RICOH IMAGING COMPANY, LTD.

Green Procurement Guideline

July. 31, 2025

(Version 6)

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As a global citizen, the Ricoh Group is obligation-conscious of environmental conservation. In addition, we strive to honor our environmental responsibilities and concentrate group-wide efforts in environmental conservation activities, implementation of which we believe to be as significant as our business operations.

Action Guideline

1. Achieve superior targets Complying with laws and regulations as a matter of course, we dutifully fulfill our environmental responsibilities, setting targets that go ahead of those that society currently requires, and by achieving these, create economic values.
2. Develop innovative environmental technologies We will take steps to develop and promote innovative environmental technologies that will give increased value to our customers and can be utilized by various people.
3. Encourage all employees to participate in environmental activities In all our business activities, we strive for awareness of environmental impact, thereby involving all Ricoh employees in implementing continuous improvements to prevent pollution, and use energy and natural resources more efficiently.
4. Be attentive to product lifecycle To provide our products and services, we spare no effort to reduce environmental effects in all stages of the product lifecycle, from procurement, manufacturing, sale, and logistics, to usage, recycling, and disposal.
5. Improve employees' environmental awareness We at Ricoh wish each employee to be attentive to a broader range of social issues and mindful of enhancing environmental awareness through proactive learning processes, designed to commit the employee to environmental conservation activities according to his or her responsibility.
6. Contribute to society By participating in and supporting environmental conservation activities, we will contribute to creating a sustainable society.
7. Optimize communication with stakeholders Ricoh Group will expand its environmental conservation activities with stakeholders. In addition, we will fully communicate and proactively cooperate with our stakeholders to reassure communities of our dependability and commitment to the environment.

【Green Procurement Policy】

RICOH IMAGING COMPANY, LTD. selectively purchases environmentally friendly materials for procurement of production materials such as raw materials, parts, and indirect production materials.

1. Purpose

This guideline provides basic ideas, specific standards, and management of the “Green Procurement of Production Materials in RICOH IMAGING COMPANY, LTD.” The guideline was established to procure materials that impact the environment less by carrying out surveys on suppliers and certifying them. Purchasing such materials will help to achieve our environment policy of “providing products developed with consideration of reducing environmental burden by promoting business activities that take into account the efficient use of natural resources to create a recycling-oriented society.”

2. Scope of Application

2.1 Scope of application to products

The criteria apply to products bearing brands (PENTAX, RICOH, and each product logo) to which RICOH IMAGING COMPANY, LTD. (referred to as RIM) holds the rights.

The criteria apply to products with Ricoh Group brand*

(1) Instruments and products designed, manufactured and sold by RIM..

(2) Instruments and products whose design and manufacture are commissioned by RIM to the third party and sold with RICOH IMAGING brand.

(3) Instruments and products designed and manufactured by the third party and sold with RICOH IMAGING brand.

2.2 Scope of application to parts and materials

(1) A part or material constituting the main body, peripheral equipment, or optional parts, etc. of products

(2) Packaging materials and packaging parts of instruments and products

(3) Instruction books

(4) Parts for service

(5) Consumables for manufacturing such as grease, adhesives, double-faced adhesive tape, packaging tape, etc.

(6) Supplies and packaging materials

3. Definition of Terms

3.1 Environmentally sensitive chemical substances

(1) Chemical substances whose uses, purposes for use or content volumes are required by the law and regulations of Japan and overseas, or voluntary criteria such as environmental label, etc. to be regulated, or expected to be regulated in the future.

(2) Chemical substances whose information on inclusion in products is required to be disclosed under laws and regulations or voluntary standards like eco-labeling at home and abroad

(3) Chemical substances whose information on inclusion in products is possibly requested by customers at the time of bidding and the like

(4) In addition to the above, chemical substances whose information on inclusion in products must be identified, because there is a likelihood that the restriction or information disclosure may be required with respect to the purpose of use or the content quantity of these substances in products in the near future.

3.2 Substances/Preparations

Chemical substance: a chemical element or compound that exists in nature or is obtained via a manufacturing process. A substance includes impurities introduced in manufacturing processes, and additives required for maintenance of stability. Solvents that can be separated without affecting the stability of the single chemical substance or without changing its composition are excluded from this definition.

