloronaphthalene	150224-16-1
		1,2,3,6,8-pentachloronaphthalene	150224-23-0
		1,2,3,7,8-pentachloronaphthalene	150205-21-3

No.	Chemical Substance Group	Substance	CAS No
		1,2,4,5,6-pentachloronaphthalene	150224-20-7
		1,2,4,5,7-pentachloronaphthalene	150224-19-4
		1,2,4,5,8-pentachloronaphthalene	150224-25-2
		1,2,4,6,7-pentachloronaphthalene	150224-17-2
		1,2,4,6,8-pentachloronaphthalene	150224-22-9
		1,2,4,7,8-pentachloronaphthalene	150224-21-8
		Hexachloronaphthalene	1335-87-1
		1,2,3,4,5,6-hexachloronaphthalene	58877-88-6
		1,2,3,4,5,7-hexachloronaphthalene	67927-27-4
		1,2,3,4,5,8-hexachloronaphthalene	103426-93-3
		1,2,3,4,6,7-hexachloronaphthalene	103426-96-6
		1,2,3,5,6,7-hexachloronaphthalene	103426-97-7
		1,2,3,5,6,8-hexachloronaphthalene	103426-95-5
		1,2,3,5,7,8-hexachloronaphthalene	103426-94-4
		1,2,3,6,7,8-hexachloronaphthalene	17062-87-2
		1,2,4,5,6,8-hexachloronaphthalene	90948-28-0
		1,2,4,5,7,8-hexachloronaphthalene	103426-92-2
		Heptachloronaphthalene	32241-08-0
		1,2,3,4,5,6,7-heptachloronaphthalene	58863-14-2
		1,2,3,4,5,6,8-heptachloronaphthalene	58863-15-3
		1,2,3,4,5,6,7,8-Octachloronaphthalene	2234-13-1
A12	Short Chain Chlorinated Paraffins (C10-13)	Alkanes, C10-13, chloro	85535-84-8
		Alkanes, C10-12, chloro	108171-26-2
		Alkanes, C12-13, chloro	71011-12-6
		Alkanes, chloro	61788-76-9
		Other Short Chain Chlorinated Paraffins	-
A13	Tri-substituted Organnostannic Compounds (TBIs/ TPTs, etc.)	Triphenyltin N,N'-dimethyldithiocarbamate	1803-12-9
		Triphenyltin fluoride	379-52-2
		Triphenyltin acetate	900-95-8
		Triphenyltin chloride	639-58-7
		Triphenyltin hydroxide	76-87-9
		Triphenyltin fatty acid salts (C=9-11)	47672-31-1
		Triphenyltin chloroacetate	7094-94-2
		Tributyltin methacrylate	2155-70-6
		Bis(tributyltin) fumarate	6454-35-9
		Tributyltin fluoride	1983-10-4
		Bis(tributyltin) 2,3-dibromosuccinate	31732-71-5
		Tributyltin acetate	56-36-0
		Tributyltin laurate	3090-36-6
		Bis(tributyltin) phthalate	4782-29-0
		Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate(alkyl; C=8)	67772-01-4
		Tributyltin sulfamate	6517-25-5
		Bis(tributyltin) maleate	14275-57-1
		Tributyltin chloride	1461-22-9 7342-38-3
		Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)	85409-17-2
		Mixture of tributyltin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthlenecarboxylate and its analogs (Tributyltin rosin salt)	26239-64-5
		Other tri-substituted organnostannic compounds	-
A14	Tributyl Tin Oxide (TBTO)	Bis(tri-n-butyltin) oxide	56-35-9
A15	Dibutyltin Compounds (DBT)	Dibutyltin oxide	818-08-6
		Dibutyltin diacetate	1067-33-0
		Dibutyltin dilaurate	77-58-7
		Dibutyltin maleate	78-04-6
		Other dibutyltin compounds	-
A16	Diocetyl Tin Compounds (DOT)	Diocetyl Tin Oxide	870-08-6
		Diocetyl tin dilaurate	3648-18-8
		Stannane, dioctyl-, bis(coco acyloxy) derivs.	91648-39-4
		Other Diocetyl tin compounds	-
A17	Perfluorooctane Sulfates (PFOS) and its Salts	Perfluorooctane Sulfonates (PFOS) C8F17SO2X (X=OH, Metal, halide, amide, and Other derivatives including polymers), all members	-
A18	Perfluorooctanoic Acid (PFOA), its Salts and PFOA-related Substances	Perfluorooctanoic acids (PFOA) C8F15O2X (X=H, NH4 and Metal salts), all members	-
		Pentadecafluorooctanoic acid	335-67-1
		Ammonium pentadecafluorooctanoate	3825-26-1
		Sodium pentadecafluorooctanoate	335-95-5
		Potassium pentadecafluorooctanoate	2395-00-8
		Silver pentadecafluorooctanoate	335-93-3
		Pentadecafluorooctanoyl fluoride	335-66-0

