

Hirakawa Hewtech Corp.
Management Standards for the
Environment-related Substances

Ver.20.0

COPY

1. Purpose

This standard is made by Hirakawa Hewtech Corp. group (hereafter called "the company"), with regard to the "Environment-related Substances to be controlled ("Controlled Substances)" contained in the raw materials, parts, devices, and the Packaging Components and Materials of which are employed in the product that the company manufactures and sells. With clarifies the Banned substance, Substance to be phased out, and Exempted substances, in order to prevent the substances from being used (filled up) into products, the company also complies with relevant laws and regulations, contributing to the preservation of global environment and aim to establish a recycling-oriented society.

2. Operation of management standards

With to promoting the green procurement actively, the company procure the products and services that contained less environment-related substance from the suppliers which are acting with environmental-conservation activities also considered in light-weight, long-life-use, easy recycling, easy-degrading, easy-treatment and energy-saving of environment-conscious products. Accordingly, the company is required to obtain ISO14001 certification and involved in environmental-protection activities aggressively.

3. Scope of management standard

(1) Survey on environmental-conservation activities to all suppliers.

(2) Definition of Banned substances and Effective date of ban.

(3) Survey on procurement of environment-related substances.

Regarding the survey on environment-related substances contained in parts and production, it shall be based on CMP Consortium respectively, besides, some of the substances are to be requested according to the company's controlled substances regulations separately.

(4) Management of the environment-related substance on the processing process.

Measurement and inspection of chemical substances by the X-ray fluorescence analyzer to those purchased parts and products.

4. Survey on environmental-conservation activities to all suppliers

All suppliers that supply procurement to the company are the target to be surveyed and to be ensure that the environmental-conservation activities (e.g. ISO14001 approval / Self-environmental-conservation activities) which has been acting properly according to the related-regulations.

5. Survey on procurement of environment-related substances and limits

Applicable to the company's products to configure by the following as raw materials, parts, device, packaging components and materials, also survey on procurement concerning environment-related substances.

(1) Resin for molding such as plastic e.t.c., and metal such as copper wire e.t.c.

(2) Functional units, modules, board assemblies and other assembly parts.

(3) Electrical parts, mechanical parts, semiconductor devices, PWBs, recording media, and the packaging components and materials.

(4) Screws

(5) Accessories (remote command controllers, mice, AC adaptors and other accessories with which are for apparatus used).

(6) Materials constituting subsidiary parts and materials (e.g. adhesive tape, soldering materials, adhesive: etc.) used for products.

(7) Printed materials (e.g. instruction manual, warranty cards, additional product/parts information) .

(8) Repair parts (The application of some repair parts for products on the market shall be followed the instruction on the separately issued notice.)

(9) The Packaging components and materials which used by suppliers for delivery and protection are defined in Table 9.1.

(10) Batteries

6. Management of the environment-related substances on the processing process

Regarding the management to the procurement and the control of through the processing process to delivery, to be operating appropriately, according to the provisions of each department.

7. Definition of Banned substances and Effective date of ban

In this Standard, terms are defined as following;

(1) Environment-related Substances to be Controlled ('Controlled Substances')

Among the substances contained in parts and devices, "Environment-related Substances to be Controlled ('Controlled Substances')" are those which, according to the company's judgment, have significant environmental-impact on both humans and the global environment. (part of the substances are comply with the provisions of old JGPSSI) .

(2) Controlled level

① Banned Substances

The substances and their applications classified into "Banned Substances" are substances that are banned from the use in parts and materials.

- ② Reduced Substances (with a period limitation of banned substance)
Switching to alternative materials and to advance the policy be abolished as soon as possible. However, the substances shall be banned immediately if the alternative materials technology has become possible to establish. Also, the "effective date of the banned" shall be reviewed, if the unavailability of adequate alternative parts and materials that satisfy the intended uses, depending on substances are not regulated by or exemption from laws.
- ③ Controlled Substances (the substances which are aim to be reduced)
No effective date for banning the use is currently set for the substances and their applications classified into "Controlled Substances" are to be reduce the concentration in raw materials, parts, devices, and the Packaging Components and Materials for uses.
- ④ Exemption
The substances and their applications classified as "Exemption" are those substances not regulated or exempted from laws, due to the unavailability of adequate alternative parts and materials that satisfies the intended uses.
- (3) Contained
"Contained" is a situation in which a substance is added to, is blended with, fills up, or adheres to the parts or devices employed in products, or the materials used for the parts or device, regardless if the situation is intentionally created or not. (including this situation in which a substance is unintentionally contained in, or added to a product in a processing process)
- (4) Intentionally added
"Intentionally added" means a situation where a substance is contained in the part, device, or its materials because of deliberate addition, filling, blending, or adhesion, in order to provide a specific characteristic, appearance, property, attribute or quality.
Notes: * A substance that satisfies either or both of the following conditions is treated as impurity and not "Intentionally added":
a) One contained in a natural material, which cannot be completely removed in a refining process by adequate technical means (i.e. natural impurities); and
b) One generated in a synthesis process, which cannot be completely removed by adequate technical means.
* There are substances called "impurities," the name of which is used to distinguish them from main materials. If they are used for the purpose of changing the characteristics of a material such as alloy and plastic, they are treated as "Intentionally added."
* Dopants (Doping Agents) for production of semiconductor devices, etc. are not treated as "Intentionally added" if present in the devices in a very small amount.
- (5) Homogeneous material
"Homogenous material" means one material of uniform composition throughout or a material, consisting of a combination of material, that cannot be disjointed or separated into different materials by mechanical actions, such as unscrewing, cutting, crushing, grinding and abrasive processes.
- (6) Material
"Material" means substance or mixture within a product or product part.
- (7) Part
"Part" means an article to be manufactured until it turns into an end product (the final article which is the outcome of assembling, processing or manufacturing chemical products and/or parts).
- (8) Article
"Article" means an item of specific shape, appearance or design created during manufacture which substantially determines functions in final use rather than functions provided by its chemical composition.
- (9) Product
"Product" means a part or an end product which is delivered to a customer as the outcome of business activities of the organization.

(10) Criteria/threshold level

"Criteria/threshold level" is a condition or a numerical value. The use of a controlled substance is prohibited or will be prohibited in the future if

- that controlled substance fulfills the condition or
- the concentration of the controlled substance matches or exceeds the specified numerical value

Notes: * When criteria such as 'Intentionally added' and a numerical value are shown in 'Criteria/threshold levels', both of them shall be satisfied.

(11) Effective date of ban on use

The date of the adaptation products to be shipped. It means the "Controlled substances" is not contained in raw materials, parts, devices, and the Packaging Components and Materials etc. that compose in the product.

(12) Packaging Components and Materials

The Packaging Components and Materials means which are used by the company for packaging and delivery of goods such as carton, instructions, tape, vinyl-tie, raps, labels, and other parts of the printed material (e.g. plastics, paper, inks, adhesives and paints, etc.).

8. Environment-related Substances to be controlled (The Controlled Substances) ,defined in this Standard.

Table 8.1 (The Controlled Substances)

No.	Substances
1	Cadmium and cadmium compounds
2	Lead and lead compounds
3	Mercury and mercury compounds
4	Hexavalent chromium compounds
5	Polybrominated biphenyls(PBBs)
6	Polybrominated diphenylethers(PBDEs)
7	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified
8	Brominated flame retardants(BFR)
9	Polychlorinated biphenyls(PCB) and specific substitutes
10	Polychlorinated naphthalenes(PCN)
11	Polychlorinated terphenyls(PCT)
12	Short-chain chlorinated paraffins(Alkanes, C10-13)(SCCP)
13	Tris(2-chloroethyl)phosphate(TCEP), Tris(1-chloro-2-propyl)phosphate(TCPP), Tris(1,3-dichloro-2-propyl)phosphate(TDCPP)
14	Perchlorates
15	Polyvinyl chloride(PVC)and PVC blends
16	Chlorinated flame retardants(CFR)
17	Hydrofluorocarbon(HFC),Perfluorocarbon(PFC),Sulfur hexafluoride(SF ₆)
18	Ozone depleting substances(ODS)
19	Perfluorooctane sulfonates and related substances (PFOS)
20	Perfluorohexane-1-sulphonic acid (PFHxS), its salts and related substances
21	Perfluorooctanoic acid(PFOA) and its salts and related substances
22	Tri-substituted organostannic compounds
23	Dibutyltin(DBT)compounds
24	Diocetyl tin(DOT)compounds
25	Beryllium oxide
26	Beryllium copper
27	Cobalt dichloride
28	Diarsenic trioxide,Diarsenic pentoxide
29	Nickel and Nickel compounds
30	Bis(2-ethylhexyl)phthalate(DEHP),Dibutyl phthalate(DBP),Benzyl butyl phthalate(BBP), Diisobutyl phthalate(DIBP)
31	Di-isononyl phthalate(DINP), Di-isodecyl phthalate(DIDP), Di-n-octyl phthalate(DNOP)

Table 8.1 (The Controlled Substances)

No.	Substances
32	Di-n-hexyl phthalate(DnHP), "1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters,C7-rich", "1,2-Benzenedicarboxylic acid,di-C7-11-branched and linear alkyl esters", Bis(2-methoxyethyl)phthalate,Diisopentylphthalate, "1,2-Benzenedicarboxylic acid, dipentylester, branched and linear", N-pentyl-isopentylphthalate,Dipentyl phthalate,"1,2-Benzenedicarboxylic acid,dihexyi ester,branched and linear"
33	Asbestos
34	Azocolourants and azodyes which form certain aromatic amines
35	Formaldehyde
36	Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene (BNST)
37	2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-butylphenol(UV-320) 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
38	Dimethyl fumarate(DMF)
39	Polycyclic aromatic hydrocarbons(PAHs)
40	Tris(2,3-brominated propyl)phosphate(TRIS)
41	Tri(1-aziridin)phoshinoxide(TEPA)
42	Hexachlorobenzene
43	Red phosphate
44	Radioactive substances
45	4,4'-Isopropylidenediphenol (bisphenol A) (BPA)
46	Halogenated flame retardants
47	Perfluorocarboxylic acids (PFCAs) and its salts and related substances
48	Perfluorohexanoic acid (PFHxA) and its salts and related substances
49	Decabromodiphenylethane (DBDPE)
50	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus" TM)
51	TSCA Priority chemicals (PBT Substances List, List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation)
52	Per/polyfluoroalkyl substances (PFAS)
53	Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH)
54	Pentachlorophenol (PCP) and its salts and esters
55	Diisooctyl phthalate (DIOP)
56	Medium-chain chlorinated paraffins (MCCP) (carbon number 14 to 17, with a chlorine content of 45wt% or more)
57	Substances in candidate list for authorization of EU REACH regulation(SVHC)

Table 8.2 Main "Targets"and "Effective date of the ban on the delivery" regarding 'Controlled Substances'

No.1	Substances: Cadmium and cadmium compounds	
Targets	Criteria/threshold levels	
Banned Substances	• Mobile phone case (product that is used to cover the surface of a mobile phone to protect the main body and decorate its appearance) • Part in direct contact with the ear of earphones (including headphones, headsets, etc.)	• 75ppm (0.0075wt%) of total cadmium in homogenous material
	• Solders	• More than 20ppm (0.002wt%) of the cadmium in solder
	• All applications other than the above (See 9 Additional rules for packaging components and materials.)	• 100ppm (0.01wt%) of total cadmium in homogeneous materials
(*) Plastics(including rubbers), paints, and inks are required to be tested in accordance with the following standards.		
Standards for measurement		
1) Sample preparation		
Typical sample preparation methods: e.g. IEC 62321-5:2013, EPA3052:1996		
(1) Closed system for acid decomposition method (e.g. microwave decomposition method)		
(2) Acid digestion method		
(3) Dry ashing method		
Note: Precipitates must be completely dissolved by some technical means (e.g. alkali fusion)		
Any extraction methods(including EN71-3:2014,ASTM F963-16,ASTM D 5517-14, and ISO 8124-3:2010)shall not be applied.		
2) Measurement methods		
Typical measurement methods: e.g.. IEC 62321-5:2013		
(1) Inductively Coupled Plasma-Optical(Atomic) Emission Spectrometry (ICP-OES[ICP-AES])		
(2) Atomic Absorption Spectrometry (AAS)		
(3) Atomic Fluorescence Spectrometry (AFS)		
(4) Inductively Coupled Plasma=Mass Spectrometry (ICP-MS)		
Note: If a combination of a sample preparation method and a measurement method can ensure that the limit of quantification for cadmium is less than 5 ppm,the combination is applicable.		
*Reference		
http://ec.europa.eu/environment/waste/rohs_eee/legis_en.htm (EU RoHS Derective)		

No.2	Substances: Lead and lead compounds	
Targets	Criteria/threshold levels	
Banned Substances	• Cables/cords (including plug and connector) with thermoset or thermoplastic coatings	• 0.03 wt% (300 ppm) of total lead surface in coating material
	• Mobile phone cases (products that are used to protect the main body by covering the surface of the mobile phone and decorate its appearance) • Part in direct contact with the ear of earphones (including headphones, headsets, etc.)	
	• Parts and materials for consumer products designed or intended primarily for children 12 years of age or younger	• 100ppm (0.01wt%) of total lead in product
	• Paint or surface coating of mobile phone cases (products that are used to protect the main body by covering the surface of the mobile phone and decorate its appearance) • Paint or surface coating of part in direct contact with the ear of earphones (including headphones, headsets, etc.)	• 90ppm (0.009wt%) of total lead in product
	• Paint and similar surface coatings of toys and other articles intended for use by children	
	• All applications other than the above (See 9 Additional rules for packaging components and materials.)	• 1000ppm (0.1wt%) of the lead in homogeneous materials
(*) Plastics (including rubbers), paints, and inks are required to be tested in accordance with the following standards		

No.2	Substances: Lead and lead compounds
Standards for measurement 1) Sample preparation Typical sample preparation methods: e.g. IEC 62321-5: 2013,EPA 3052:1996 (1) Closed system for acid decomposition method(e.g.microwave decomposition method) (2) Acid digestion method (3) Dry ashing method Note: Precipitates must be completely dissolved by some technical means (e.g. alkali fusion). Any extraction methods(including EN71-3:2014,ASTM F963-16,ASTM D 5517-14, and ISO 8124-3:2010)shall not be applied. 2) Measurement methods Typical measurement methods:e.g.IEC 62321-5:2013 (1) Inductively Coupled Plasma-Optical(Atomic) Emission Spectrometry (ICP-OES[ICP-AES]) (2) Atomic Absorption Spectrometry (AAS) (3) Atomic Fluorescence Spectrometry (AFS) (4) Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) Note: If a combination of a sample preparation method and a measurement method can ensure that the limit of quantification for lead is less than 30 ppm,the combination is applicable.	
*Reference http://ec.europa.eu/environment/waste/rohs_eee/legis_en.htm (EU RoHS Derective)	

No.3	Substances: Mercury and mercury compounds
Targets	Criteria/threshold level
Banned Substances	- All applications (See 9 Additional rules for packaging components and materials.) - Intentionally added or 1000ppm (0.1wt%) of total mercury in the homogeneous materials

No.4	Substances:Hexavalent chromium compounds	
Targets	Criteria/threshold level	
Banned Substances	• Natural leather parts and materials • Surfaces of screws,steel sheets,etc. that are processed with plating or conversion coating	• Residue on the processed surface(*) • 3ppm (0.0003wt%) of total hexavalent chromium in dry weight of the natural leather materials
	• All applications other than the above (see 9 Additional rules for packaging components and materials.)	• 1000ppm (0.1wt%) of total hexavalent chromium in the homogeneous materials
Testing methods(for reference)		
The methods for natural leather materials are as follows.		
1) EN ISO 17075:2007		
2) IULTCS/IUC18(conform with ISO 17075:2007)		
3) IEC 62321-7-2 : 2017		

* Residue on the processed surface is banned in banned substances. Not applicable to hexavalent chromium compounds for surface processing.