Preparation: A mixture or solution intentionally comprising two or more individual chemical substances

3.3 Article

An object of specific shape, appearance, or design provided during manufacture which determines functions in final use at a level beyond that provided by its chemical composition. In the case of equipment products, component parts and consumable supplies that are intentionally attached to the products or the packaging materials which remain with the final products fall under this category. Of those, however, the portion that is intentionally released is regarded as substances/ preparations, and therefore, not articles.

3.4 Inclusion prohibited substance

A substance whose inclusion in equipment products or articles constituting equipment products is banned. Please refer to Table 4-2-1 for the control levels of Banned and Exempt.

(1) Inclusion of substances in equipment products or articles that constitute equipment products in the amount above threshold is banned. However, as regards heavy metals in

packaging materials (cadmium, hexavalent chromium, lead and mercury), intentional addition is also banned

(2) As regards substances without threshold, they are banned when information on inclusion can be obtained, for instance, when they are intentionally added, or information on inclusion can be obtained from upper stream in the supply chain, or inclusion can be identified by analysis as needed.

(3) Use is permitted for a purpose exempt from application of this standard, and for the amount below the threshold

3.5 Inclusion prohibited candidate substance

Substance that are likely to be added to "Inclusion prohibited substance" soon, although the details of the regulation and the enforcement start date have not been determined.

3.6 Inclusion controlled substance

Substances that are to be monitored and controlled for inclusion in products and the articles that make up the products.

3.7 Inclusion (existence)

Refers to the fact that substances whose inclusion is banned are included in articles.

(1) Intentional addition

Refers to the fact that said substances are used for the purpose of improving the performance of a part or material, or changing its characteristics. In addition, when said substances are used in manufacturing process, etc. and so it is clear that they are contained in the final products, it is also regarded as intentional addition.

(2) Unintentional inclusion

Refers to the case when said substances are contained in natural materials and cannot be removed technologically in the refining processes, also when they are mixed or bonded unintentionally in manufacturing processes. Refers to so-called impurities.

3.8 Homogeneous Material

Refer to a material which cannot be mechanically separated into two or more different materials. The following are some examples of homogeneous material.

・Metal alloy, polymer alloy, chemical compounds, etc.

・Paint, adhesive, ink, paste, plastic polymer, glass powder, ceramic powder, etc.

A part applied with paint, print or plating can be mechanically separated into material part and coating of paint, ink or plaiting. So, each of these is a homogeneous material. “Mechanical

separation" means that a material is separated into pieces by mechanical actions such as removing screws, cutting, crushing, grinding, polishing and so forth.

3.9 Inclusion threshold

Content of a substance included in a part and material, or the maximum latitude of content density. In the case of complex part that has multiple substances (materials) inside, the content density is defined as density in Homogeneous Material containing the subject substance, not as the value defining the whole part as a denominator.

3.10 Control level

Contained chemical substances are classified into the following two levels based on laws and regulations, etc.

(1) Banned: The use that is not allowed by laws and regulations.

(2) Exempt: The use that is not limited by laws and regulations, and that substitute does not exist.

3.11 Schedule to discontinue delivery

(1) Immediately: Delivery discontinuance becomes effective immediately

(2) From __/ __/__: Delivery will be discontinued on the specified

(3) Date under assessment: Currently, the delivery is not a subject to discontinue. The delivery discontinuance will be scheduled accordingly when it is determined that the introduction of substitute is possible based on changes of social conditions or technological/economical situations.

4. Criteria for managing environmentally sensitive chemical substances

4.1 Inclusion prohibited substance/ Inclusion prohibited candidate substance

Table 4-1-1 shows the list of inclusion prohibited substances and Table 4-1-2 shows the list of inclusion prohibited candidate substances.

Table 4-2-1 shows CAS No., scope and examples of use, content thresholds, applications exempted from content prohibition, and reference laws and regulations as the management criteria for inclusion prohibited substances.

4.2 Substances prohibited for use in manufacturing processes

The following substances are prohibited for use in the manufacturing process. We ask for thorough elimination (nonuse) activities.

5. Requirement for suppliers

RIM purchases materials from the suppliers who satisfy conditions 1) to 5) listed belows.
Please submit information using Form 1 "Environmental Survey Certificate."
We may ask you to conduct additional surveys or resubmit the Environmental Survey Certificate due to revisions to laws and regulations or reconfirmation of surveyed substances.

1) Non-use of prohibited chemical substances

You should provide us with the Certificate not containing chemical substances listed in Table 4-1-2 that must not be contained in products. Please refer to the Format 1 “Certificate of not containing chemical substances that must not be contained in products”. Please refer to Table 4-2-1 for the threshold of inclusion. If the substance is exempted from the regulations etc, please mention the exemption item No. on the certificate.