No.	Chemical Substance Group	Substance	CAS No
		Methyl pentadecafluorooctanoate	376-27-2
		Ethyl pentadecafluorooctanoate	3108-24-5
		3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-Heptadecafluorodecan-1-ol	678-39-7
		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester	1996-88-9
A19	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) (UV-320)	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	3846-71-7
A20	Cobalt Dichloride (CoCl ₂)	Cobalt dichloride (CoCl ₂)	7646-79-9
A21	Hexabromocyclododecane (HBCDD) and its Isomers	Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6
		α-hexabromocyclododecane	134237-50-6
		β-hexabromocyclododecane	134237-51-7
		γ-hexabromocyclododecane	134237-52-8
A22	4 Specific Phthalates	Di(2-ethylhexyl) phthalate (DEHP)	117-81-7
		Butyl benzyl phthalate (BBP)	85-68-7
		Dibutyl phthalate (DBP)	84-74-2
		Diisobutyl phthalate (DIBP)	84-69-5
A23	Phenol, Isopropylated Phosphate (3:1) (PIP 3:1)	Phenol, Isopropylated Phosphate (3:1) (PIP 3:1)	68937-41-7
A24	Pentachlorothiophenol (PCTP)	Pentachlorothiophenol (PCTP)	133-49-3
A25	Linear and Branched Perfluorocarboxylic Acids of the Formula C _n F _{2n+1} -C(=O)OH where n = 8, 9, 10, 11, 12, or 13 (C ₉ -C ₁₄ PFCAs), including their Salts, and related substances	Linear and branched perfluorocarboxylic acids of the formula C _n F _{2n+1} -C(=O)OH where n = 8, 9, 10, 11, 12, or 13 (C ₉ -C ₁₄ PFCAs), including their salts, and related substances	-

Table 7 Examples of Declarable Substances

This detailed list is examples of the declarable chemical substances (groups) and does not cover all applicable chemical substances.

No.	Chemical Substance Group	Substance	CAS No
B1	Phthalates (except Table 2 Prohibited Chemical Substances)	Diisodecyl phthalate	26761-40-0 68515-49-1
		Diisononyl phthalate	28553-12-0 68515-48-0
		Diisobutyl phthalate	84-69-5
		Di-n-octyl phthalate	117-84-0
		Di(2-methoxy ethyl) phthalate (Bis(2-methoxy ethyl) phthalate)	117-82-8
		Diisopentyl phthalate	605-50-5
		Di-n-hexyl phthalate	84-75-3
		Di-n-pentyl phthalate	131-18-0
B2	Brominated Flame Retardants (except Table 2 Prohibited Chemical Substances)	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	-
		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]	-
		Poly(2,6-dibromo-phenylene oxide)	69882-11-7
		Tetra-decaboro-diphenoxy-benzene	58965-66-5
		1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1
		3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
		TBBA, unspecified	30496-13-0
		TBBA-epichlorohydrin oligomer	40039-93-8
		TBBA-diglycidyl-ether oligomer	70682-74-5
		TBBA carbonate oligomer	28906-13-0
		TBBA carbonate oligomer, phenoxy end capped	94334-64-2
		TBBA carbonate oligomer, 2,4,6-tribromophenol terminated	71342-77-3
		TBBA-bisphenol A-phosgene polymer	32844-27-2
		Brominated epoxy resin end-capped with tribromophenol	139638-58-7
		Brominated epoxy resin end-capped with tribromophenol	135229-48-0
		TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
		TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
		TBBA-bis-(allyl-ether)	25327-89-3
		TBBA-dimethyl-ether	37853-61-5
		Tetrabromo-bisphenol S	39635-79-5
		TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
		2,4-Dibromo-phenol	615-58-7
		2,4,6-tribromo-phenol	118-79-6
		Pentabromo-phenol	608-71-9
		2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
		Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
		Bis(methyl)tetrabromo-phthalate	55481-60-2
		Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
		2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
		TBPA, glycol-and propylene-oxide esters	75790-69-1
		N,N'-Ethylene -bis-(tetrabromo-phthalimide)	32588-76-4
		Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
		2,3-Dibromo-2-butene-1,4-diol	3234-02-4
		Dibromo-neopentyl-glycol	3296-90-0
		Dibromo-propanol	96-13-9
		Tribromo-neopentyl-alcohol	36483-57-5
		Poly tribromo-styrene	57137-10-7
		Tribromo-styrene	61368-34-1
		Dibromo-styrene grafted PP	171091-06-8
		Poly-dibromo-styrene	31780-26-4
		Bromo-/Chloro-paraffins	68955-41-9
		Bromo-/Chloro-alpha-olefin	82600-56-4