No.5	Substances: Polybrominated biphenyls(PBBs)
Targets	Criteria/threshold level
Banned Substances	- All uses - Intentionally added 1000ppm (0.1wt%) in homogeneous materials
* Recommended analysis criteria : IEC62321-6、 IEC62321-12	

No.6	Substances: Polybrominated diphenylethers (PBDEs) (including decabromodiphenyl ether [DecaBDE])	
Targets		Criteria/threshold level
Banned Substances	• All uses	• Intentionally added
	※ Recommended analysis criteria : IEC62321-6、IEC62321-12	• 1000ppm (0.1wt%) in homogeneous materials
	• All excluding applications falling within the scope of EU RoHS 2011/65/EU	• Intentionally added
		• 10ppm (0.001wt%) in homogeneous materials

No.7	Substances: Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified	
CAS No.25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8, 4736-49-6, 65701-47-5, 138257-17-7, 138257-18-8, 138257-19-9, 169102-57-2, 678970-15-5, 678970-16-6, 678970-17-7		
Targets		Criteria/threshold level
Banned Substances	▪ All uses	▪ Intentionally added or ▪ 75ppm (0.075wt%) of the homogeneous materials

N0.8	Substances:Brominated flame retardants(BFR)	
(other than PBBs, PBDEs, HBCDD)		
Targets		Criteria/threshold levels
Controlled Substances	• Flame retardants used for printed wiring board laminate	• 900ppm (0.09wt%) of total bromine content by weight in the laminate
	• Plastic materials except printed wiring board laminates	• 1000ppm(0.1wt%) of bromine in plastic materials

No.9	Substances:Polychlorinated biphenyls(PCB) and specific substitutes	
CAS No. of Specific substitutes are [76253-60-6], [81161-70-8] and [99688-47-8]		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added • 0.00002wt% (0.2ppm) in homogeneous materials

No.10	Substances:polychlorinated naphthalenes(PCN)	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added

No.11	Substances:polychlorinated terphenyls(PCT)	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added or
		• 2ppm (0.0002wt%) in homogeneous materials

No.12	Substances: Short-chain chlorinated paraffins(Alkanes, C10-13)(SCCP)	
Short-chain chlorinated paraffins with carbon chain lengths of 10-13		
Targets		Criteria/threshold level
Banned Substances	• All uses	• Intentionally added or • 1000ppm (0.1wt%) of the homogeneous materials

No.13	Substances: Tris(2-chloroethyl) phosphate (TCEP), Tris(1-chloro-2-propyl)phosphate(TCPP), Tris(1,3-dichloro-2-propyl)phosphate(TDCPP)	
CAS No.115-96-8, 13674-84-5, 13674-87-8		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• 1000ppm (0.1wt%) of the homogeneous materials

No.14	Substances: Perchlorates	
Targets		Criteria/threshold levels
Controlled Substances	• All uses	• 6ppb (0.006ppm) of the homogeneous materials

No.15	Substances: Polyvinyl chloride (PVC) and PVC blends	
Targets		Criteria/threshold levels
Banned Substances	• Substrates for FeliCa contactless IC cards • Fabrics and coating agents used for carrying bags, carrying cases, and carrying pouches for the following products (excluding those for professional use): Personal computers, digital cameras, video camcorders, and portable audio products • Cable ties used for accessories and connecting cords • Packaging components and materials to protect, contain, or transport products or supplied accessories (e.g. bags, adhesive tapes, cartons, and blister packs) Note that packaging components or materials for devices, semiconductors, and any other components (e.g. trays, magazine sticks, stoppers, reels, embossed carrier tapes) are excluded • Flexible flat cables (FFC) • Insulating plates, decorative panels, labels (excluding those for batteries) • Sheets, and laminates (including sheets and laminates used for exterior of wooden speakers) • Suction cups for mounting in-vehicle products	• Intentionally added
Controlled Substances	• All applications other than Banned Substances	• Intentionally added
Exemption	• Binder for resins used for paints, inks, coating agents, adhesives etc.	

No.16	Substances: Chlorinated flame retardants (CFR) (other than TCEP, TCPP, TDCPP)	
Targets		Criteria/threshold
Controlled Substances	• Flame retardants used for printed wiring board laminate	• 900ppm (0.09wt%) of total chlorine content in laminate
	• Plastic materials except printed wiring board laminates	• 1000ppm (0.1wt%) of chlorine in plastic materials

No.17	Substances: Fluorinated greenhouse gases (PFC, SF₆, HFC)	
Targets		Criteria/threshold
Banned Substances	• All uses	• Intentionally added

No.18	Substances: Ozone depleting substances(ODS)	
Subjected substance (*) in Montreal Protocol appendix A, B, C, E		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added
	• Components and materials processed with ODS	• Processs with ODS clesning, foaming or other processes
* Reference : http://www.env.go.jp/earth/ozone/montreal_protocol.html https://ozone.unep.org/resources (Web site from U N E P Ozone Secretariat)		

(Official web site from Environment Department)

No.19	Perfluorooctane sulfonates and related substances (PFOS)	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added or
		• 25ppb(0.000025wt%) of the material (as the sum of PFOS) • 1ppm (0.0001wt%) of the material (as the sum of PFOS related substances)

No.20	Perfluorohexane-1-sulphonic acid (PFHxS), its salts and related substances	
Targets		Criteria/threshold
Banned Substances	• All uses	• Intentionally added
		• 25ppb (0.000025wt%) of the material (as the sum of PFHxS and its salts) • 1ppm (0.0001wt%) of the material (as the sum of PFHxS related substances)

No.21	Substances: Perfluorooctanoic acid (PFOA) and its salts and related substances	
Targets		Criteria/threshold levels
Banned Substance	• All uses	• Intentionally added
		• 25ppb (0.000025wt%) of the material (as the sum of PFOA and its salts) • 1ppm (0.0001wt%) of the material (as the sum of PFOA related substances)

N0.22	Substances: Tri-substituted organostannic compounds	
including tributyltin(TBT) compounds and triphenyltin(TPT) compounds		
Targets		Criteria/threshold level
Banned Substances	• All uses	• Intentionally added or • 1000ppm (0.1wt%) of tin contained in materials

No.23	Substances: Dibutyltin (DBT) compounds	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• 1000ppm (0.1wt%) of tin contained in a product

No.24	Substances: Dioctyltin (DOT) compounds	
Targets		Criteria/threshold levels
Banned Substances	- Textile and leather articles intended to come into contact with the skin - Childcare articles - Two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)	1000ppm (0.1wt%) of tin contained in a product

No.25	Substances: Beryllium oxide	
Targets		Criteria/threshold level
Banned Substances	All uses	1000ppm (0.1wt%) of contained in materials

No.26	Substances: Beryllium copper	
Targets		Criteria/threshold levels
Controlled Substances	All uses	Intentionally added

No.27	Substances: Cobalt dichloride	
CAS No. [7646-79-9]		
Targets		Criteria/threshold levels
Banned Substances	• Moisture indicator used for a desiccant agent (e.g. silica gel)	• Intentionally added
	• Humidity indicator card which is impregnated with cobalt dichloride	• 1000ppm (0.1wt%) of contained in materials

No.28	Substances: Diarsenic trioxide, Diarsenic pentaoxide	
The target substances are as follows: CAS No.1327-53-3, 1303-28-2. The following threshold level for each substance shall be applied.		
Targets		Criteria/threshold levels
Banned Substances	• LCD panels (including cover glasses, touchscreens, and backlights)	• 1000ppm (0.1wt%) of homogeneous materials

No.29	Substances: Nickel and Nickel compounds	
Note: If there are other instructions issued by client for nickel, its shall be followed.		
Targets		Criteria/threshold levels
Banned Substances	• Parts and materials for mobile phone, where prolonged skin contact is expected • Parts and materials for wrist-watch and wristband product, where prolonged skin contact is expected (ex. cases, watch straps and tighteners).	• 0.5µg/cm²/week (release concentration)
Controlled Substances	• All, where prolonged skin contact is expected	• Intentionally added

No.30	Substances: Bis(2-ethylhexyl)phthalate(DEHP),Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Diisobutyl phthalate(DIBP)	
The target substances are as follows:CAS No.117-81-7, 84-74-2, 85-68-7, 84-69-5 (Refer to Table 8.2c-1). The following threshold level for each substance shall be applied.		
Targets		Criteria/threshold levels
Banned Substance	• All uses ※Recommended analysis criteria : IEC62321-8、 IEC62321-12	• 1000ppm (0.1wt%) as the sum of the phthalate concentrations in homogeneous material
	•Parts and materials for children's toy or child caer article	
	• All excluding applications falling within the scope of EU RoHS 2011/65/EU	
	•Part in direct contact with the ear of earphones (including headphones, headsets, etc.)	

No.31	Substances: Di-isononyl phthalate(DINP), Di-isodecyl phthalate(DIDP), Di-n-octyl phthalate(DNOP)	
CAS No.28553-12-0, 68515-48-0, 26761-40-0, 68515-49-1, 117-84-0		
Targets		Criteria/threshold levels
Banned Substances	• Parts and materials for children's mouth toys or child care products	• 1000ppm (0.1wt%) or more as the sum of the phthalate concentrations in homogeneous materials
Controlled Substances	• All uses other than above	• Intentionally added

No.32	Substances: Di-n-hexyl phthalate(DnHP)	
CAS No.84-75-3		
Targets		Criteria/threshold levels
Controlled Substances	• All uses	• Intentionally added • 1000ppm (0.1wt%) or more of the homogeneous material

No.33	Substances: Asbestos	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added

No.34	Substances: Azocolourants and azodyes which form certain aromatic amines	
Regarding certain aromatic amines, see Table 8.2d		
Targets		Criteria/threshold levels
Banned Substances	• Additives of textiles and leathers	• 30ppm (0.003wt%) or more in textiles and leathers
Testing methods (for reference)		
The methods for decomposing azo compounds and then extracting amines are as follows.		
1) For textiles: EN 14362-1:2012; EN 14362-2:2012 for 4-aminoazobenzene		
2) For leather: EN ISO 17234-1:2024; EN ISO 17234-2:2011 for 4-aminoazobenzene		

Table 8.2d List of certain aroamine compounds

CAS No.	Amine compounds
92-67-1	4-aminodiphenyl
92-87-5	benzidine
95-69-2	4-chloro-o-toluidine; 4-chloro-2-methylaniline
91-59-8	2-naphthylamine
97-56-3	o-aminoazotoluene
99-55-8	2-amino-4-nitrotoluene; 5-nitro-o-toluidine
106-47-8	p-chloroaniline
615-05-4	2,4-diaminoanisole
101-77-9	4,4'-diaminodiphenylmethane; 4,4'-methylenedianiline
91-94-1	3,3'-dichlorobenzidine
119-90-4	3,3'-dimethoxybenzidine
119-93-7	3,3'-dimethylbenzidine
838-88-0	3,3'-dimethyl-4,4'-diaminodiphenylmethane; 4,4'-diamino-3,3'-diphenylmethane
120-71-8	p-cresidine; 6-methoxy-m-toluidine
101-14-4	4,4'-methylene-bis-(2-chloroaniline)
101-80-4	4,4'-oxideaniline
139-65-1	4,4'-thiodianiline; 4,4'-diaminodiphenylsulfide
95-53-4	o-toluidine
95-80-7	2,4-toluylenediamine; 4-methyl-m-phenylenediamine
137-17-7	2,4,5-trimethylaniline
90-04-0	o-anisidine
60-09-3	4-aminoazobenzene

No.35	Substances; Formaldehyde	
CAS No.50-00-0		
Targets		Criteria/threshold levels
Banned Substances	• The wooden products made from fiberboard, particleboard, or plywood, which are employed in products(e.g. speakers and racks)	• The details are as follows.
	• Textiles	• 75ppm (0.0075wt%) or more in textiles
	• All uses other than adove	• Intentionally added
Threshold level(emission content):Obtain the value by any one of the following methods.		
1) [With a chamber method] Concentration in the air: Equal to or less than 0.1ppm (or 0.124mg/m³) in an air-tight test chamber whose volume is 12m³,1m³,or 0.0225m³ https://echa.europa.eu/documents/10162/17233/rest_formaldehyde_guideline_en.pdf/35000cf2-5c37-e96e-52f7-367b41172915?t=1747203191545		
2) [With a perforator method] • Equal to or less than 6.5mg in 100g of a particleboard without a surface treatment(the average value during six months) • Equal to or less than 7.0mg in 100g of a fiberboard without a surface treatment (the average value during six months) • Equal to or less than 8.0mg in 100g of a particleboard/fiberboard without a surface treatment (the value derived from the one-time measurement based on EN120)		
3) [With a desiccator method] • Average content: 0.5mg/l or less • Maximum content: 0.7mg/l or less (Use N=2 to check the average and maximum values.)		
Testing methods: • A chamber method specified in EN 717-1:2004 • A perforator method specified in ISO12460-5:2015 • A desiccator method specified in JIS A 5905 (Fiberboards) and JIS A 5908 (Particleboards)		

No.36	Substances: Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene(BNST)	
CAS No.68921-45-9		
Targets		Criteria/threshold levels
Banned Substances	▪ All uses	▪ Intentionally added
Exemption	▪Additives of rubber(note that such used for tires are Banned Substances)	

No.37	Substances: 2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-butylphenol(UV-320)	
	2-(2H-benzotriazol-2-yl)-4,6-ditertpentyphenol (UV-328)	
(UV-320) CAS No. 3846-71-7		
(UV-328) CAS No. 25973-55-1		
Targets		Criteria/threshold levels
Banned Substances	• All uses	UV-328 • Intentionally added • 1ppm (0.0001wt%) or more to homogeneous material

No.38	Substances: Dimethyl fumarate (DMF)	
CAS No. 624-49-7		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• 0.1ppm (0.00001wt%) or more to homogeneous material

No.39	Substances: Polycyclic aromatic hydrocarbons (PAHs)	
CAS No. 50-32-8, 192-97-2, 56-55-3, 218-01-9, 205-99-2, 205-82-3, 207-08-9, 53-70-3		
Targets		Criteria/threshold levels
Reduced Substances	• Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact	• 0.5ppm (0.00005 wt%) or more of the homogeneous material
	• Rubber or plastic parts that come into direct, prolonged or repetitive skin or oral cavity contact except those for toys or childcare articles	• 1ppm (0.0001 wt%) or more of the homogeneous material

No.40	Substances:Tris(2,3-brominated propyl) phosphate(TRIS)	
CAS No.126-72-7		
Targets		Criteria/threshold levels
Banned Substances	• The textiles which may come in contact with skin of the human body directly	• Intentionally added • Prohibition of the Adhesion in process of manufacture, Mixture, and generation

No.41	Substances: Tri(1-aziridin)phoshinoxide (TEPA)	
CAS No.545-55-1		
Targets		Criteria/threshold levels
Banned Substances	• The textiles which may come in contact with skin of the human body directly	• Intentionally added • Prohibition of the Adhesion in process of manufacture, Mixture, and generation

No.42	Substances:Hexachlorobenzene	
CAS No. 118-74-1		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added • 10ppm (0.001wt%) or more of the homogeneous material

No.43	Substances:Red phosphate	
CAS No. 7723-14-0		
Targets		Criteria/threshold levels
Banned Substances	• All except metal	• Intentionally added
Exemption	•Device Division Related parts	

No.44	Substances:Radioactive substances	
Targets		Criteria/threshold levels
Controlled Substances	• All uses	• Intentionally added

No.45	Substances:4,4'-Isopropylidenediphenol (bisphenol A) (BPA)	
CAS No. 80-05-7		
Targets		Criteria/threshold levels
Controlled Substances	• All uses	• Intentionally added or • 1000ppm (0.1wt%) in homogeneous materials

No.46	Halogenated flame retardants	
Targets		Criteria/threshold levels
Banned Substances	• Plastic external enclosures and stand of electric and electronic product (Including labels, tapes, etc. attached to the plastic enclosure and stands)	• Intentionally added or • 0.1wt% of total halogen elements in homogeneous material (including PBBs and PBDEs)

No.47	Perfluorocarboxylic acids (PFCAs) and its salts and related substances	
Carbon Number(C9~C21)		
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added • 25ppb (0.0000025wt%) of the material (as the sum of PFCAs and its salts) • 260ppb (0.000026wt%) of the material (as the sum of PFCAs related substances)

No.48	Perfluorohexanoic acid (PFHxA) and its salts and related substances	
Targets		Criteria/threshold levels
Banned Substances	• Textiles, leather, furs	• Intentionally added • 25ppb (0.0000025wt%) of the material (as the sum of PFHxA and its salts) • 1ppm (0.0001wt%) of the material (as the sum of PFHxA related substances)