2) Non-use of substances which are prohibited to use while production.

Please report on non-use of the list of prohibited substances in manufacturing process shown in Table 4-3. Please refer to the Format 2 “Certificate of non-use of chemical substances of which use in production processes is prohibited”.

3) Disclosure of chemical substances included in the product.

RIM collects information of chemical substances included in articles, substances or preparations which compose the product (to be compliant with EU REACH etc).

Please submit 1. below. If necessary, please also submit 2. and 3.
Please report on China RoHS. However, if the finished product is not an electrical or electronic device, reporting is not required.

1. Regarding REACH Substances of Very High Concern (SVHC), please confirm the ECHA website and report the latest information.

2. “chemSHERPA” provided by JAMP(*1.).
   Regarding how to prepare the DATA, please refer to the support tool and FAQ in the website https://chemsherpa.net/english

3. Please submit ICP(Inductively Coupled Plasma) analysis data, Gas Chromatograph analysis data measured by research agency, or equivalent data. In this case please attach easy-understanding chart to show which parts are measured.

4) Dealing with substances whose inclusion is candidate for prohibition

We request that you take a voluntary up-front approach, such as monitoring the use of existing parts and considering future alternatives. Based on the decision of the law, the substance may be added to the list of substances whose inclusion is banned without sufficient grace period. We would also appreciate your cooperation when RIM requests us to provide information on the content of newly adopted parts.

5) Establishment of environmental management system

It is required that the suppliers need to satisfy either of below 1 to 3.

1. Having certificate of ISO14001 or conformable system. (Conformable system means the equivalent system to ISO14000 which is promoted by a foundation, local government or incorporated association.)
2. Having guideline to manage chemical substances included in the products, which is announced by JAMP, or established environmental management system which is equivalent to 1.
3. Consideration for environmental conservation activities.

*1 JAMP : Joint Article Management Promotion-consortium

*These guidelines is subject to review annually based on legal trend, our company direction, etc. When a revision is made as a result of reviews, it will be posted in the bulletin board of Ricoh Imaging website.

《URL Address》

*Ricoh Imaging website: https://www.ricoh-imaging.co.jp/english/about/outline.html

Materials Procurement： https://www.ricoh-imaging.co.jp/english/about/procurement/

【Contact information】

Contact the section that deals with your company or the section below.

Product containing chemicals manegement section
RICOH IMAGING COMPANY, LTD.
zjc_rim_kankyoucyousa@jp.ricoh.com

◆Table 4-1-1 List of substances whose inclusion is banned

No.	Name of Substance
1	Polychlorinated Biphenyls (PCBs)
2	Polychlorinated Terphenyls (PCTs)
3	Polychloronaphthalenes (PCNs) (Cl≥1)
4	Polybrominated Biphenyls (PBBs)
5	Polybrominated Diphenyl ethers (PBDEs)
6	Short Chain Chlorinated Paraffins (Carbon chain length: 10-13)
7	Asbestos
8	Ozone Depleting Substances
9	Cadmium and Cadmium Compounds
10	Hexavalent Chromium Compounds
11	Lead and Lead Compounds
12	Mercury and Mercury Compounds
13	Perfluorooctanesulfonic acid and its salts (PFOS)
14	Certain Azocolourants and Azodyes
15	Tri-substituted organostannic compounds
16	Dibutyltin (DBT) compounds
17	Dioctyltin (DOT) compounds
18	Dimethyl fumarate（DMF）
19	Polycyclic aromatic hydrocarbons (PAHs)
20	Perfluorooctanoic acid (PFOA) and related substances
21	Hexabromocyclododecane (HBCDD)
22	Biz (2-ethylhexyl) phthalate (DEHP)
23	Benzyl butyl phthalate (BBP)
24	Dibutyl phthalate (DIBP)
25	Diisobutyl phthalate (DIBP)
26	Polymers in which halogens are contained structurally
27	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances (Note8)
28	Phenol, isopropylated phosphate (3:1) (PIP (3:1)) [*8]
29	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds
30	Dechlorane Plus
31	UV-328
32	Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances
33	Halogenated flame retardants
34	Fluorinated greenhouse gases (HFCs, PFCs, SF6, HFOs)
-	Lead and Lead Compounds
-	Mineral oil aromatic hydrocarbons with 1 or 2 and 3 to 7 aromatic rings(MOAH)
-	Mineral oil saturated hydrocarbons with 16 to 35 carbon atoms(MOSH)
-	Volatile organic compound（VOC）
-	Per- and polyfluoroalkyl substances (PFAS)