No.	Chemical Substance Group	Substance	CAS №
		Vinylbromide	593-60-2
		Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
		Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
		Tris(tribromo-neopentyl) phosphate	19186-97-1
		Chlorinated and brominated phosphate ester	125997-20-8
		Pentabromo-toluene	87-83-2
		Pentabromo-benzyl bromide	38521-51-6
		1,3-Butadiene homopolymer, brominated	68441-46-3
		Pentabromo-benzyl-acrylate, monomer	59447-55-1
		Pentabromo-benzyl-acrylate, polymer	59447-57-3
		Decabromo-diphenyl-ethane	84852-53-9
		Tribromo-phenyl-maleinimide	59789-51-4
		Tetrabromo-chyclo-octane	31454-48-5
		1,2-Dibromo-4-(1,2dibromo-methyl)-cyclohexane	3322-93-8
		TBPA Na salt	25357-79-3
		Tetrabromo phthalic anhydride	632-79-1
		Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
		Other Brominated Flame Retardants	-
B3	Chlorinated Flame Retardants (except Table 2 Prohibited Chemical Substances)	Tetrakis(2-chloroethyl)dichloroisopentylidiphosphate	38051-10-4
		Tris(1-chloro-2-propyl)phosphate	13674-84-5
		Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0
		Tris(1,3-dichloro-2-propyl)phosphate	13674-87-8
		1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro- ("Dechlorane Plus"™)	13560-89-9
		1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-, (1R,4S,4aS,6aS,7S,10R,10aR,12aR)-rel- (anti- (or exo) "Dechlorane Plus"™)	135821-74-8
		1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-, (1R,4S,4aS,6aR,7R,10S,10aS,12aR)-rel- (syn- (or endo) "Dechlorane Plus"™)	135821-03-3
		Other Chlorinated Flame Retardants	-
B4	Polyvinyl Chloride (PVC) and its mixtures	Polyvinyl chloride (PVC)	9002-86-2
		Other Polyvinyl chlorides	-

* Revision history

Version	Revision Month/Year	Revision Description
1.0	07 / 2004	Initial document established.
2.0	11 / 2004	Added formats, etc.
3.0	03 / 2008	Revised formats etc.
4.0	12 / 2015	Revised to reflect EU RoHS Directive amendments
5.0	08 / 2018	Revised to reflect EU RoHS Directive amendments,etc.
5.1	10 / 2019	Revised internal regulations to reflect the revision of external regulations
6.0	03 / 2022	<ol style="list-style-type: none"> 1. Revised terms and sentences: "non-use" to "non-inclusion", "ppm" to "wt%", etc. 2. Revised the structure: integrated the appendix into the text, adjusted the table order, added the revision history 3. Added and revised the tables <ol style="list-style-type: none"> (1) Table 2 Prohibited Chemical Substances: added remarks to A2~5 and A22 for the threshold for specific materials, revised the applicable materials of A16 and A20, added A23~A25, added regulation information and examples of use, etc. (2) Table 3 Declarable Substances: added B3, of moving down lowered B4, added regulation information and examples of use, etc. (3) "Table 4 Reference Laws, Standards, etc." :newly established. (4) Table 5 Exemptions from EU RoHS Directive ANNEX III : explaining the treatment of exemption extension applications, adding the URL of the EU authorities, etc. Explained the treatment of exemptions which are applying for extension, added EU authorities URL, "Applicable Category" "Expiry Date" columns and detailed notes on categories, etc. (5) Added exemplified substances in Tables 6 and 7 in accordance with the revision of the substance lists in Table 2 and 3.