No.49	Decabromodiphenylethane (DBDPE)	
CAS No. 84852-53-9		Criteria/threshold levels
Controlled Substances	• Electrical and electronic equipment (including its parts)	• Intentionally added
Banned Substances	• All uses other than above	• Intentionally added • 500ppm (0.05wt%) in homogeneous materials

No.50	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diece ("Dechlorane Plus" TM)	
Targets		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added • 1ppm (0.0001wt%) in homogeneous materials

No.51	TSCA Priority chemicals (PBT Substances List, List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation)	
Regarding certain aromatic amines, see Table 8.2e		Criteria/threshold levels
Banned Substances	• All uses	• Intentionally added

表 8. 2e TSCA Priority chemicals (PBT Substances List, List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation)

CAS No.	Substances
1163-19-5	Decabromodiphenyl ether (DecaBDE)
68937-41-7	Phenol, Isopropylated Phosphate (PIP) (3:1)
732-26-3	2,4,6-Tris (tert-butyl) phenol (TTBP)
133-49-3	Pentachlorothiophenol (PCTP)
87-68-3	Hexachlorobutadiene (HCBd)
75-09-2	Methylene Chloride
106-94-5	1-Bromopropane
25637-99-4	Cyclic Aliphatic Bromide Cluster (HBCD)
3194-55-6	
3194-57-8	
1332-21-4	Asbestos
56-23-5	Carbon Tetrachloride
123-91-1	1,4-dioxane
872-50-4	N-Methylpyrrolidone (NMP)
127-18-4	Perchloroethylene
81-33-4	Pigment Violet 29
79-01-6	Trichloroethylene (TCE)

No.52	Substances:Per/polyfluoroalkyl substances (PFAS)	
Targets		Criteria/threshold levels
Banned Substances	• Textile products (including natural and synthetic leather)	• Intentionally added or • 50ppm (0.005wt%) of organic fluorine in homogeneous materials
Controlled Substances	• All uses	• Intentionally added

No.53	Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH)	
1 to 7 aromatic rings(MOAH), 16 to 35 carbon atoms(MOSH)		
Targets		Criteria/threshold levels
Banned Substances	• Packaging components and materials, Printed materials	• 1000ppm (0.1wt%) in ink ※3 to 7 aromatic rings(MOAH) • 1ppm (0.0001wt%) in ink

No.54	Pentachlorophenol (PCP) and its salts and esters	
Targets		Criteria/threshold levels
Banned Substances	All uses	- Intentionally added or 5ppm (0.0005wt%) in homogeneous materials

No.55	Diisooctyl phthalate (DIOP)	
CAS No. 27554-26-3		
Targets		Criteria/threshold levels
Controlled Substances	• All uses	•1000ppm (0.1wt%) in homogeneous materials

No.56	Medium-chain chlorinated paraffins (MCCP) (carbon number 14 to 17, with a chlorine content of 45wt% or more)	
Targets		Criteria/threshold levels
Banned Substances	All uses	- Intentionally added 1000ppm (0.1wt%) in homogeneous materials

No.57	Substances:Substances in candidate list for authorization of EU REACH regulation(SVHC)	
See Table 8.2f		
Targets		Criteria/threshold levels
Controlled Substances	• All uses However, excluding banned substances specified in this standard	•1000ppm (0.1wt%) or more of the homogeneous materials

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
001	Antracene	120-12-7
002	4,4'-Diaminodiphenylmethane	101-77-9
003	Dibutyl phthalate(DBP)	84-74-2
004	Cobalt dichloride	7646-79-9
005	Diarsenic pentaoxide	1303-28-2
006	Darsenic trioxide	1327-53-3
007	Sodium dichromate,dihydrate	7789-12-0, 10588-01-9
008	5-tert-butyl-2,4,6-trinitro-m-xylene(muysk xylene)	81-15-2
009	Bis(2-ethyl(hexyl)phthalate) (DEHP)	117-81-7
010	Hexabromocyclododecane(HBCDD)	3194-55-6
011	Alkanes,C10-13.chloro(Short Chain Chlorinated Praffins)	85535-84-8
012	Bis(tributyltin)oxide	56-35-9
013	Lead hydrogen arsenate	7784-40-9
014	Triethyl arsenate	15606-95-8
015	Benzl butyl phthalate(BBP)	85-68-7
016	2,4-Dinitrotoluene	121-14-2
017	Anthracene oil	90640-80-5
018	Anthracene oil,anthracene paste,distnlights	91995-17-4
019	Anthracene oil,anthracene paste,anthracene fraction	91995-15-2
020	Anthracene oil,anthracene-low	90640-82-7
021	Anthracene oil,anthracene paste	90640-81-6
022	Diisobutyl phthalate(DIBP)	84-69-5
023	Lead chromate	7758-97-6
024	Lead chromate molybdate sulfate red(C.I Pigment Red 104)	12656-85-8
025	Lead sulfochromate yellow(C.I Pigment Yellow 34)	1344-37-2
026	Acrylamid	76-06-1
027	Tris(2-chloroethyl)phosphate	115-96-8
028	Coal tar pitch,high temperature	65996-93-2
029	Trichloroethylene	79-01-6
030	Boric acid	10043-35-3
031	Disodium tetraborate,anhydrous	12179-04-3, 1330-43-4, 1303-96-4
032	Tetraboron disodium heptaoxide,hydrate	12267-73-1
033	Sodium chromate	7775-11-3
034	Potassium chromate	7789-00-6
035	Anmonium dichromate	7789-09-5
036	Potassium dichromate	7778-50-9
037	Cobalt(II) sulphate	10124-43-3
038	Cobalt(II)dinitrate	10141-05-6
039	Coblalt(II) carbonate	513-79-1
040	Cobalt(II) diacetate	71-48-7
041	2-Methoxyethanol	109-86-4
042	2-Ethoxyethanol	110-80-5
043	Chromium trioxide	1333-82-0
044	Acids generated from chromium trioxide and their oligomers (Dichromic acid, Oligomers of chromic acid and dichromic acid)	7738-94-5, 13530-68-2
045	2-ethoxyethyl acetate	111-15-9
046	Strontium chromate	7789-06-2
047	1,2-Benzendicarboxy and di-C7-11 – branched and linear alkyl esters	68515-42-4
048	hydrazine	7803-57-8, 302-01-2
049	1-methyl-2-pyrrolidone	872-50-4
050	1,2,3-trichloropropane	96-18-4

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
051	1,2-Benzendicarboxylic acid di-C6-8-branched alkyl esters, C7-rich	71888-89-6
052	Dichromium tris(chromate)	24613-89-6
053	Potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9
054	Pentazinc chromate octahydroxide	49663-84-5
055	Formaldehyde, oligomeric reaction products with aniline	25214-70-4
056	Bis(2-methoxyethyl)phthalate	117-82-8
057	2-Methoxyaniline, o-Anisidine	90-04-0
058	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9
059	1,2-Dichloroethane	107-06-2
060	Bis(2-methoxyethyl)ether	111-96-6
061	Arsenic acid	7778-39-4
062	Calcium arsenate	7778-44-1
063	Trilead diarsenate	3687-31-8
064	N,N-dimethylacetamide[DMAC]	127-19-5
065	2,2'-dichloro-4,4'-methylenedianiline[MOCA]	101-14-4
066	Phenolphthalein	77-09-8
067	Lead azide, Lead diazide	13424-46-9
068	Lead styphnate	15245-44-0
069	Lead dipicrate	6477-64-1
070	Aluminosilicate Refractory Ceramic Fibres[RCF]	-
071	Zirconia Aluminosilicate Refractory Ceramic Fibres[Zr-RCF]	-
072	1,2-bis(2-methoxyethoxy)ethane[TEGDME, triglyme]	112-49-2
073	1,2-dimethoxyethane;ethylene glycol dimethyl ether [EGDME]	110-71-4
074	Diboron trioxide	1303-86-2
075	Formamide	75-12-7
076	Lead(II)bis(methanesulfonate)	17570-76-2
077	TGIC(1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9
078	β-TGIC(1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6
079	4,4'-bis(dimethylamino)benzophenone(Michler's ketone)	90-94-8
080	N,N,N',N'-tetramethyl-4,4'-methylenedianiline(Michler's base)	101-61-1
081	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride(C.I.Basic Violet3)	548-62-9
082	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride(C.I.Basic Blue 26)	2580-56-5
083	α,α-Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue4)	6786-83-0
084	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1
085	Bis(pentabromophenyl)ether (DecaBDE)	1163-19-5
086	Pentacosfluorotridecanoic acid	72629-94-8
087	Tricosfluorododecanoic acid	307-55-1
088	Henicosfluoroundecanoic acid	2058-94-8
089	Heptacosfluorotetradecanoic acid	376-06-7
090	4(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues	-
091	4-Nonylphenol, branched and linear-substances with a linear and/ or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	-
092	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3
093	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride-HHPA)	85-42-7
094	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
095	Methoxy acetic acid	625-45-6
096	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
097	Diisopentylphthalate (DIPP)	605-50-5
098	N-pentyl-isopentylphthalate	-
099	1,2-Diethoxyethane	629-14-1
100	N,N-dimethylformamide; dimethyl formamide	68-12-2
101	Dibutyltin dichloride (DBT)	683-18-1
102	Acetic acid, lead salt, basic	51404-69-4
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)	1319-46-6
104	Lead oxide sulfate(basic lead sulfate)	12036-76-9
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)	69011-06-9
106	Dioxobis(stearato)trilead	12578-12-0
107	Fatty acids, C16-18, lead salts	91031-62-8
108	Lead bis(tetrafluoroborate)	13814-96-5
109	Lead cyanamate	20837-86-9
110	Lead dinitrate	10099-74-8
111	Lead oxide (lead monoxide)	1317-36-8
112	Lead tetroxide (orange lead)	1314-41-6
113	Lead titanium trioxide	12060-00-3
114	Lead Titanium Zirconium Oxide	12626-81-2
115	Pentalead tetraoxide sulphate	12065-90-6
116	Pyrochlore, antimony lead yellow	8012-00-8
117	Silicic acid, barium salt, lead-doped	68784-75-8
118	Silicic acid, lead salt	11120-22-2
119	Sulfurous acid, lead salt, dibasic	62229-08-7
120	Tetraethyllead	78-00-2
121	Tetralead trioxide sulphate	12202-17-4
122	Trilead dioxide phosphonate	12141-20-7
123	Furan	110-00-9
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9
125	Diethyl sulphate	64-67-5
126	Dimethyl sulphate	77-78-1
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
128	Dinoseb	88-85-7
129	4,4'-methylenedi-o-toluidine	838-88-0
130	4,4'-oxydianiline and its salt	101-80-4
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3
132	4-methyl-m-phenylenediamine(2,4-toluene-diamine)	95-80-7
133	6-methoxy-m-toluidine(p-cresidine)	120-71-8
134	Biphenyl-4-ylamine	92-67-1
135	o-aminoazotoluene	97-56-3
136	o-Toluidine; 2-Aminotoluene	95-53-4
137	N-methylacetamide	79-16-3
138	1-bromopropane; n-propyl bromide	106-94-5
139	Cadmium	7440-43-9
140	Cadmium oxide	1306-19-0
141	Dipentyl phthalate(DPP)	131-18-0
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB -and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
143	Ammonium pnetadecafluorooctanoate (APFO)	3825-26-1
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1
145	Cadmium sulphide	1306-23-6
146	Diethyl phthalate	84-75-3
147	Disodium 3,3'-[[1,1-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
148	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
149	Imidazo lidine-2-theone; 2-imidazo line-2-thiol	96-45-7
150	Lead di(acetate)	301-04-2
151	Triethyl phosphate	25155-23-1
152	1,2-Benzenedicarboxylic acid, diethyl ester, branched and linear	68515-50-4
153	Cadmium chloride	10108-64-2
154	Sodium perborate; perboric acid, sodium salt	15120-21-5, 11138-47-9
155	Sodium peroxometaborate	7632-04-4
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
159	Cadmium fluoride	7790-79-6
160	Cadmium sulphate	10124-36-4, 31119-53-6
161	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)	-
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of diethyl phthalate (EC No. 201-559-5)	68515-51-5, 68648-93-1
163	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]	-
164	1,3-propanesultone	1120-71-4
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3
167	Nitrobenzene	98-95-3
168	Perfluorononanoic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts)	375-95-1, 21049-39-8, 4149-60-4
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7
171	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7, 335-76-2, 3830-45-3
173	p-(1,1-dimethylpropyl)phenol	80-46-6

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
0174	Perfluorohexane-1-sulphonic acid and its salts	355-46-4
0175	Chrysene	218-01-9
0176	Benz[a]anthracene	-
0177	Cadmium nitrate	10325-94-7, 10022-68-1 (tetrahydrate)
0178	Cadmium hydroxide	56-55-3
0179	Cadmium carbonate	513-78-0
0180	Dechlorane plus (including any of its individual anti- and syn-isomers or any combination thereof)	13560-89-9, 135821-74-8, 135821-03-3
0181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with 0.1% w/w 4-heptylphenol, branched and linear]	-
0182	Benzo[ghi]perylene	191-24-2
0183	Decamethylcyclopentasiloxane (D5)	541-02-6
0184	Disodium octaborate	12008-41-2
0185	Dodecamethylcyclohexasiloxane (D6)	540-97-6
0186	Ethylenediamine	107-15-3
0187	Lead	7439-92-1
0188	Octamethylcyclotetrasiloxane (D4)	556-67-2
0189	Terphenyl, hydrogenated	61788-32-7
0190	Dicyclohexyl phthalate(DCHP)	84-61-7
0191	Benzene-1,2,4-tricarboxylicacid1,2- anhydride(trim ellitic anhydride) (TMA)	552-30-7
0192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6
0193	Benzo[k]fluoranthene	207-08-9
0194	Fluoranthene	206-44-0, 93951-69-0
0195	Phenanthrene	85-01-8
0196	Pyrene	129-00-0, 1718-52-1
0197	Undecafluorohexanoic acid and its ammonium salt	307-24-4, 21615-47-4
0198	2-methoxyethyl acetate	110-49-6
0199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with 0.1% or more w/w of 4-nonylphenol, branched and linear (4-NP)	-
0200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-
0201	4-tert-butylphenol	98-54-4
0202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
0203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
0204	Diisohexyl phthalate	71850-09-4
0205	Perfluorobutane sulfonic acid (PFBS) and its salts	-
0206	1-vinylimidazole	1072-63-5
0207	2-methylimidazole	693-98-1
0208	Butyl 4-hydroxybenzoate	94-26-8
0209	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
0210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8
0211	bis(2-(2-methoxyethoxy)ethyl) ether、stannane, dioctyl-, bis(coco acyloxy) derivs.,, and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-
0212	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-
0213	Orthoboric acid, sodium salt	13840-56-7

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
0214	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 1522-92-5 36483-57-5 96-13-9
0215	Glutaral	111-30-8
0216	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	-
0217	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	-
0218	1,4-dioxane	123-91-1
0219	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7
0220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-
0221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1
0222	S-(tricyclo[5.2.1.0' ² ,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8
0223	tris(2-methoxyethoxy)vinylsilane	1067-53-4
0224	N-(hydroxymethyl)acrylamide	924-42-5
0225	1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene]	37853-59-1
0226	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (tetrabromobisphenol-A; TBBPA)	79-94-7
0227	4,4'-sulphonyldiphenol(bisphenol S; BPS)	80-09-1
0228	Barium diboron tetraoxide	13701-59-2
0229	Bis(2-ethylhexyl)tetrabromophthalate covering any of the individual isomers and/or combinations thereof;bis(2-ethylhexyl) tetrabromophthalate ;TBPH	-
0230	Isobutyl 4-hydroxybenzoate	4247-02-3
0231	Melamine	108-78-1
0232	Perfluoroheptanoic acid and its salts	-
0233	reaction mass of 2,2,3,3,5, reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	-
0234	bis(4-chlorophenyl) sulphone	80-07-9
0235	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
0236	2,4,6-tri-tert-butylphenol	732-26-3
0237	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol(UV-329)	3147-75-9
0238	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl] butan-1-one	119344-86-4
0239	Bumetrizole(UV-326)	3896-11-5
0240	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	-
0241	Bis(α,α-dimethylbenzyl) peroxide	80-43-3
0242	Triphenyl phosphate	115-86-6
0243	6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl] hexanoic acid	2156592-54-8
0244	Triphenyl phosphorothioate	597-82-0
0245	1,1,1,3,3,5,5,5-Octamethyltrisiloxane	107-51-7
0246	Tris(perfluoropropyl)amine	338-83-0
0247	tert-Butyl derivative of O,O,O-Triphenyl phosphorothioate	192268-65-8

Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)

	Substance name	CAS No.
0248	1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxy]trisiloxane	17928-28-2
0249	decamethyltetrasiloxane	141-62-8
0250	tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-{[4-chloro-6-({2-[(4-fluoro-6-{[4-(vinylsulfonyl)phenyl]amino}-1,3,5-triazine-2-yl)amino]propyl}amino)-1,3,5-triazine-2-yl]amino}-5-sulfonato-1-naphthyl)diazenyl]-5-methoxyphenyl}diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-
0251	1,1'-(ethane-1,2-diyl)bis[pentabromobenzene](DBDPE)	84852-53-9
0252	Bisphenol AF (4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and its salts)	1478-61-1
0252-1	Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyl(diethylamino)diphenylphosphonium 4-[1,1,1,3,3,3-hexafluoro-2-(4-hydroxyphenyl)propan-2-yl]phenolate (1:1)	-
0252-2	Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol (1:1)	-
0252-3	disodium 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenolate	-
0252-4	Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	75768-65-9
0252-5	Phosphonium, tributyl(2-methoxypropyl)-, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	126049-00-1
0252-6	Reaction products of benzene, chlorine and sulfur chloride (S ₂ Cl ₂) with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol	921213-47-0
0252-7	benzyl(diethylamino)diphenylphosphonium 4-[1,1,1,3,3,3-hexafluoro-2-(4-hydroxyphenyl)propan-2-yl]phenolate	57705-90-9
0252-8	N,N-dibutyl-N-methylbutan-1-aminium 4-[1,1,1,3,3,3-hexafluoro-2-(4-hydroxyphenyl)propan-2-yl]phenolate	-
0253	n-Hexane	110-54-3

9. Regarding the Packaging Components and Materials matters

(1) Definition of "packaging components and materials"

Packaging components and materials are defined as products made from any materials and components of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods from the producer to the user or consumer.