◆Table4-1-2 List of inclusion prohibited candidate substances

No.	Name of substance
1	Per-and polyfluoroalkyl substances (PFAS)
2	Medium-chain chlorinated paraffins (MCCP, C14-17)
3	Long-chain perfluorocarboxylic acids (C15-C21 PFCAs), their salts and related compounds
4	Each chlorine and bromine (mainly halogenated flame retardants) contained in plastic parts of office equipment such as copiers and printers

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
1	Polychlorinated Biphenyls (PCBs)	Appendix 2 No.1	All Ex: Insulating oil, Lubricant, Electric insulating medium, Solvent, Electrolyte	—	The case where it is contained as by-product, not exceeding 50 ppm	1,2
2	Polychlorinated Terphenyls (PCTs)	Appendix 2 No.2	All Ex: Insulating oil, Lubricant, Electric insulating medium, Solvent, Electrolyte	50ppm	—	3
3	Polychloronaphthalenes (PCNs)(Cl=>1)	Appendix 2 No.3	All Ex: Lubricant, Paint, Plastic stabilizer, Electric insulating medium, Flame retardant	—	—	1,2
4	Polybrominated Biphenyls (PBBs)	Appendix 2 No.4	All Ex: Flame retardant	1000ppm	—	3,4
5	Polybrominated Diphenyl ethers (PBDEs)	Appendix 2 No.5	All Ex: Flame retardant	RoHS subjected products: 1000ppm RoHS unsubjected products: 500ppm (the sum of the concentration of tetra-, penta-, hexa-, hepta- and decaBDE) Note: DecaBDE shall be managed independently due to its un-specified threshold value.	—	1,3,4 5(Deca-BDE)
6	Short Chain Chlorinated Paraffins (Carbon chain length: 10-13)	Appendix 2 No.6	All Ex: PVC plasticizer, Flame retardant	1000ppm	—	1
7	Asbestos	Appendix 2 No.7	All Ex: Brake lining pad, Insulator, Filler, Rubbing agent, Electric insulating medium, Filler, Pigment/Paint, Talc, Heat insulator	—	—	3
8	Ozone Depleting Substances	Appendix 2 No.8	All Ex: Coolant, Foaming agent, Digestive, Detergent	—	When contained as by-product	6,7,8
9	Cadmium and its compounds	Appendix 2 No.9	Packaging materials	100ppm (The sum of the concentration of cadmium, hexavalent chromium, lead and mercury) and Intentional addition prohibited	—	3,4,9,10, 11,12,13
			Portable battery, Battery (Excludes the following: Alkaline zinc-manganese dioxide portable batteries)	20ppm *The threshold value of cadmium contained in the battery shall be calculated with the weight of cadmium in the gross weight of battery (namely, concentration of cadmium per battery), same as the definition of the European Battery Regulation.	—	
			Alkaline zinc-manganese dioxide portable batteries	10ppm	—	
			All other than the above Ex: ・Paint, ink ・Additives such as pigment, dye, stabilizer in resin (including gum) materials (excluding impurities) ・Material or a part treated with cadmium electroplating or cadmium coating. ・Parts Electroless plated with nickel using luster, containing cadmium ・Pigment and dye in glass and paint for glass ・Silver brazing filler metals containing cadmium ・Material and parts such as zinc, zinc alloy, and zinc compound, etc. (free-cutting brass rods, rubber belt, etc.) ・Electric point of contact of DC motor, switch, relay, breaker and the like ・Fuse element of temperature fuse ・Fluorescent tubes (small-size fluorescent tubes, straight fluorescent tubes) ・Fluorescent material contained in fluorescent indicator	100ppm	—	