Note: The definition excludes the components and materials for the returnable boxes, which are reused or recycled under the control of carriers or suppliers, and are not disposed of by end-users or the company.

Table 9.1 Regarding the Packaging components and materials matters

Substances: Heavy metals (cadmium, lead, mercury, and hexavalent chromium)		
Articles that satisfy not only the rules specified in Table 8.2, but also the following conditions determined by the regulations of relevant laws		
Targets		Criteria/threshold levels
Banned Substances	• All packaging components and materials as of Table 9.1a	100ppm (0.01wt%) more of the total-concentration of four heavy metals (cadmium, lead, mercury, and hexavalent chromium)in each part, ink, or paint the constitutes a package that constitutes a package
Exemption	• Cartons for returnable boxes owned by carriers or parts suppliers	
Packaging components and materials are required to be tested in accordance with the following standards.		
For hexavalent chromium:		
1. First analyze total chromium content and verify that the total concentration of cadmium, lead, mercury and total chromium is less than 100 ppm. When analyzing the same sample preparation methods as those used for cadmium and lead are applicable. 2. If this total concentration is more than 100 ppm , verify that the sum of the cadmium, lead and mercury concentration is less than the 100 ppm limit. When the sum of the cadmium, lead and mercury concentration is less than the 100 ppm limits, analyze and confirm that no hexavalent chromium is present, using the standard methods for detecting hexavalent chromium provided in Table9.1.		
Standards for four heavy metals measurement		
1. Samplr preparation		
For cadmium and lead, follow the methods respectively specified in Table 8.2 (*1)(*2). For total chromium, follow the methods specified in Table 8.2 (*1). For mercury, typical methods are as follows. (1) Closed system for acid decomposition method (e.g. a microwave decomposition method) (e.g. IEC 62321-5:2013, EPA 3052:1996) (2) A heating evaporation-cold-vapor mercury-atomic-absorption method (3) A wet decomposition method (e.g. Kjeldahl method) in which a decomposition flask with a reflux condenser is used to decompose mercury by sulfuric acid or nitric acid. Note: In the process of sample preparation, particular attention is required to avoid mercury and precipitates must be completely dissolved by some technical means.		
2. Measurement methods		
Regarding the measurement of cadmium, lead, and total-chromium concentrations, follow the methods specified in Table 8.2 (*1)(*2). Regarding the measurement of mercury concentrations, follow the same methods as cadmium and lead specified in Table 8.2 (*1)(*2). When the mercury concentration is predicted to be low, you are advised to use one of the following methods: (1) A reduction-evaporation atom-absorption method (2) ICP-OES(ICP-AES) method with a hydride-generation apparatus (3) ICP-MS method with a hydride-generation apparatus		

Standard methods for detecting hexavalent chromium:

Note: Standard methods specified hereafter are applicable when total concentration of the four elements of cadmium, lead, mercury, and total chromium in packaging components and materials is 100 ppm or more.

Detection methods:

1. Sample preparation
 - Extraction methods such as boiling water extraction and alkaline extraction (e.g. IEC 62321 7-2:2017, EPA 3060A)
2. Measurement method
 - Ultraviolet-Visible (UV/VIS) Spectroscopy (e.g. IEC 62321 7-2:2017, EPA 7196A)
 - If a combination of a sample preparation method and a measurement method can ensure the following limits of quantification, the combination is also available.
 - (1) Less than 5 ppm for mercury, cadmium, and the total chromium
 - (2) Less than 30 ppm for lead

(*1) Refer to Standards for measurement in Table 8.2 "Main 'Targets' and 'Effective date of the ban on the delivery' regarding 'Controlled Substances.'"of "Substances: Cadmium and cadmium compounds"

(*2) Refer to Standards for measurement in Table 8.2 "Main 'Targets' and 'Effective date of the ban on the delivery' regarding 'Controlled Substances.'"of "Substances: Lead and Lead compounds"

Table 9.1a Illustrative examples PACKAGING components/materials and NOT PACKAGING components/materials

Note: The following lists provide some examples of the products, which we categorize as "packaging" as well as "not packaging," to serve as a reference. They are not intended to include all products in both categories.

For consumer-and professional-electronics products (used for transporting company products)		
PACKAGING		
1	Carton (Box)	Including master carton and sub-master carton made from any materials.
2	Cushion	
3	Protection bag, protection sheet	Such as made from foamed plastic or nonwoven fabric.
4	Plastic bag	
5	Envelope	Such as used for warranty card.
6	Blister pack	
7	Film	Including protection films such as used for the LCD displays.
8	Clamshell	
9	Separator, spacer, partition	
10	Printing ink	Used for packaging components.
11	Adhesive tape	Such as used for closing carton or poly bag, or, fixing or protection for removable component.
12	Staple	
13	Label	Attached to the packaging components under control of the company such as bar-code label.
14	Joint	Carton joint.
15	Band	Such as PP band.
16	Handing tab	
17	Carrying handle	Including its related components.
18	Crate	Such as wooden frame.
19	Shrink film	
20	Bottle	
21	Sleeve	
22	Jewel box	Such as packaging for fountain pen.
23	Skid	
24	Spindle case	
NOT PACKAGING		
1	Case/Bag	Cases or bags intended to be used as storage for CD, DVD, Blu-ray Discs, MD, tapes or MO devices.
2	Index card, Index label	Such as index-card or label for CD and other recording media which are defined as part of product.
3	Carrying case, carrying pouch	Such as used for headphones, camera, and walkman®, which are defined as part of product.
4	Label	Labels attached to products and others except those attached to packaging components and materials.
5	Label	Labels attached by third parties such as cargo label and/or invoice.
For devices, semiconductors, and any other components		
PACKAGING		
1	Magazine stick	Such as used for IC.
2	Stopper	
3	Tray	
4	Reel	

For physical distribution		
PACKAGING		
1	Pallet	Made from wood, plastic, paper etc. which is used in one-way transportation, including slip sheet.
2	Crate	Such as wooden container.
3	Stretch film	Wrap around palletized unit.
4	Wooden container	
5	Items used for over packaging	Such as carton, cushion, adhesive tape, etc. which is used for component delivery.
6	Band, string	Such as PP band.
OUT PACKAGING		
1	Shipping container, air container	Such as 40 ft container for boat, and air cargo container.

1. Major controlled substances, and examples of applicable laws and regulations

Substances or the uses which are banned by applicable laws in each country or area, even if the substances or the uses are not defined in this "Management Standards for the Environment-related Substances of Hirakawa Hewtech Corp.", are to comply with relevant laws and regulations.

The revised edition and appendix should be also referred if there are.

Substances	Laws and regulations (examples)
1.Cadmium and cadmium compounds	[EU] RoHS Directive 2011/65/EU and its amendments
	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
	[China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products
	[Japan] Law for the Promotion of Effective Utilization of Resources
	[Korea] Electrical Appliances And Consumer Products Safety Control Act
	[USA California] Electronic Waste Recycling Act (California RoHS) SB 20, amended by SB 50 and AB 575
2.Lead and lead compounds	[EU] RoHS Directive 2011/65/EU and its amendments
	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
	[China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products
	[Japan] Law for the Promotion of Effective Utilization of Resources
	[USA] Consumer Product Safety Improvement Act of 2008 PUBLIC LAW 110-314
	[Korea] Electrical Appliances and Consumer Products Safety Control Act
	[USA California] Electronic Waste Recycling Act (California RoHS) SB 20, amended by SB 50 and AB 575
3.Mercury and mercury compounds	[EU] RoHS Directive 2011/65/EU and its amendments
	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
	[China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products
	[Japan] Law for the Promotion of Effective Utilization of Resources
	[Canada] Products containing Mercury Regulations SOR/2014-254
	[Japan] Act on Preventing Mercury Pollution of the Environment
	[India] E-Waste (Management) Rules
4.Hexavalent chromium compounds	[EU] RoHS Directive 2011/65/EU and its amendments
	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
	[China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products
	[Japan] Law for the Promotion of Effective Utilization of Resources
5.Polybrominated biphenyls (PBBs)	[EU] RoHS Directive 2011/65/EU and its amendments
	[China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products
	[Japan] Law for the Promotion of Effective Utilization of Resources
	[EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021

Substances	Laws and regulations (examples)
6.Polybrominated diphenylethers (PBDEs)	[EU] RoHS Directive 2011/65/EU and its amendments [EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021 [China] Law Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products [Japan] Law for the Promotion of Effective Utilization of Resources [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. [USA] Toxic Substances Control Act(TSCA)
7.Hexabromocyclododecane (HBCDD)	[EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. [EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021
8. Brominated flame retardants(BFR) (other than PBBs, PBDEs, HBCDD)	(Standard) IEC 61249-2-21 (Standard) IPC-4101 (Standard) JEDEC JS709
9.Polychlorinated biphenyls (PCB)	[EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021 [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. [USA] Toxic Substances Control Act(TSCA)
10.Polychlorinated naphthalenes (PCN)	[EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021 [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
11.Polychlorinated terphenyls (PCT)	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
12.Short-chain chlorinated paraffins (SCCP)	[EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [EU] Persistent Organic Pollutants(POPs) Regulation (EC) No.2019/1021 [Norway] Regulations relating to restrictions on the manufacture, import, export, sale and use of chemicals and other products hazardous to health and the environment (Consumer Product Regulations) [Switzerland] Act of Reduction of Risks in Treatment of Specified Hazardous Substances, Preparations, and Articles in Switzerland (ChemRRV) Swiss Ordinance 814.81
13.Tris (2-chloroethyl) phosphate (TCEP) Tris(2-chloro-1-methylethyl) phosphate (TCPP), Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	[USA] State of Vermont Act. 85 [USA] Washington D.C., D.C. Law 21-108 Carcinogenic Flame Retardant Prohibition Amendment Act of 2016.
14.Perchlorates	[USA California] Perchlorate Contamination Prevention Act of 2003 AB 826
16.Chlorinated flame retardants(CFR)	(Standard) JEDEC JS709 (Standard) IEC 61249-2-21; (Standard) IPC-4101
17.Hydrofluorocarbon (HFC), Perfluorocarbon (PFC), Sulfur hexafluoride (SF ₆)	[EU] REGULATION (EU) No 517/2014 on fluorinated greenhouse gases

Substances	Laws and regulations (examples)
18.Ozone depleting substances (ODS)	[EU] Regulation on substances that deplete the ozone layer (EC) No. 1005/2009 [Japan] Law concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures [USA] Clean Air Act; (Treaty) Montreal Protocol on Substances that Deplete the Ozone Layer [USA] Clean Air Act Title VI; [USA] Internal Revenue Code Title 26
19.Perfluorooctane sulfonates (PFOS) and its salts and related compounds	[EU] Persistent Organic Pollutants (POPs) Regulation (EC) No. 2019/1021 [Canada] Prohibition of Certain Toxic Substances Regulations SOR/2012-285 and its amendment [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
20.Perfluorohexane sulfonates (PFHxS) and its salts and related substances	[EU] Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
21.perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA	[EU] Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
22.Trisubstituted organic tin compounds (incl. tributyltin (TBT) compounds and triphenyltin (TPT) compounds)	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II [Japan] Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. [Norway] Regulations relating to restrictions on the manufacture, import, export, sale and use of chemicals and other products hazardous to health and the environment (Consumer Product Regulations)FOR-2004-06-01-922
23.Dibutyltin (DBT) compounds	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II
24.Dioctyltin (DOT) compounds	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II
25.Beryllium oxide	(Guidance) EICTA, CECED and EERA Joint Position: Guidance on implementing article 11 of Directive 2002/96(EC) concerning information for treatment facilities
27.Cobalt dichloride	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II
28.Diarsenic trioxide, Diarsenic pentaoxide	[EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [EU] REACH Regulation (EC) No.1907/2006 ANNEX XIV
29.Nickel and Nickel compounds	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
30.Bis (2-ethylhexyl) phthalate, Dibutyl phthalate, Benzyl butyl phthalate, Diisobutyl phthalate	[EU] RoHS Directive 2011/65/EU and its amendments [EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII [USA] Consumer Product Safety Improvement Act of 2008 PUBLIC LAW 110-314 [Korea (the Republic of)] Electrical Appliances and Consumer Products Safety Control Act
31.Di-isononyl phthalate(DINP), Di-isodecyl phthalate(DIDP), Di-n-octyl phthalate(DNOP)	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII [USA] Consumer Product Safety Improvement Act of 2008 PUBLIC LAW 110-314 [USA California] Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
32.Di-n-hexyl phthalate(DnHP)	[EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [USA California] Safe Drinking Water and Toxic

Substances	Laws and regulations (examples)
33.Asbestos	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II [USA] Toxic Substances Control Act(TSCA) [Switzerland] Act of Reduction of Risks in Treatment of Specified Hazardous Substances, Preparations, and Articles in Switzerland(chemRRV) Swiss Ordinance 814.81
34.Specific azo compounds	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII
35.Formaldehyde	[Austria] BGB I 1990/194: Formaldehyde Restriction §2, 12/2/1990; [Lithuania] Hygiene Norm HN 96:2000 (Hygiene Norms and Regulations) [USA] TSCA Title VI [Germany] ChemVerbotsV [Denmark] Directive No. 289 [EU] REACH Regulation (EC)No.1907/2006 ANNEX XVII
37.2-benzotriazol-2-yl-4,6-di-tert-butylphenol(UV-320) 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	(UV-320) [EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II (UV-328) Eleventh meeting of the Parties to the Stockholm Convention (COP.11) [EU] Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
38.Dimethyl fumarate (DMF)	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II
39.Polycyclic aromatic hydrocarbons (PAHs)	[EU] REACH Regulation (EC) No.1907/2006 ANNEX XV II
42. Hexachlorobenzene	[EU] Draft Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
44. Radioactive substances	[USA] Nuclear Regulatory Commission Regulations Title 10 CFR Part 20 [Japan] Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors; [Japan] Law Concerning Prevention from Radiation Hazards due to Radio-Isotopes, etc. [EU] Directive 2013/59/Euratom
45. 4,4'-Isopropylidenediphenol (bisphenol A) (BPA)	[EU] REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation [USA California] Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
46. Halogenated flame retardants	[EU] Commission Regulation (EU)2019/2021 laying down ecodesign requirements for electronic displays [USA Washington] Chapter 173-337 WAC - Safer Products Restrictions and Reporting [EU & UK] Energy and Resource Efficiency of Games Consoles Self-Regulatory Initiative to further improve the energy and resource efficiency of Games Consoles
47. Perfluorocarboxylic acids (PFCAs) and its salts and related substances	[EU] Draft Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021 [EU] REACH Regulation (EC) No.1907/2006 ANNEX XVII [Canada] Proposed Prohibition of Certain Toxic Substances Regulations, 2022
48. Perfluorohexanoic acid (PFHxA) and its salts and related substances	[EU] REACH Regulation (EC)No.1907/2006 ANNEX XVII
49. Decabromodiphenylethane (DBDPE)	[Canada] Proposed Prohibition of Certain Toxic Substances Regulations, 2025

Substances	Laws and regulations (examples)
50. 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca -7,15-diece ("Dechlorane Plus" TM)	Eleventh meeting of the Parties to the Stockholm Convention (COP.11) [Canada] Proposed Prohibition of Certain Toxic Substances Regulations, 2025 [EU] Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
51. Per/polyfluoroalkyl substances (PFAS)	[USA] State of Maine: An Act to Stop Perfluoroalkyl and Polyfluoroalkyl Substances Pollution
52. TSCA Priority chemicals (PBT Substances List, List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation)	[USA] Toxic Substances Control Act (TSCA)
53. Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH)	[France] Law no. 2020-105 of 10 February 2020 on the fight against waste and the circular economy
54. Pentachlorophenol (PCP) and its salts and esters	[EU] Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
55. Diisooctyl phthalate (DIOP)	[France] Law no. 2020-105 of 10 February 2020 on the fight against waste and the circular economy
56. Medium-chain chlorinated paraffins (MCCP) (carbon number 14 to 17, with a chlorine content of 45wt% or more)	[EU] Draft Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021

* As of January 2026, this information has been confirmed. Since the content of regulations may change, please refer to the latest version of each regulation for detailed confirmation.