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
10	Hexavalent chromium compounds	Appendix 2 No.10	Products that come into contact with skin, including leather products and leather parts	3ppm (In total dry weight of leather)	—	3,4,11,12
			Packaging materials	100ppm (The sum of the concentration of cadmium, hexavalent chromium, lead and mercury) and Intentional addition prohibited	—	
			All other than the above Ex: ・Paint, ink ・Materials and parts galvanized and treated with chromate (sheet metal, screw, shafts, bearings, etc. used for general machinery components, purchased electronic components, electric power devices, etc.) ・Materials and parts such as aluminum, copper alloys and zinc alloys chemically synthesized with chromate (treatment before painting)	1000ppm	—	
11	Lead and lead compounds	Appendix 2 No.11	Packaging materials	100ppm (The sum of the concentration of cadmium, hexavalent chromium, lead and mercury) and Intentional addition prohibited	—	3,4,9,10, 11,12,13, 14
			Lead in polyvinyl chloride electric wire coating	300ppm	—	
			Portable batteries Excludes the following ・Zinc-manganese dioxide button portable batteries ・Alkaline zinc-manganese dioxide portable batteries	100ppm *Lead content threshold in battery is calculated by the proportion of the mass of lead in the total mass of battery cell (i. e., concentration per one battery cell), in the same way as the definition in the EU Battery Regulation.	—	
			Zinc-air button portable batteries (Until February 17, 2028)	500ppm *Portable battery threshold (100 ppm) will apply after the deadline.	—	
			・Zinc-manganese dioxide button portable batteries ・Alkaline zinc-manganese dioxide portable batteries	40ppm	—	
			Cases and straps sold separately	500ppm	—	
			All other than the above Ex: ・Paint, ink ・Additives such as pigment, dye, stabilizer in resin (including gum) materials ・Material and parts plated with lead alloy (e.g. piano wire plated with tin) ・Parts containing lead as lubricant (e.g. Dry bearing) ・Optical glass, filter glass ・Various alloys containing lead(However, exempt alloys are excluded.) ・Solder materials (solders with Pb = 85% or less) ・Soldered parts and units (Printed Circuit Board, electric power device, motor, clutch, sensor, etc) ・Lead in server and storage (HDD) ・FFC connector contact part	1000ppm	Glass fluorescent tube with lead content of no more than 0,2wt%	
					Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	
					・Lead as an alloying element in aluminium containing up to 0,4 % lead by weigt, provided it stems from lead-bearing aluminium scrap recycling ・Lead as an alloying element in aluminum for machining purposes with a lead content up to 0,4% by weight	
					Lead contained in copper alloy (no more than 4.0wt%)	
					Lead contained in high melting point solder (Lead alloy with 85wt% or more of lead content)	
					Electric and electronic parts containing lead in glass or ceramic exempt dielectric ceramic in condenser (example: piezo element), or electric and electronic parts containing lead in glass or ceramic base compound	
					Lead in dielectric ceramic in condenser with rated voltage of AC125V or DC 250 or more.	
					Lead in dielectric ceramic in condenser with rated voltage of AC125 or less than DC250V. However , limited to the spare parts for electrical and electronic products placed on the market prior to January 1, 2013	
					Lead contained in white glass used for optical purposes	