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Cadmium and cadmium compounds	
Targets	Effective date of the ban on the delivery
• Packaging components and materials • The stabilizers, pigments, or dyes used for plastics (including rubber) materials (e.g. labels, cabinets, phonograph records, cable tie, the keys of remote commanders, the outer plastic resins of electrical parts, and the insulators of electrical wiring) • Paints, inks • Surface treatment (e.g. electroplating, electroless plating, etc.) and coating • Photographic films • Fluorescent lamps (small-sized ones, straight-tube ones)	Banned since the establishment of this Standard
• ALL uses except those specified in Reduced Substances and Exemption	Banned since January 1, 2005
• Parts composed of metals containing zinc (e.g. brass, hot dip galvanizing, etc)	Banned since October 1, 2005
• Optical glass	Banned since May 11, 2011
• Mobile phone case (product that is used to cover the surface of a mobile phone to protect the main body and decorate its appearance) • Part in direct contact with the ear of earphones (including headphones, headsets, etc.) (Cadmium 0.0075wt% (75ppm) in homogeneous material)	Banned since July 3, 2020
• EU RoHS exemptions 8(b), 8(b)-I, 13(b)-III	Banned since July 28, 2024

Substances: Lead and lead compounds	
Targets	Effective date of the ban on the delivery
• Packaging components and materials • The paints, and inks containing lead, which are used for PWBs	Banned since the establishment of this Standard
• Surface coating (plating) for the external electrodes, lead wires, and other areas of parts (e.g. electrical parts, semiconductor devices, and heat sinks) • The stabilizers, pigments, and dyes contained in the plastic (including rubber) materials that are used for outer and exposed areas of the following articles: mice, devices, AC adaptors, connection cords, remote commanders, and power supply cords • The paints and inks used for outer and exposed areas of devices	Banned since April 1, 2004
• ALL uses except those specified in Reduced Substances, Controlled Substances and Exemption	Banned since January 1, 2005
• Electroless plating films such as electroless nickel plating and electroless gold plating whose lead content is more than 1000 ppm	Banned since February 1, 2006
• Glass for all uses except those specified in Exemption • Solder consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 wt% and less than 85 wt%	Banned since June 1, 2010
• Plastics (including rubbers), paints, and inks (1000ppm (0.1wt%) of the lead in homogeneous materials) • Solder (solder containing more than 1000ppm of lead)	Banned since May 11, 2011
• Dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Banned since January 1, 2012
• Crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of EU Directive 69/493/EEC	Banned since April 1, 2012
• Lead in glass of CRT / CCFL	Banned since April 1, 2018

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Lead and lead compounds	
Targets	Effective date of the ban on the delivery
- Parts and materials for consumer products designed or intended primarily for children 12 years of age or younger (100ppm (0.01wt%) of total lead in product) - Paint and similar surface coatings of toys and other articles intended for use by children (90ppm (0.009wt%) of total lead surface in coating material)	Banned since June 21, 2019
- Paint or surface coating of mobile phone cases (products that are used to protect the main body by covering the surface of the mobile phone and decorate its appearance) - Paint or surface coating of part in direct contact with the ear of earphones (including headphones, headsets, etc.)" - Mobile phone case (product that is used to cover the surface of a mobile phone to protect the main body and decorate its appearance) - Part in direct contact with the ear of earphones (including headphones, headsets, etc.)	Banned since July 3, 2020
EU RoHS exemption 13(b)-III	Banned since July 28, 2024

Substances: Mercury and mercury compounds	
Targets	Effective date of the ban on the delivery
- Packaging components and materials - Paints, and inks - Hour meters - Relays, switches, or sensors whose contacts contain mercury - Mercury or its compounds mixed in plastics	Banned since the establishment of this Standard
ALL uses except those specified in Reduced Substances and Exemption	Banned since January 1, 2005
- Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL): Short length (not over 500 mm) : 3.5 mg or more, and less than 5 mg per lamp - All applications other than the above (Intentionally added, 1000ppm (0.1wt%) of total mercury in the homogeneous materials	Banned since May 11, 2011
All applications (Intentionally added, 1000ppm (0.1wt%) of total mercury in the homogeneous materials	Banned since May 28, 2012
EU RoHS exemptions 3(a), 3(b), 3(c)	Banned since July 28, 2024

Substances:Hexavalent chromium compounds	
Targets	Effective date of the ban on the delivery
Packaging components and materials	Banned since the establishment of this Standard
- Constituents of parts or materials (e.g. inks, paints, additives, etc.) - Residues in the surfaces of screws, steel sheets, etc. that are processed with plating or conversion coating	Banned since January 1, 2005
- Surfaces of screws,steel sheets,etc that are processed with plating or conversion coating - All applications other than the above (Intentionally added, 1000ppm of total hexavalent chromium in the homogeneous materials	Banned since May 11, 2011
Natural leather parts and materials (3ppm (0.0003wt%) of total hexavalent chromium in dry weight of the natural leather materials)	Banned since July 27, 2015

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Polybrominated biphenyls(PBB)	
Targets	Effective date of the ban on the delivery
• All uses (e.g. flame retardants contained in plastics)	Banned since the establishment of this Standard
• All (Intentionally added, 1000ppm (0.1wt%) in homogeneous materials)	Banned since May 11, 2011
• All (Intentionally added)	Banned since June 1, 2020
• All excluding applications falling within the scope of EU RoHS 2011/65/EU (Intentionally added, 500ppm (0.05wt%) in homogeneous materials)	Banned since June 1, 2020

Substances: Polybrominated diphenylethers (PBDE) (including decabromodiphenyl ether [DecaBDE])	
Targets	Effective date of the ban on the delivery
• All uses (e.g. flame retardants contained in plastics)	Banned since the establishment of this Standard
• The parts manufactured using the molding dies, which were made in or before December 2002 (Applicable only to the bodies of the displays and TV sets shipped to countries and regions other than European ones) The parts whose molding dies have been made since January 2003 must not contain PBDE.	Banned since January 1, 2005
• All (Intentionally added, 1000ppm (0.1wt%) in homogeneous materials)	Banned since May 11, 2011
• All (Intentionally added)	Banned since June 1, 2020
• All excluding applications falling within the scope of EU RoHS 2011/65/EU (Intentionally added, 500ppm (0.05wt%) in homogeneous materials)	Banned since June 28, 2023
• All excluding applications falling within the scope of EU RoHS 2011/65/EU (Intentionally added, 10ppm (0.001wt%) in homogeneous materials)	Banned since Aug 25, 2025

Substances: Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified	
Targets	Effective date of the ban on the delivery
• Flame retardants used in plastics, resins (Intentionally added, More than 1000ppm (0.1wt%) of the parts)	Banned since June 4, 2014
• All uses (Intentionally added, More than 1000ppm (0.1wt%) of the parts)	Banned since May 30, 2017

Substances: Polychlorinated biphenyls(PCB) and specific substitutes Substances: Polychlorinated naphthalenes(PCN) Substances: Polychlorinated terphenyls(PCT)	
Targets	Effective date of the ban on the delivery
• All uses (e.g. capacitors, lubricants, insulating oils, transformers containing oil, paints, and flame retardants in plastics)	Banned since the establishment of this establishment of this Standard
• All (Intentionally added)	Banned since May 11, 2011
• All (Intentionally added, 50ppm(0.005wt%) or more of the materials)	Banned since June 24, 2013
• PCTs: All (50ppm(0.005wt%) or more of the materials)	Banned since May 30, 2017
• PCBs and specific substitutes: All (50ppm(0.005wt%) or more of the materials)	Banned since June 28, 2023
• PCTs: All (2ppm(0.0002wt%) or more of the materials) • PCBs and specific substitutes: All (0.2ppm(0.00002wt%) or more of the materials)	Banned since Aug 25, 2025

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Short-chain chlorinated paraffins (Alkanes, C10-13) (SCCP)	
Targets	Effective date of the ban on the delivery
• The cabinets of products (including accessories) and PWBs	Banned since the establishment of this Standard
• All uses other than the above	Banned since February 1, 2006
• All (1000ppm(0.1wt%) or more of the materials)	Banned since May 11, 2011
• All (Intentionally added, 1000ppm(0.1wt%) or more of the materials)	Banned since June 4, 2014

Substances: Tris(2-chloroethyl) phosphate (TCEP), Tris(1-chloro-2-propyl)phosphate(TCPP), Tris(1,3-dichloro-2-propyl)phosphate(TDCPP)	
Targets	Effective date of the ban on the delivery
• Flame retardants used in plastics, resins, fabrics, and textiles (More than 1000ppm (0.1wt%) of the parts)	Banned since July 27, 2015
• All (1000ppm (0.1wt%) in homogeneous materials)	Banned since May 30, 2017

Substances: Polyvinyl chloride (PVC) and PVC blends	
Targets	Effective date of the ban on the delivery
• Substrates for Felica contactless IC cards	Banned since before the establishment of this Standard
• Coating agents and fabrics for the carrying bags, carrying cases, and carrying pouches, which are designed for use with personal computers, digital cameras, camcorders, and portable audio products (excluding those for professional use)	Banned since the establishment of this Standard
• Cable ties used for accessories and connecting cords	Banned since July 1, 2002
• Packaging components and materials to protect, contain, or transport products or supplied accessories (e.g. bags, adhesive tapes, cartons, and blister packs)	Banned since January 1, 2005
• Heat shrink tubes	Banned since April 1, 2005
• Flexible flat cables (FFC)	Banned since April 1, 2007
• Sheets and laminates used for exterior of wooden speakers	
• Insulating plates, decorative panels, labels, sheets, and laminates	
• Suction cups for mouting in-vehicle products	Banned since April 1, 2010

Substances: Fluorinated greenhouse gases(PFC, HFC)	
Targets	Effective date of the ban on the delivery
• All uses for refrigerant, insulation and other products	Banned since April 1, 2008
• All (Intentionally added)	Banned since May 30, 2017

Substances: Ozone depleting substances(ODS)	
Targets	Effective date of the ban on the delivery
• All uses for refrigerant, insulation and other products	Banned since before the establishment of this Standard
• Components and materials processed with ODS during cleaning, foaming and other processes	
• All (Intentionally added)	Banned since May 11, 2011

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Perfluorooctane sulfonates (PFOS)	
Targets	Effective date of the ban on the delivery
- Materials whose PFOS concentration is 0.1 wt% or more - Textiles or other coated materials whose amount of PFOS is 1 µg/m² or more of the coated material	Banned since April 1, 2008
All uses except those specified in Exemption (photographic films for professional use and resists for semiconductors)	Banned since April 1, 2010
All (Intentionally added)	Banned since May 11, 2011
Textiles or other coated materials (Intentionally added, More than 1000ppm (0.1wt%) of the materials)	Banned since May 30, 2017

Perfluorooctane sulfonates and its derivatives (PFOS)	
Targets	Effective date of the ban on the delivery
- Textiles (cloth) or other coated materials (1µg/m² or more to homogeneous material) - All except the above material (Intentionally added, 1ppm (0.0001wt%) of the material (as the sum of PFOS))	Banned since June 28, 2023

Perfluorohexane-1-sulphonic acid (PFHxS), its salts and related substances	
Targets	Effective date of the ban on the delivery
All uses (Intentionally added)	Banned since February 28, 2022
- All uses (Intentionally added, 25ppb (0.0000025wt%) of the material (as the sum of PFHxS and its salts)) - All uses (1ppm (0.0001wt%) of the material (as the sum of PFHxS related substances))	Banned since June 28, 2023

Substances: Perfluorooctanoic acid(PFOA) and individual salts and esters of PFOA	
Targets	Effective date of the ban on the delivery
- Coatings applied to textiles, leathers and fabrics - All applications other than above and Level 2	Banned since April 1, 2014 Banned since April 1, 2014
- Photographic coatings applied to films, papers, or printing plates (More than 1µg/m² of the coated material) - Additives for adhesives, foil or tape in semiconductor (More than 1000ppm (0.1wt%) of the parts)	Banned since July 27, 2015
- Textiles, photographic coatings applied to films, paper or printing plates and other coated consumer products (More than 1µg/m² of the coated material) - All uses other than the above (More than 1000ppm (0.1wt%)of the materials)	Banned since May 30, 2017
- Textiles, photographic coatings applied to films, paper or printing plates and other coated consumer products (More than 1µg/m² of the coated material (as the sum of PFOA)) - All uses other than the above (More than 1000ppm (0.1wt%)of the materials (as the sum of PFOA))	Banned since June 21, 2019

Substances: Perfluorooctanoic acid(PFOA) and its salts and related substances	
Targets	Effective date of the ban on the delivery
- All uses (Intentionally added or 25 ppb of PFOA including its salts in homogeneous materia - All uses (1000ppb (1ppm) of one or a combination of PFOA-retaed substances, in homogeneous	Banned since February 28, 2022

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Tri-substituted organotin compounds including tributyltin (TBT) compounds and triphenyltin (TPT) compounds	
Targets	Effective date of the ban on the delivery
• All uses including paints, inks, preservatives, and mold inhibitors	Banned since the establishment of this Standard
• All uses (Intentionally added, More than 1000ppm (0.1wt%) of the tin contained in materials)	Banned since May 11, 2011

Substances: Dibutyltin (DBT) compounds	
Targets	Effective date of the ban on the delivery
• All applications including additives of plastics (except Reduced Substances)	Banned since July 1, 2011
• One-component and two-component room temperature vulcanisation sealants (RTV-1 and RVT-2 sealants)	Banned since July 1, 2014
• One-component and two-component room temperature vulcanisation adhesives (RTV-1 and RVT-2 adhesives)	
• Catalysts for paints or coating agents	
• Stabilizers in PVC used for coating of fabrics intended for outdoor applications	
• Additives of soft polyvinyl chloride (PVC) profiles whether by themselves of coextruded with hard PVC	
• All uses (More than 1000ppm (0.1wt%) of the tin contained in materials)	Banned since May 11, 2011
• All uses (More than 1000ppm (0.1wt%) of the tin contained in a product)	Banned since June 21, 2019

Substances: Dioctyltin (DOT) compounds	
Metal tin, tin alloys, tin plating and tin inorganic compounds do not fall under this category.	
Targets	Effective date of the ban on the delivery
• Additives of textiles	Banned since July 1, 2011
• Textile and leather articles intended to come into contact with the skin	Banned since May 30, 2017
• Childcare articles	
• Two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits) (More than 1000ppm (0.1wt%) of the tin contained in materials)	
• (More than 1000ppm (0.1wt%) of the tin contained in a product)	Banned since June 21, 2019

Substances: Beryllium oxide	
Targets	Effective date of the ban on the delivery
• All uses	Banned since April 1, 2008
• All uses (Intentionally added, More than 1000ppm(0.1wt%) of the contained in materials)	Banned since May 30, 2017

Substances: Cobalt dichloride	
Targets	Effective date of the ban on the delivery
• Moisture indicator used for a desiccant agent (e.g. silica gel)	Banned since April 1, 2009
• Humidity indicator card which is impregnated with cobalt dichloride	Banned since May 11, 2011
• Humidity indicator card which is impregnated with cobalt dichloride (1000ppm(0.1wt%) of the contained in materials)	Banned since May 30, 2017

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Diarsenic trioxide, Diarsenic pentaoxide	
Targets	Effective date of the ban on the delivery
Antifoam agents or fining agents for LCD panels (including cover glasses, touchscreens, and backlights) (1000ppm(0.1wt%) of the contained in materials)	Banned since May 30, 2017

Substances: Nickel and Nickel compounds	
Targets	Effective date of the ban on the delivery
- Parts and materials for mobile phone, where prolonged skin contact is expected - Parts and materials for wrist-watch and wristband product, where prolonged skin contact is expected (ex. cases, watch straps and tighteners)(0.28μg/㎠/week (release concentration))	Banned since June 21, 2019
(0.28μg/㎠/week (release concentration))	Banned since July 3, 2020

Substances: Bis(2-ethylhexyl)phthalate(DEHP),Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Diisobutyl phthalate(DIBP)	
Targets	Effective date of the ban on the delivery
- Additives of parts and materials for carrying bags, carrying cases, carrying pouches (More than 1000ppm(0.1wt%) of the parts) - Additives of parts and materials for EEE(electrical and electronic equipment) that are in prolonged contact with the human skin (More than 1000ppm(0.1wt%) of the homogeneous materials)	Banned since July 27, 2015
Additives of parts and materials for carrying bags, carrying cases, carrying pouches (More than 1000ppm (0.1wt%) of the homogeneous materials)	Banned since May 30, 2017
Parts and materials for EEE (note that parts and materials for batteries are Controlled Substance) materials for batteries are Controlled Substance) (More than 1000ppm (0.1wt%) of the homogeneous materials)	Banned since July 5, 2018
Parts and materials for children's toy or child care article (1000ppm (0.1wt%) or more as the sum of the phthalate (DEHP, DBP, BBP) concentrations in homogeneous material)	Banned since June 21, 2019
- All uses (1000ppm(0.1wt%) of the contained in materials) - All excluding applications falling within the scope of EU - Part in direct contact with the ear of earphones (including headphones, headsets, etc.) (1000ppm (0.1wt%) as the sum of the phthalate concentrations in homogeneous material)	Banned since July 3, 2020

Substances: Di-isononyl phthalate(DINP), Di-isodecyl phthalate(DIDP), Di-n-octyl phthalate(DNOP)	
Targets	Effective date of the ban on the delivery
Parts and materials for children's mouth toys or child care products (1000ppm (0.1wt%) as the sum of the phthalate (DINP, DIDP, DNOP) concentrations in materials)	Banned since May 30, 2017
Parts and materials for children's mouth toys or child care products (1000ppm (0.1wt%) as the sum of the phthalate concentrations in homogeneous material)	Banned since June 28, 2023

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Asbestos	
Targets	Effective date of the ban on the delivery
• All uses (e.g. insulators and fillers)	Banned since the establishment of this Standard

Substances: Azocolourants and azodyes which form certain aromatic amines	
Targets	Effective date of the ban on the delivery
• The substances which are used in parts or articles that may come into direct and prolonged contact with the human skin (e.g. belt, straps, ear phones, head phones, and shoulder pads for bags)	Banned since the establishment of this Standard
• Additives of textiles and leathers (More than 30ppm (0.003wt%) in textiles and leathers)	Banned since May 11, 2011
• Textiles (cloth, textiles)/leather product parts and materials (More than 30ppm (0.003wt%) in textiles and leathers)	Banned since May 30, 2017

Substances; Formaldehyde	
Targets	Effective date of the ban on the delivery
• The wooden products made from fiberboard, particleboard, or plywood, which are employed in products for import into Europe (e.g. speakers and racks)	Banned since the establishment of this Standard
• The wooden products made from fiberboard, particleboard, or plywood, which are employed in products for destinations other than Europe (e.g. speakers and racks)	Banned since January 1, 2005
• Textiles (More than 75ppm (0.0075wt%) in textiles)	Banned since May 30, 2017

Substances: Substances: Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	
Targets	Effective date of the ban on the delivery
• All uses (Intentionally added)	Banned since July 27, 2015

Substances: 2-(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert-butylphenol (UV-320)	
CAS No. [3846-71-7], Synonym: "Phenol, 2-(2h-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-", "2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole"	
Targets	Effective date of the ban on the delivery
• Ultraviolet protectants and ultraviolet absorbers applied to decorative laminate, developing papers, molded plastic parts	Banned since April 1, 2008
• Lenses and frames of glasses	Banned since April 1, 2011
• All uses (Intentionally added)	Banned since June 24, 2013
• All uses (Intentionally added, More than 1000ppm (0.1wt%) of the materials)	Banned since May 30, 2017
• All uses (Intentionally added or more than 1000ppm (0.1wt%) of the materials)	Banned since June 28, 2023

Substances: 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	
Targets	Effective date of the ban on the delivery
• All uses (Intentionally added or more than 1000ppm (0.1wt%) of the materials)	Banned since Jun 1, 2023
• All uses (Intentionally added or more than 1ppm (0.001wt%) of the materials)	Banned since Aug 25, 2025

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Dimethyl fumarate (DMF)	
Targets	Effective date of the ban on the delivery
• All uses (e.g. fungicides and desiccant agents)	Banned since April 1, 2010
• All uses (0.1ppm of the materials)	Banned since May 11, 2011

Substances: Polycyclic aromatic hydrocarbons (PAHs)	
Targets	Effective date of the ban on the delivery
• Rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use (More than 1ppm (or 0.0001 wt%) of the materials)	Banned since July 1, 2015
• Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact (More than 0.5ppm (0.00005 wt%) of the materials)	Banned since May 30, 2017
• Rubber or plastic parts that come into direct, prolonged or repetitive skin or oral cavity contact except those for toys or childcare articles (More than 1ppm (0.0001 wt%) of the materials)	

Substances: Tris(2,3-brominated propyl) phosphate(TRIS)	
Targets	Effective date of the ban on the delivery
•The textiles which may come in contact with skin of the human body directly (Intentionally added, Prohibition of the Adhesion in process of manufacture, Mixture,and generation)	Banned since May 11, 2011

Substances: Tri(1-aziridin)phoshinoxide (TEPA)	
Targets	Effective date of the ban on the delivery
•The textiles which may come in contact with skin of the human body directly (Intentionally added, Prohibition of the Adhesion in process of manufacture, Mixture,and generation)	Banned since May 11, 2011

Substances: Hexachlorobenzene	
Targets	Effective date of the ban on the delivery
•All uses (Intentionally added)	Banned since June 24, 2013
•All uses (Intentionally added or 10ppm (0.001 wt%) in an article or mixture)	Banned since June 28, 2023

Substances: Red phosphate	
Targets	Effective date of the ban on the delivery
•All except metal (Intentionally added)	Banned since May 30, 2017

2. History of updates on effective date of the ban on the delivery for every substance

Substances: Halogenated flame retardants	
Targets	Effective date of the ban on the delivery
- Plastic enclosure and stand of electronic displays, including televisions, monitors and digital signage displays with a screen area greater than 100 square centimetres, as well as labels, tapes etc, attached to the plastic enclosures and stands. - Plastic enclosure of game device (Intentionally added or 0.1wt% of total halogen elements in homogeneous material (including PBBs and PBDEs)	Banned since February 1, 2022

Substances : Per/polyfluoroalkyl substances (PFAS)	
Targets	Effective date of the ban on the delivery
Textile products (including natural and synthetic leather) (Intentionally added or 100ppm (0.01wt%) of organic fluorine in homogeneous materials	Banned since Aug 25, 2025

Substances : Medium-chain chlorinated paraffins (MCCP) (carbon number 14 to 17, with a chlorine content of 45wt% or more)	
Targets	Effective date of the ban on the delivery
All uses (Intentionally added)	Banned since January 1, 2026

Substances : Pentachlorophenol (PCP) and its salts and esters	
Targets	Effective date of the ban on the delivery
All uses (more than 5ppm (0.005wt%) of the materials)	Banned since Aug 25, 2025

Substances: Perfluorocarboxylic acids (PFCAs) and its salts and related substances	
Targets	Effective date of the ban on the delivery
Carbon Number(C9~C21、C9~C14) - All uses (Intentionally added or 25ppb of the material (as the sum of PFCAs and its salts) - All uses (260ppb of the material (as the sum of PFCAs related substances))	Banned since June 28, 2023

1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diece ("Dechlorane Plus"™)	
Targets	Effective date of the ban on the delivery
All uses	Banned since Jun 28, 2023

Substances: Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH)	
Targets: MOAH with 1 to 7 aromatic rings, MOSH with carbon number 16 to 35	Effective date of the ban on the delivery
Packaging components and materials, Printed materials (1000ppm (0.1wt%) in ink) * MOAH with 3 to 7 aromatic rings (1ppm (0.0001wt%) in ink)	Banned since July 28, 2024

Substances: TSCA Priority chemicals (PBT Substances List, List of the First 10 Chemical Substances Undergoing TSCA's Risk Evaluation)	
Targets	Effective date of the ban on the delivery
All uses (Intentionally added)	Banned since February 1, 2022

3. Exemption List

Exemptions that HIRAKAWA HEWTECH Group uses are shown in the following table. "Effective date defined in laws" means the date when the latest exemption became or will become applicable and "Expiration date defined in laws" represents the earliest one if there are different ones for several categories. Please check the number in "Remarks" and refer to the relevant note below the table for details. The expiration date of exemptions relevant to EU Directive The expiration dates of exemptions under EU Directive 2011/65/EU (EU RoHS) are subject to change, so please check the latest information.

Reference information: [Implementation of the RoHS Directive \(European Commission Website\)](#)

No.	Regulation name	DISPLAY STRING	Use name		Effective date defined in laws	Expiration date defined in laws	Remarks
1	EU RoHS	6(a)- I	Pb	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0.35% lead by weight	2026-07-01	Pending	6) 7)
2	EU RoHS	6(a)- II	Pb	Lead as an alloying element in batch hot dip galvanised steel components containing up to 0.2% lead by weight	2026-07-01	Pending	6) 7)
3	EU RoHS	6(c)	Pb	Copper alloy containing up to 4% lead by weight	2026-07-01	Pending	6) 7)
4	EU RoHS	7(a)	Pb	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)	2026-07-01	Pending	8)
5	EU RoHS	7(a)- I	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) for internal interconnections for attaching die, or other components along with a die in semiconductor assembly with steady state or transient/impulse currents of 0.1A or greater or blocking voltages beyond 10V, or die edge sizes larger than 0.3mm x 0.3mm	2026-07-01	2027-12-31	9)
6	EU RoHS	7(a)- II	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) for integral (meaning internal and external) connections of die attach in electrical and electronic components, if all the following conditions are met: - the thermal conductivity of the cured/ sintered die attach material is >35 W/(m x K), - the electrical conductivity of the cured/ sintered die attach material is >4.7 MS/m, - solidus melting temperature is higher than 260°C	2026-07-01	2027-12-31	9)

3. Exemption List

No.	Regulation name	DISPLAY STRING	Use name		Effective date defined in laws	Expiration date defined in laws	Remarks
7	EU RoHS	7(a)-III	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) in first level solder joints (internal or integral connections - meaning internal and external) for manufacturing components so that subsequent mounting of electronic components onto subassemblies (i.e. modules, sub circuit boards, substrates, or point to point soldering) with a secondary solder does not reflow the first level solder. This sub entry excludes die attach applications and hermetic sealings	2026-07-01	2027-12-31	9)
8	EU RoHS	7(a)-IV	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) in second level solder joints for the attachment of components to printed circuit board or lead frames: (1) in solder balls for the attachment of ceramic ball grid array (BGA); (2) in high temperature plastic overmouldings (>220°C)	2026-07-01	2027-12-31	9)
9	EU RoHS	7(a)-V	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) as a hermetic sealing material between: (1) a ceramic package or plug and a metal case; (2) component terminations and an internal sub part	2026-07-01	2027-12-31	9)
10	EU RoHS	7(a)-VI	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) for establishing electrical connections between lamp components in incandescent reflector lamps for infrared heating, high intensity discharge lamps, or oven lamps	2026-07-01	2027-12-31	9)
11	EU RoHS	7(a)-VII	Pb	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) for audio transducers where the peak operating temperature exceeds 200°C	2026-07-01	2027-12-31	9)
12	EU RoHS	7(c)- I	Pb	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound	2026-07-01	Pending	6)
13	EU RoHS	7(c)- II	Pb	Lead in dielectric ceramic in capacitors for a rated voltage of 125V AC or 250V DC or higher	2026-07-01	2027-12-31	10)

3. Exemption List

No.	Regulation name	DISPLAY STRING	Use name		Effective date defined in laws	Expiration date defined in laws	Remarks
14	EU RoHS	7(c)- V	Pb	Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils any of the following functions: (1) for protection and electrical insulation in glass beads of high voltage diodes and glass layers for wafers; (2) for hermetic sealing between ceramic, metal and/or glass parts; (3) for bonding purposes in a process pramenter window for <500°C combines with a viscosity of 1013.3 dPas ('glass transition temperature'); (4) for use as a resistive material such as ink, with a resistivity range from 1 ohm/square to 100 megohm/square, excluding trimmer potentiometers; (5) for use in chemically modifies glass surfaces for microchannel plates (MCPs), channel electron multipliers (CEMs) and resistive glass products (RGPs).	2026-07-01	2027-12-31	11)
15	EU RoHS	7(c)-VI	Pb	Electrical and electronic components containing lead in a ceramic that fulfils any of the following functions: (1) for use in piezoelectric lead zirconium titanate (PZT) ceramics; (2) for providing ceramics with a positive temperature coefficient (PTC).	2026-07-01	2027-12-31	12)
16	EU RoHS	13(a)	Pb	Lead in white glasses used for optical applications	2018-07-06	Pending	3)
17	EU RoHS	13(b)	Cd, Pb	Cadmium and lead in filter glasses and glasses used for reflectance standards	2018-07-06	Pending	1)
18	EU RoHS	13(b)- I	Pb	Lead in ion coloured optical filter glass types	2018-07-06	Pending	4)
19	EU RoHS	13(b)- II	Cd	Cadmium and lead in glazes used for reflectance standards	2018-07-06	Pending	4)
20	EU RoHS	15	Pb	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	2020-03-01	Pending	1)

3. Exemption List

No.	Regulation name	DISPLAY STRING	Use name		Effective date defined in laws	Expiration date defined in laws	Remarks
21	EU RoHS	15(a)	Pb	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies; - a semiconductor technology node of 90nm or larger, - a single die of 300mm ² or larger in any semiconductor technology node; - stacked die packages with die of 300mm ² or larger, or silicon interposers of 300mm ² or larger.	2020-03-01	Pending	2)
22	EU RoHS	34	Pb	Lead in cermet-based trimmer potentiometer elements	2019-07-01	Pending	3)

- 1) Cat. 8, 9 and 11: pending
- 2) Cat. 1-7, 10 and 11: pending
- 3) All cat.: pending
- 4) Cat. 1-7 and 10: pending
- 5) Cat. 8, 9 and 11: The expiration date of December 11, 2026
- 6) All cat.: The expiration date of June 30, 2027
- 7) The exemption shall not cover electrical and electronic equipment (EEE) for supply to the general public where the EEE or accessible part thereof may, during normal or foreseeable conditions of use, be places in the mouth by children. However, the exemption shall apply where the following can be both demonstrated:
 - the rate of lead release from such an EEE or any accessible part, whether coated or uncoated, dose not exceed 0.05 µg/cm² per hour (equivalent to 0.05 µg/g/h),
 - for coated articles, that the coating is sullicient to ensure that this release rate is not exceeded for a period of at least two years of normal of reasonably foreseeable conditions of use of the EEE.