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
					Lead contained in solder composed of more than two kinds of elements, and is used for joining pin and package of microprocessor, of which lead content is more than 80wt% and les than 85wt%. However, spare parts of products put on market before Jan. 1, 2011 only are applicable	
					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 90 nm or larger; - a single die of 300 mm^2 or larger in any semiconductor technology node; - stacked die packages with die of 300 mm2 or larger, or silicon interposers of 300 mm^2 or larger.	
12	Mercury and mercury compounds	Appendix 2 No.12	Packaging materials	100ppm (The sum of the concentration of cadmium, hexavalent chromium, lead and mercury) and Intentional addition prohibited	—	3,4,9,10, 11,12,13
			Batteries Excludes the following - Alkaline zinc-manganese dioxide portable batteries - Non-alkaline zinc-manganese dioxide portable batteries	5ppm[*6] *Mercury content threshold in battery is calculated by the proportion of the mass of mercury in the total mass of battery cell (i. e., concentration per one battery cell), in the same way as the definition in the EU Battery Regulation.	—	
			・Alkaline zinc-manganese dioxide portable ・Non-alkaline zinc-manganese dioxide portable batteries	1ppm	—	
			All other than the above Ex: ・Dispensation into pigment, paint, ink and resin ・Relay, switch and sensor with mercury as contact point	1000ppm	Mercury in other discharge lamps for special purposes not specifically mentioned in EU RoHS	
					Mercury in high pressure mercury vapour lamps used in projectors where an output 2000 lumen ANSI is required (effective until 24 August 2026)	
					Mercury in high pressure sodium vapour lamps used for horticulture lighting (effective until 24 August 2026)	
					Mercury in lamps emitting light in the ultraviolet spectrum (effective until 24 August 2026)	
13	Perfluorooctanesulfonic acid and its salts (PFOS)	Appendix 2 No.13	Textile, coated material	1μg/m^2 or 1000 ppm	—	1
			All other than the above	1000ppm		
14	Certain Azocolourants and Azodyes that form certain amines	Appendix 2 No.14	Fabric and leather parts/products that can come into direct contact with human skin (or mouth orifice) for extended period of time *Only those instructed in drawings or specifications are applicable	30ppm	—	3
15	Trisubstituted organotin compound	Appendix 2 No.15	All Ex: Antiseptic, antimold, paint, colorant, antifoulant paint, cooling medium, bloating agent, extinguishing agent, cleaning agent, stabilization agent, antioxidizing agent/age inhibitor, antibacterial and antifungal agents, antifoulant	1000ppm *1 Concentration of tin mass after conversion into metal	—	3
16	Dibutyltin compounds	Appendix 2 No.16	All Ex: Stabilizers for vinyl chloride resin , lubricants and catalyst	1000ppm *1	—	3
17	Dioctyltin compounds	Appendix 2 No.17	The following two uses ・RTV-2 moulding kits ・Two uses of articles made of fabric with an intention to come into contact with skin	1000ppm *1	—	3
18	Dimetylfumarate (dimethyl fumarate (DMF))	Appendix 2 No.18	All Ex: ・Antiseptic of leather products ・Desiccant (silica gel pack)	0.1ppm	—	3
19	Polycyclic aromatic hydrocarbons (PAHs)	Appendix 2 No.19	Rubber or plastic components that come in direct contact with human skin or in the mouth for extended period or short period repeatedly *The suppliers of the relevant parts shall be contacted by RICOH IMAGING COMPANY, LTD. individually.	1ppm	—	3

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
20	Perfluorooctanoic acid (PFOA) and any related substances 1: Eight substances regulated by Norwegian law	Appendix 2 No.20(a)	Textile and coated materials	1μg/㎡	—	15
			All other than the above	1000ppm	—	
	Perfluorooctanoic acid (PFOA) and any related substances 2: Substance regulated by EU POPs regulation	Appendix 2 No.20(b)	All	PFOA and its sait : 25ppb (0.025 ppm) One or a combination of related subtances : 1000ppb (1 ppm) *The threshold value in the molded product is used. *Eight substances regulated by Norwegian law must meet Norwegian law standards even if they are excluded.	Equal to or below 20 mg/kg (0,002 % by weight) where they are present in medical devices other than invasive devices and implantable devices. The use of perfluooroctyl bromide containing perfluoroctyl iodide for the purpose of producing pharmaceutical products.	
21	Hexabromocyclododecane (HBCDD)	Appendix 2 No.21	All Ex: Flame retardant	75ppm	—	1,2
22	Biz (2-ethylhexyl) phthalate (DEHP)	Appendix 2 No.22	All Ex: Plasticizers, etc.	Electric and electronic equipment within the scope of Directive 2011/65/EC.:1000 ppm Any products other than electric and electronic equipment within the scope of Directive 2011/65/EC: 1000ppm by weight of the plasticised material including individually or in any combination of DEHP,BBP,DBP,DIBP	—	3,4
23	Benzyl butyl phthalate (BBP)	Appendix 2 No.23	All Ex: Plasticizers, etc.	Electric and electronic equipment within the scope of Directive 2011/65/EC.:1000 ppm Any products other than electric and electronic equipment within the scope of Directive 2011/65/EC: 1000ppm by weight of the plasticised material including individually or in any combination of DEHP,BBP,DBP,DIBP	—	3,4
24	Dibutyl phthalate (DIBP)	Appendix 2 No.24	All Ex: Plasticizers, etc.	Electric and electronic equipment within the scope of Directive 2011/65/EC.:1000 ppm Any products other than electric and electronic equipment within the scope of Directive 2011/65/EC: 1000ppm by weight of the plasticised material including individually or in any combination of DEHP,BBP,DBP,DIBP	—	3,4
25	Diisobutyl phthalate (DIBP)	Appendix 2 No.25	All Ex: Plasticizers, etc.	Electric and electronic equipment within the scope of Directive 2011/65/EC.:1000 ppm Any products other than electric and electronic equipment within the scope of Directive 2011/65/EC: 1000ppm by weight of the plasticised material including individually or in any combination of DEHP,BBP,DBP,DIBP	—	3,4
26	Polymers in which halogens are contained structurally	Appendix 2 No.26	Packaging plastic parts that acquire either the Blue Angel or Eco Mark *Packaging plastic parts refer to "parts that are part of products (e.g., styrene foam, bubble cushioning material, tape, etc.)" used to wrap Ricoh Group products to prevent damage or staining when the products are placed on the market, and packaging materials used only for delivery to the RICOH IMAGING COMPANY, LTD. are excluded from the scope.	—	—	16,17,22
			Plastic enclosures for office equipment such as copiers and printers that acquire Blue Angel, Eco Mark, or EPEAT	—	—	