For the purpose of this footnote, it is considered that an EEE or accessible part of an EEE may be placed in the mouth by children if it is smaller that 5 cm in one dimension or has a detachable or protruding part of that size.
- 8) All Cat. (except appications covered by point 24 of Annex III EU RoHS Derective 2011/65/EU) : June 30, 2027
- 9) All Cat. (except appications covered by point 24 of Annex III EU RoHS Derective 2011/65/EU) : December 31, 2027
- 10) All Cat. (except applications covered by point 7(c)- I or 7(c)-IV) : December 31, 2027
- 11) All Cat. The expiration date of December 31, 2027
- 12) All Cat. (except applications covered by point 7(c)- II or 7(c)-III and 7(c)-IV of Annex III as well as point 14 of Annex IV): December 31, 2027

Revise resume

Establishment Established on May 29, 2002

Revision	Ver.2-0	February 12, 2003
	Added	Allowance concentration of cadmium and lead in the footnote of Table.1 " Cadmium and cadmium compound".
	Added	A footnote to Table 1 chlorinated paraffin class.
	Deleted	Table.2 and raising the number of table.
	Added	4-aminoazobenzene to Table.2
	Modified	Table 4 "The main purpose of reducing substance and targets of total eradication".
	Added	The allowance concentration and analysis methods of four heavy-metal which are contained in Lead and packaging materials.
	Added	/Pb into "Environment-related substances (Cd) content measured Table".
	Ver.2-1	September 17, 2003
	Changed	"The time limit of the banned target" to "effective ban date" and time limitation of lead contained in an external exposed portion of plastic to "the end of February in 2004". also, as the terms and condition of lead and PVC, added " within the range of the observance of the law, with the customer demand is not limited".
	Ver.2-2	September 1, 2004
	Overall review.	
	Reviewed	*Banned substances and banned substances time limit policy.
	Reviewed	*Targets substances and investigation method of used in production process to product.
	Reviewed	*Written guarantee concerning material contained in product.
	Added	*The measurement control with the fluorescent, X-ray analysis devices.
	Ver.2-3	September 1, 2005
	Reviewed as below	
	Added	*Limit, allowance value, purpose and target to "Impurity".
	Added	*Concerning the test methods of Pretreatment and test methods.
	Changed	Management method (from company to QMS-office).
	Ver.2-4	March 1, 2006
	*Changed	title.
	Ver.2-4	March 6, 2007
	*As an appendix of	"Management Standards for the Environment-related Substances".
	Ver.3.0	April 24, 2008
	Overall	*Environment-related substances.
	Ver.4.0	June 1 , 2009
	P2: Purpose	
	Changed	"Hirakawa Hewtech Corp." to "Hirakawa Hewtech Group"
	P2: Scope of mananement Standard	
	(3) Survey on procurement of environment-related	
	Added	" JAMP "
	P2: 5. Survey on procurement of environment-related Substances and limite.	
	Added	"(1) Resin for molding such as plastic e.t.c., and metal such as cupper wire e.t.c."
	Added	"(10) Batteries"
	P3: Table 8.1 (The Controlled Substances)	
	Added	" Cobalt Dicloride"

Ver.4.0 June 1, 2009

P4 and P6: Standards for measurement

1. Sample operation(1)

Added " e.g. IEC 62321: 2008 "

2. Sample operation(3)

Added " e.g. IEC 62321: 2008 "

P6: Mercury and Mercury compounds

Exemption

Added " LCD backlight panels "

We reviewed notation and made clear that all uses except the excluded item were banned substances.

P12: Perfluorooctane sulfonates (PFOS)

Added Controlled Substances: All uses except Banned substances, the excluded item, from April 1, 2010

Added " cobalt dichloride "

P15:

Added [Document: Relevant laws and regulations]

Ver. 5.0 January 5, 2010

P3:

Added "Dimethyl fumarate" into 「Table 8.1 (the Controlled Substances)」 "

P12:

Added " No.23: Dimethyl fumarate "

Ver. 6.0 May 14, 2010

P3:

Added "Dibutyltin compounds" into 「Table 8.1 (The Controlled Substances)」

P8 and P16:

Added "No.12: Dibutyltin compounds "

P3:

Added "Diocetyl tin compounds" into 「Table 8.1 (The Controlled Substances)」

P8 and P16:

Added "No.13: Diocetyl tin compounds "

Changed from "Tributyltin compounds and Triphenyltin compounds" to "Trisubstituted organotin compounds (including tributyltin compounds, triphenyltin compounds)"

P3:

Changed The name in the 「Table 8.1 (The Controlled Substances)」

P8:

Changed The name of "No.11"

Added "Metal tin, an alloy, tin plating, the inorganic compounds of tin do not correspond"

P16:

Changed The name of "No.11"

It is changed the follows to "the reduction substances" by "application exclusion"

P5: Optical glass of cadmium

P6: The glass which is used in a use listed in the excluded item of lead.

P6: Solder consisting of more than two elements for the connection between the pins and the package of micro processors with a lead content of more 80wt% and less than 85wt%.

P6: Dielectric ceramic in capacitors for a rated voltage of less than 125VAC or 350VDC

P7: Mercury in cold cathode fluorescent lamp (CCFL and EEFL): Short length (not over 500mm); 3.5mg or more and less than 5mg per lamp.

P6:

Added crystal glass as defined in Annex 1 (categories 1, 2, 3 and 4) of EU Directive 69/493/EEC]

P7:

Changed Contents of "Exemption" of Mercury.

Ver. 6.0 Mav 14, 2010

P10:
Added Azodyes that form any of the amine compounds listed in Table 8.2b through the decomposition methods cited in REACH Regulation(EC) No.1907/2006/Annex XVIII and amine compounds in Table 8.2b.
P11: polyvinyl chloride(PVC) and pvcblends
Changed " Suction cups for mounting in-vehicle products" to Banned substances by Controlled substances.
P12: "beryllium oxide"
Abolished " Special use without the substitution"
Changed " All uses " into "Banned Substances"
P13:
Abolished " Controlled Substances"
Changed All uses except those specified in Exemption.
(photographicfilms for professional use and resists for semiconductors)
P16:
Review Document: Relevant laws and regulations.

Ver. 7.0 May 11, 2011

Review With a revision of ss-00259 reviewed from P3 to P19.
P3:
Added " tris(2,3-brominated propyl)phosphate(TRIS)" into 「Table 8.1 (THE Controlled Substances)」
P4:
Added " tri(1-aziridin)phoshinoxide(TEPA)" into 「Table 8.1 (THE Controlled Substances)」
P4:
Added "Bisphenol A (BPA) " into 「Table 8.1 (THE Controlled Substances)」
P14:
Added " SF6 " into 「Table 8.2c List of ozone layer destruction materials」

Ver. 7.1 August 1,2011

P10: " Dibutyltin (DBT) compounds "
Changed " Reduced Substances" to " Banned Substances"
Changed " more than 1,000ppm for the tin element of materials" to " contained the tin element more than 1,000ppm for materials"
Changed " One-component and two-component room temperature vulcanisation sealants (RTV-1 and RTV-2 sealants)" to " one-component room temperature vulcanisation sealant (RTV-2) "

Ver. 8.0 May 28, 2012

Review With a revision of ss-00259 reviews
P4:
Based on ss-00259 with "「Table 8.1 (The Controlled Substances)」"
Added Bis(2-ethylhexyl)phthalate,Dibutyl phthalate,Diisobutyl phthalate,Benzyl butyl phthalate Di-isononyl phthalate,Di-isodecyl phthalate,Di-n-octyl phthalate,Di-hexyl phthalate 1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters,C7-rich, 1,2-Benzenedicarboxylic acid,di-C7-11-branched and linear alkyl wsters, Bis(2-methoxyethyl)phthalate
Added "4-(1,1,3,3tetramethylbutyl) phenol, Bis(2-methoxyethyl)ether, N,N-dimethyl acetamide (DMAC)"
P6:
" No2: Lead and lead compounds "
Deleted " Reduced Substances "
Deleted " Crystal glass as defined in Annex 1 of EU Directive 69/493/Eec "
Added Note: A solder whose lead content is equal to or less than the threshold level of solder shown in "Criteria/threshold levels"shall be used if it is used for anisotropic conductive film (ACF) and anisotropic conductive paste (ACP) as a conductive material.
P8: " Mercury and mercury compounds "
Banned Substances
Deleted "mercury in cold cathode fluorescent lamps (CCFL) and external electrode fluorescent lamps (EEFL). Short length (not over 500mm.)"
P10 and No10 and No 14

Ver, 8.0 May 28, 2012

- P11: " Other brominated organic compounds " and "Other chlorinated organic compounds "
Controlled Substances
Divided into " Flame retardants used for prited wiring bord laminate" and " Flame retardants of plasticizer contained in plastic parts other than the above.
- P11: No.15: "Trisubstituted organotin compounds"(including tributyltin(TBT) compounds and triphenyltin(TPT)compounds)
- Added When "intentionally added" and a numerical value are shown in "criteria/thres levels", both of them shall be satisfied.
- No.17: " Dioctyltin(DOT) compounds"
- Changed " Reduced Substances" to " banned Substances "
- P14: No.24: "beryllium copper "
Criteria/threshold levels
Changed to " Intentional Added
No.27:
Bis(2-ethylhexyl)phthalate,Dibutyl phthalate,Diisobutyl phthalate,Benzyl butyl phthalate
Controlled Substances
Criteria/threshold levels
Changed to "More than 1000ppm (or 0.1wt%) of the parts.
- P15:
Added No.28:
Di-isononyl phthalate,Di-isodecyl phthalate,Di-n-octyl phthalate,Di-hexyl phthalate
1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters,C7-rich,
1,2-Benzenedicarboxylic acid,di-C7-11-branched and linear alkyl wsters,
Bis(2-methoxyethyl)phthalate
- Added CAS No.71888-89-6, 68515-42-4, 117-82-8
- Added "DIHP, DHNUP,DMEP " into " Table 8.2cList of specific phthalates"
- P17: No.32:"Boric acid, specific sodium, borales"
Criteria/Threshold levels
Added More than 1000ppm (or 0.1wt%) of the parts
- Added No.35: 4-(1,1,3,3-tetra methylbutyl)phenol.
- Added No.36: Bis(2-methoxyetyl)ether
- Added No.37: N,N-dimethylacetamide(DMAC)

Ver, 9.0 June 24,2013

- Review With a revision of SS-00259 reviewed from P4 to P23
- P4: Based on SS-00259 with「Table 8.1(The Controlled Substances)」
- Added Diisopentyl phyhalate, "1.2-Benzenedicarboxylic acid dipentylester,branch and linear",
N-pentyl-isopentyl phthalate, Etylene glycol dimetyl (GDME)
Perchlolates
Hexachlorobenzene
- P5: Substances:Cadmium and cadmium compound
Banned Substances
- Changed The thereshold lebel of Plastics, paints, Inks and All applications other than the abov
to 100ppm.
- Added The object of Reduced Substance
- Reviewed "Exemption"
- P6: Substances: lead and lead compounds
"Banned Substances"
- Delated Solders, Plating, Steels, Alminium alloy, Copper alloy, Glass of fluorescent tube
"Exemption"
- Added Solders, Plating, Steels, Alminium alloy, Copper alloy, Glass of fluorescent tube
- P8:
Changed Thereshold lebel of Mercury and mercury compounds, Hexavalent chromium compounds,
Polychlorinated biphenyls to more than 1000ppm.

Ver, 9.0 June 24,2013

- P10,P11:
Changed Thereshold lebel of Polybrominated biphenyl, Polybrominated diphenyl eters(including decabromodiphenyl ster) to more than 1000ppm.
- Substances: hexabromocyclododecane
Banned Substances
- Changed Effective data of the ban on delivery from January 1, 2014
- P14: Substances: Specific benzotriazole
Banned Substances
- Changed "All uses"
- P15: Substances: Bis(2-ethyl hexyl)phthalate, Dibutylphthalate, benzyl butylphthalate, Diisobutylphthalate
Reduced Substances
- Changed For the item of the reduction material, delivery prohibition time added from December 1, 2013 to the part used for a product except the electronic equipment, the part that the time when delivery was prohibited in the additive to materials was used for electronic equipment from June 1, 2013, the additive to materials.
- Delated "Controlled Substances"
Added "Exemption"
- P16:
Added "Diisopentylphthalate, 1,2-Benzenedicarboxylic acid, dipentylester, branch and linear N-pentyl isopentyl phthalate " into Table 8.2c Lisit of Specific phthalate.
- P19: Controlled Substances
Added Etylene glycol dimethyl ester, Perchlorales.
Banned Substances
- Added Hgexachlorobenzene
- P22: Documents
Reviewed The following laws and regulations into "Major controlled ssubstances and examples of applicable laws and regulations
- Added Cadmium and cadmium compounds, Lead and lead compoundds,Hexavalent chromium compounds, Polybrominated biphnyls(PBB), Polybrominated diphenylsters: 「South Korea.ACT on Resouce Recycling of Electrical and electronic Equipmant and Vehcle」
- Added Mercury and mercury compounds
「United States. Mercury Risk Reduction ACT」
- Added Polychlorinated bisphenyls(PCB),Polychlorinated naphtalenes(PCN),Polychlorinated terphenyls(PCT):「United States.Polychlorinated bisphenyls(PCBs) Manufacturing, Processing, Distribution inCommerces and Use Prohibitions(40CFR 761)」
- P23:
Added Bis(2-ethylhexyl)phthalate, Dibutyl phthalate, Benzyl butyl phthalate,Diisobutyl phthalate
「Denmark:Statutory Order No.1113 」
- Review With a revision of SS-00259 reviewed from P4 to P24
- P4,P10
Added Tris(2-chloro-1-methylethyl)phosphate(TCPP),Tris(1,3-dichloro-2-propyl)phosphate(TDCPP)
- P4,P11
Added Sulfur hexafluoride(SF6)
- P4,P12
Added Perfluorooctanoic acid(PFOA) and individual salts and esters of PFOA
- P4,P15
Added Dipentyl phthalate
- P4,P17
Added Polycyclic aromatic hydrocarbons(PAHs)

Ver, 10.0 June 4,2014

P5,P18 Trixylyl phosphats(TXP)
Added

Ver, 11.0 July 27,2015

Review With a revision of SS-00259 reviewed from P2 to P27

P5,P13
Added Hydrochlorofluorocarbons(HCFC)

P5,P14
Added 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate(DOTE)

P5,P14
Added 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)

P5,P18
Added Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene (BNST)

P5,P18
Added 2-benzotriazol-2-yl-4,6-di-tert-butylphenol(UV-320)

P5,P18
Added 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)

Ver, 12.0 May 30,2017

Review With a revision of SS-00259(15th edition) reviewed from P5 to P30

P6,P19
Added Red phosphate

P6,P20
Added Substances in candidate list for authorization of EU REACH regulation(SVHC)
Delated No.38 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)
 No.41 Boric acid,specific sodium borates
 No.42 4-(1,1,3,3-tetramethylbutyl)phenol
 No.43 Bis(2-methoxyethyl)ether
 No.44 N,N-dimethylacetamide(DMAC)
 No.45 Ethylene glycol dimethyl ether (EGDME)
 No.46 Trixylyl phosphate(TXP)
 No.49 Bisphenol A (BPA)

Ver, 13.0 July 5,2018

Review With a revision of SS-00259(16th edition) reviewed from P5 to P30

P23
Added Substances in candidate list for authorization of EU REACH regulation(SVHC)
 Listed up to the 18th in SVHC of EU REACH regulation

Ver, 14.0 June 21,2019

Review With a revision of SS-00259(17th edition) reviewed from P5 to P34

P5,P12
Added No.20-1 Perfluorooctanoic acid (PFOA) and its salts and related substances

P5,P14
Added No.28 Nickel and Nickel compounds

P6,P17
Added No.43 Radioactive substances

P22
Added Substances in candidate list for authorization of EU REACH regulation(SVHC)
 Listed up to the 20th in SVHC of EU REACH regulation

P30 to P34
Added Histoty of updates of delivery prohibition date for each subsutance

Ver, 15.0 July 3 ,2020

Review With a revision of SS-00259(18th edition) reviewed from P5 to P34

P5,P12

Added No.20 Perfluorohexane sulfonates (PFHxS) and its salts

P6,P17

Added 4,4'-Isopropylidenediphenol (bisphenol A) (BPA)

P22

Added Substances in candidate list for authorization of EU REACH regulation(SVHC)
 Listed up to the 22th in SVHC of EU REACH regulation
 Substance No.198 to No.205 added

P30 to P35

Added Histoty of updates of delivery prohibition date for each subsutance

Ver, 16.0 Feb 28 ,2022

Review With a revision of SS-00259(19th edition) reviewed from P4 to P36

P4,P10

Added No.21 Perfluorooctanoic acid(PFOA) and its salts and related substances

P5,P15

Added No.46 Halogenated flame retadants

Added No.47 Long-chain (c9-c20) perfluorocarboxylic acids (PFCAs) and its salts and related substances

Added No.48 Perfluorohexanoic acid (PFHxA) and its salts and related substances

Added No.49 Decabromodiphenylethane (DBDPE)

Added No.50 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo
 [12.2.1.16,9.02,13.05,10] octadeca-7,15-diece ("Dechlorane Plus"TM)

P5,P16

Added No.51 TSCA Priority chemicals (PBT Substances List,
 List of the First 10 Chemical Substances Undergoing TSCA's Risl Evaluation)

P17 to P22

Review Substances in candidate list for authorization of EU REACH regulation(SVHC)
 Listed up to the 25th in SVHC of EU REACH regulation
 Substance No.206 to No.219 added

P30 to P36

Review Histoty of updates of delivery prohibition date for each subsutance

P37 to P38

Added Exemption List

Ver, 17.0 June 28 ,2023

Review With a revision of SS-00259(21th edition) reviewed from P4 to P38
 ※It has not been revised for the 20th edition.

P4,P10

Changed No.19 Perfluorooctane sulfonates and its derivatives (PFOS)

Added Criteria/threshold level

- ・「1ppm (0.0001wt%) of the material (as the sum of PFOS)」

P5,P14

Added No.37 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)

P5,P15

Changed No.47 Long-chain (C9-C21) perfluorocarboxylic acids (PFCAs) and its salts and related substances Controlled level

- ・「Banned Substances」

Added Criteria/threshold level

- ・「25ppb (0.0000025wt%) of the material (as the sum of PFCAs and its salts)」
- ・「260ppb (0.000026wt%) of the material (as the sum of PFCAs related substances)」

P5,P16

Added No.52 Per/polyfluoroalkyl substances (PFAS)

P8

Added No.6 Polybrominated diphenylethers (PBDE)

Added Targets

- ・「 All excluding applications falling within the scope of EU RoHS 2011/65/EU」
- Criteria/threshold level
- ・「 Intentionally added, 500ppm (0.05wt%) in homogeneous materials」

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P8	No.9 Polychlorinated biphenyls(PCB) and specific substitutes
Added	Criteria/threshold level ・「 0.5ppm (0.00005wt%) of the homogeneous materials」
P9	No.15 Polyvinyl chloride (PVC) and PVC blends
Deleted	・Reference
P10	No.18 Ozone depleting substances(ODS)
Changed	・Reference
P10	No.20 Perfluorohexane sulfonates (PFHxS) and its salts and related substances
Added	Criteria/threshold level ・「25ppb (0.0000025wt%) of the material (as the sum of PFHxS and its salts)」 ・「1ppm (0.0001wt%) of the material (as the sum of PFHxS related substances)」
P10	No.21 Perfluorooctanoic acid (PFOA) and its salts and related substances
Deleted	・Structure description
P12	No.32 Di-n-hexyl phthalate(DnHP)
Added	・「 Intentionally added」
P13	No.35 Formaldehyde
Added	・「 CAS No.50-00-0」
P14	No.42 Hexachlorobenzene
Added	・「1000ppm (0.1wt%) or more of the homogeneous material」
P16	No.50 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diece ("Dechlorane Plus" TM)
Changed	Controlled level ・「Banned Substances」
P17 to P22	
Review	Substances in candidate list for authorization of EU REACH regulation(SVHC) Listed up to the 28th in SVHC of EU REACH regulation Substance No.220 to No.233 added
P27 to P30	
Review	Major controlled substances, and examples of applicable laws and regulations
P31 to P38	
Review	Histoty of updates of delivery prohibition date for each subsutance
Review	With a revision of SS-00259(22th edition) reviewed from P4 to P42
P4, P10	No.19「Perfluorooctane sulfonates and related substances (PFOS) 」
Changed	Change substance name from「Perfluorooctane sulfonates and its derivatives (PFOS) 」 to 「Perfluorooctane sulfonates and related substances (PFOS) 」
Changed	Changed prohibited substances from 「Textiles (cloth) or other coated materials 」 「All except the above material」 to 「All uses 」
P5, P15	No.47「Perfluorocarboxylic acids (PFCAs) and its salts and related substances 」
Changed	Change substance name from 「Long-chain (C9-C21) perfluorocarboxylic acids (PFCAs) and its salts and related substances 」 to 「Perfluorocarboxylic acids (PFCAs) and its salts and related substances」
Added	Add 「Carbon Number(C9～C21, C9～C14)」 to the target
P5, P16	No.53「Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH) 」
Added	Added 「Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH) 」 to "Table 8.1 List of Environmentally Controlled Substances (2/2)"
Added	Management criteria added to No. 53 on page 16
P5, P16	No.54「Pentachlorophenol (PCP) and its salts and esters 」
Added	Added 「Pentachlorophenol (PCP) and its salts and esters 」 to "Table 8.1 List of Environmentally Controlled Substances (2/2)"
Added	Management criteria added to No. 54 on page 16
P5, P17	No.55「Diisooctyl phthalate (DIOP) 」
Added	Added 「Diisooctyl phthalate (DIOP) 」 to "Table 8.1 List of Environmentally Controlled Substances (2/2)"
Added	Management criteria added to No. 55 on page 17
P8	No.7「Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified 」
Changed	Criteria/threshold levels from 「100ppm (0.01wt%) of the homogeneous materials 」 to 「75ppm (0.075wt%) of the homogeneous materials」
P9	No.15「Polyvinyl chloride (PVC) and PVC blends 」
Deleted	Deleted 「Heat shrink tubes(excuding those for batteries) 」 from the list of prohibited substances

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P11	No.28「Diarsenic trioxide, Diarsenic pentaoxide」
Deleted	Deleted 「Antifoam agents or fining agents for」 from the list of prohibited substances
P12	No.30「Bis(2-ethylhexyl)phthalate(DEHP),Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Diisobutyl phthalate(DIBP)」
Deleted	Deleted 「Table 8.2c-1 List of specific phthalates (phthalic esters)(1)」
P15	No.48「Perfluorohexanoic acid (PFHxA) and its salts and related substances」
Added	Added 「Textiles, leather, furs」 to the list of prohibited substances
Added	Added 「25ppb (0.0000025wt%) of the material (as the sum of PFHxA and its salts)」 「1ppm (0.0001wt%) of the material (as the sum of PFHxA related substances)」 to Criteria/threshold levels
P16	No.50「1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diece ("Dechlorane Plus™")」
Added	Added 「1ppm (0.0001wt%) in homogeneous materials」 to Criteria/threshold levels
P18-P23	
Review	Table 8.2f Review of EU REACH Regulation Candidate Substances for Authorization (SVHC)
Added	Contains the list of SVHC candidate substances up to the 30th list (240 substances). Added controlled substances No. 234 to No. 240
P28-P32	
Review	Review of substances and major legal and regulatory examples in each country and region
P33-42	
Review	Review of the change history list of the date of ban on delivery for each substance.
P43-P44	
Review	Review of the RoHS exemption list
Deleted	Removed exemption「8(b)」8(b)-I「13(b)-III」「15」 from the RoHS exemption list.

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- ①Review associated with the revision of SS-00259 (23rd edition)
- ②Review of the names in Substances in Table 8.1 (The Controlled Substances)
 - * Review of "Controlled Substances" on page 4 to "Appendix 1: Substances and Major National/Regional Regulations" on page 32.
- ③Review based on customer requirements
 - * Page 4: No.56 Substances: Medium-chain chlorinated paraffins (MCCP)
(carbon number 14 to 17, with a chlorine content of 45wt% or more)
 - Registered in Table 8.1 (The Controlled Substances) (2/2) on page 4.
 - Additional registration under No.56 on page 17.
 - * Page 6: No. 1 Substances: Cadmium and cadmium compounds
 - Deleted the year from the measurement specifications in the measurement criteria.
 - * Page 6: No. 2 Substances: Lead and lead compounds
 - Deleted the year from the measurement specifications in the measurement criteria.
 - * Page 7: No. 4 Substances: Hexavalent chromium compounds
 - Deleted the year from the measurement specifications in the measurement criteria.
 - * Page 7: No. 6 Substances: Polybrominated diphenylethers (PBDEs)
 - In Criteria/threshold level, changed "500ppm (0.05wt%) in homogeneous materials" to "10ppm (0.001wt%) in homogeneous materials".
 - * Page 8: No. 9 Substances: Polychlorinated biphenyls(PCB) and specific substitutes
 - In Criteria/threshold level, changed "0.00005wt% (0.5ppm) in homogeneous materials" to "0.00002wt% (0.2ppm) in homogeneous materials".
 - * Page 8: No. 11 Substances: polychlorinated terphenyls(PCT)
 - In Criteria/threshold level, changed "0.0050wt% (50ppm) in homogeneous materials" to "0.0002wt% (2ppm) in homogeneous materials".
 - * Page 14: No. 37 Substances: 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
 - In Criteria/threshold level, changed "Intentionally added or 0.1wt% (1000ppm) in homogeneous materials" to "Intentionally added, 0.0001wt% (1ppm) in homogeneous materials".
 - * Page 15: Substances: Perfluorohexanoic acid (PFHxA) and its salts and related substances
 - Changed the effective date of the ban on the delivery from "June 1, 2025" to "June 1, 2026".
 - * Page 15: No. 52 Substances: Per/polyfluoroalkyl substances (PFAS)
 - Added "textile products (including natural and synthetic leather)" to banned substances.
 - In Criteria/threshold level, added "Intentionally added or 100ppm (0.01wt%) of organic fluorine in homogeneous materials".

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- ④ Review of Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)
This revision includes candidate substances up to the 32nd SVHC list (247 substances).
 - * Page 23: Added controlled substances No.241 to No.247.
- ⑤ Review of substances and major national/regional regulatory examples
 - * Pages 28 to 32: Review of "Appendix 1: Substances and Major National/Regional Regulatory Examples".
 - * Page 32: Added No. 56 Substances: Medium-chain chlorinated paraffins (MCCP).
- ⑥ Review of 2. History of updates on effective date of the ban on the delivery for every substance.
 - * Pages 33 to 42: Review of "2. History of updates on effective date of the ban on the delivery for every substance".
 - * Page 42: Added Substances: Mineral oil aromatic hydrocarbons (MOAH), Mineral oil saturated hydrocarbons (MOSH).
- ⑦ Review of the RoHS Exemption List.
 - * Page 44: Added 5) to 11) to the notes on RoHS Exemption List.

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- ① Review associated with the revision of SS-00259 (24rd edition)
 - * Page 2: In 3. "Scope of management standard," (3), changed "Regarding the survey on environment-related substances contained in parts and production, it shall be based on JAMP... to Regarding the survey on environment-related substances contained in parts and production, it shall be based on CMP Consortium..."
- ② Review of the names in Substances in Table 8.1 (The Controlled Substances)
 - * Review of "Environment-related Substances to be Controlled ('Controlled Substances')" on page 4 to "Appendix 1: Substances and Major National/Regional Regulatory Examples" on page 35.
- ③ Review based on customer requirements
 - * Page 7: No. 5 Substances: Polybrominated biphenyls (PBBs)
 - Added "Recommended analysis criteria: IEC62321-6, IEC62321-12".
 - * Page 9: No. 6 Substances: Polybrominated diphenylethers (PBDEs) (including decabromodiphenyl ether [DecaBDE])
 - Added "Recommended analysis criteria: IEC62321-6, IEC62321-12".
 - * Page 8: No. 11 Substances: polychlorinated terphenyls (PCT)
 - Added "Intentionally added or" to Criteria/threshold levels.
 - * Page 11: No. 30 Substances: Bis(2-ethylhexyl)phthalate (DEHP), Dibutyl phthalate (DBP), Benzyl butyl phthalate (BBP), Diisobutyl phthalate (DIBP)
 - Added "Recommended analysis criteria: IEC62321-8, IEC62321-12".
 - In Criteria/threshold levels for "All uses" in Targets, changed "1000ppm (0.1wt%) of homogeneous materials" to "1000ppm (0.1wt%) as the sum of the phthalate concentrations in homogeneous material".
 - * Page 12: No. 34 Substances: Azocolourants and azodyes which form certain aromatic amines
 - In Testing methods (for reference), 2) Leather materials, changed "EN ISO 17234-1:2015;" to "EN ISO 17234-1:2024;"
 - * Page 13: No. 35 Substances: Formaldehyde
 - Added "All uses other than above" to Targets. Added "Intentionally added" to Criteria/threshold levels.
 - In Testing methods, 1. With a chamber method, added "EU REACH Regulation (EC) No.1907/2006: Concentration in the air. Less than 0.062mg/m3 (Loading factor (1±0.02) m2/m3)".
 - Added a URL to Measurement methods, 1. A chamber method.
 - In Measurement methods, 3. A perforator method, changed "ISO12460:2015" to "ISO12460-5:2015".
 - * Page 15: No. 47 Substances: Perfluorocarboxylic acids (PFCAs) and its salts and related substances
 - Deleted "Carbon Number (C9 - C14)" from targets.
 - * Page 15: No. 48 Substances: Perfluorohexanoic acid (PFHxA) and its salts and related substances
 - Deleted the comment "Effective date of the ban on the delivery: June 1, 2026".

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- * Page 16: No. 49 Substances: Decabromodiphenylethane (DBDPE)
 - Divided the control targets from "Reduced Substances" into "Controlled Substances" and "Banned Substances".
 - For "Controlled Substances, "Electrical and electronic equipment (including its parts)" is defined, and "Intentionally added" is registered in Criteria/threshold levels.
 - For "Banned Substances," "All uses other than above" is defined, and Criteria/threshold levels are changed to "Intentionally added and 500ppm (0.05wt%) in homogeneous materials".
- * Page 16: No. 52 Substances: Per/polyfluoroalkyl substances (PFAS)
 - Changed Criteria/threshold levels from "100ppm" to "50ppm".
- * Page 17: No. 54 Substances: Pentachlorophenol (PCP) and its salts and esters
 - Added "Intentionally added or" to Criteria/threshold levels.
- * Page 17: No. 56 Substances: Medium-chain chlorinated paraffins (MCCP)
 - Changed the control targets from "Reduced Substances" to "Banned Substances".
 - Added "1000ppm (0.1wt%) in homogeneous materials" to Criteria/threshold levels.
 - Deleted the comment "Effective date of the ban on the delivery: January 1, 2026".
- ④ Review of Table 8.2f Substances in candidate for authorization of EU REACH regulation(SVHC)
This revision includes candidate substances up to the 35nd SVHC list (253 substances).
 - * Page 24: Added controlled substances No.248 to No.253.
- ⑤ Review of substances and major national/regional regulatory examples
 - * Pages 29 to 33: Review of "Appendix 1: Substances and Major National/Regional Regulatory Examples".
- ⑥ Review of 2. History of updates on effective date of the ban on the delivery for every substance.
 - * Pages 34 to 43: Review of "2. History of updates on effective date of the ban on the delivery for every substance".
 - * Page 43: Added Substances: Per/polyfluoroalkyl substances (PFAS)
 - * Page 43: Added Substances: Medium-chain chlorinated paraffins (MCCP)
 - * Page 43: Added Substances: Pentachlorophenol (PCP) and its salts and esters
- ⑦ Review of the RoHS Exemption List.
Updated the "designation symbols," "application names," and marginal notes for RoHS exemptions on pages 44 through 47.