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
27	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances	Appendix 2 No.27	All	The concentrati on in the substance, the mixture, or the article is below 25 ppb for the sum of C9-C14 PFCAs and their salts or 260 ppb for the sum of C9-C14 PFCA-related substances	the concentration limit shall be 10 ppm for the sum of C9-C14 PFCAs, their salts and C9-C14 PFCA related substances, where they are present in a substance to be used as a transported isolated intermediate met for the manufacturing of fluorochemicals with a perfluoro carbon chain length equal to or shorter than 6 atoms	3
					exempted until 25 February 2028 to the can coating for pressurised metered-dose inhalers	
					exempted until 30 June 2030 to semiconductors used in spare or replacement parts for finished electronic equipment placed on the market before 31 December 2023.	
					The concentration limit shall be 100 ppb for the sum of C9-C14 PFCAs, in fluoroplastics and fluoroelastomers that contain perfluoroalkoxy groups.	
					less than 1000ppb for the sum of C9-C14 PFCAs, where these are present in PTFE micro powders produced by ionising irradiation or by thermal degradation, as well as in mixtures and articles for industrial and professional uses containing PTFE micro powders.	
28	Phenol,isopropylated phosphate (3:1) (PIP (3:1))	Appendix 2 No.28	All Ex: Plasticizers, flame retardants, plastics, etc.	—	Lubricant and grease	5
					Recycled or reused plastic	
29	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS related compounds	Appendix 2 No.29	All Ex: Fluorine coating, metal plating, etc.	25 ppb for PFHxS or any of its salts 1000 ppb (1 ppm) for the sum of concentrati ons of all PFHxS related compounds	—	1
30	Dechlorane Plus	Appendix 2 No.30	All Ex: Silicone rubber, lubricant, adhesive, tape, flame retardant for cable, etc.	—	—	18
31	UV-328	Appendix 2 No.31	All Ex: Lubricant, adhesive, tape, UV absorbers for plastic, etc.	—	Triacetyl cellulose (TAC) film in polarizers	18
32	Perfluorohexanoic acid (PFHxA), its salts and PFHxArelated substances	Appendix 2 No.32	Textile products	25 ppb (0.025 ppm) for the sum of PFHxA and its salts (from April 10, 2027) 1,000 ppb (1 ppm) for the sum of PFHxA-related substances (from April 10, 2027)	—	3
33	Halogenated flame retardants	Appendix 2 No.33	Plastic enclosures of office equipment such as copiers and printers that obtain Blue Angel, Eco Mark, or EPEAT	Intentional addition of organic halogen compounds prohibited	—	16,17,22
			Electronic display enclosures and stands	Total halogen content: 1,000 ppm	・Electronic displays with a screen area of 100 square centimeters or less ・Projectors ・All-in-one video conferencing systems ・Media displays ・Visual reality headsets ・Displays specified in Article 2 of the EU WEEE Directive 2012/19/EU ・Displays specified in Article 2 of the EU Erp Directive ・Industrial displays	20
			Plastic enclosures of electronic devices powered by 120V outlets or batteries 【from July 1, 2026】	1.Total bromine concentration: 1,000 ppm or 2.Total chlorine concentration: 1,000 ppm or 3.Total fluorine concentration: 1,000 ppm and Total Phosphours concentration: less than 5,000 ppm	・Plastic housings for electrical and electronic devices used in outdoor products (waterproof cameras) (individual consultation)	19

◆Table 4-2-1 RIM criteria for inclusion prohibited substances

* Since examples of purposes and uses do not cover all cases, please check with the publisher if you are not sure.

No.	Name of substance	CAS No.	Scope/ Examples of use	Content threshold	Applications exempted from content prohibition	Reference
34	Fluorinated greenhouse gases (HFCs, PFCs, SF6, HFOs)	Appendix 2 No.34	All Ex.: air conditioning, refrigeration/freezing equipment, chillers, fire extinguishers	—	—	21
-	Mineral oil aromatic Hydrocarbons (MOAH) comprising 1 to 7 aromatic rings	—	Packing materials, Printing matters Ex.: ・cardboard box, cushioning material (styrofoam, babble wrap and others), tapes for packing, rope, bag ・operation manual, start guide, notice, warranty card, and other printed pieces that are packed with products	1000ppm for concentrati of MOAH in ink	・Materials for protecting or covering products in transportation ・Labels attached on products	French AGEC Law
-	Mineral oil aromatic hydrocarbons (MOAH) comprising 3 to 7 aromatic rings	—		1ppm for concentrati of MOAH in ink		
-	Mineral oil saturated hydrocarbons (MOSH) with 16 to 35 carbon atoms	—		1000ppm for concentrati of MOSH in ink		
-	volatile organic compounds（VOC)	—	Adhesives, Paints, Inks, Cleaning agents		Cleaning agents for semiconductor (including integrated circuit)	China Air Pollution Control Act
-	Per- and polyfluoroalkyl substances (PFAS)	—	Textile products Ex: Case, Strap	Intentionally added or total organic fluorine: 50 ppm		US California (AB 1817)

◆Table 4-2-2 Inclusion prohibited candidate substances

No.	Substance	Reference
1	Per- and polyfluoroalkyl substances (PFAS)	USA TSCA PFAS proposed regulation
		USA Maine An Act to Stop PFAS Pollution
		EU REACH proposed restriction
2	Medium-chain chlorinated paraffins (MCCP,C14-17)	18
3	Long-chain perfluorocarboxylic acids (C15-C21 PFCAs), their salts and related compounds	18
4	Each chlorine and bromine (mainly halogenated flame retardants) contained in plastic parts of office equipment such as copiers and printers	22

◆Table 4-3 Substances prohibited for use in manufacturing process

No.	Substance	CAS No.
1	Trichloroethylene	79-01-6
2	Tetrachloroethylene	127-18-4
3	Dichloromethane	75-09-2
4	Carbon tetrachloride	56-23-5
5	1,2- dichloroethane	107-06-2
6	1,1- dichloroethylene	75-35-4
7	cis-1，2-Dichloroethylene	156-59-2
8	1,1,1- trichloroethane	71-55-6
9	1,1,2- trichloroethane	79-00-5
10	1,3-dichloropropane	542-75-6
11	Benzene *including benzene-containing products	71-43-2
12	Ozone-depletingsubstances (see Appendix 2)	-

Appendices Table 1: List of Reference Laws, Regulations and Voluntary Criteria

No.	Laws, Regulations and Voluntary Criteria
1	EU POPs regulation Annex I
2	Chemical Substances Control Law
3	EU REACH (Annex 17 Restriction)
4	EU RoHS directive
5	US TSCA PBT regulation
6	US: ODS labeling restriction (Section 611 on the Clean Air Act Amendments of 1990)
7	Montreal Protoco
8	EU Ozone regulation
9	Japan: Law on Promoting Green Purchasing
10	EU Battery regulation
11	EU Packaging directive
12	US: The Model Toxics in Packaging Legislation
13	China: Battery Standard (GB24427-2021)
14	Proposition65 of the State of California, USA
15	Norwegian Act
16	German Blue Angel
17	Japanese Eco-mark
18	POPs Convention Annex A Elimination
19	Washington Administrative Code (Safer Products for Washington)
20	EU Erp Directive (Lot5) (Electronic Displays)
21	EU F-Gas Regulations
22	US: EPEAT

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
1	Polychlorinated biphenyls (PCBs) *The substances shown to the right are exactly alternative PCBs, however, they are listed as example PCBs since they are regulated in the European Directive.	Polychlorinated biphenyls	1336-36-3
		Aroclor 1254	11097-69-1
		Monomethyl-tetrachloro-diphenyl methane Note (Ugilec 141)	76253-60-6
		Monomethyl-dichloro-diphenyl methane Note (Ugilec 121, 21)	-
		Monomethyl-dibromo-diphenyl methane Note (DBBT)	99688-47-8
2	Polychlorinated terphenyls (PCTs)	Polychlorinated terphenyl	61788-33-8
		Aroclor 5442	12642-23-8
3	Polychloronaphthalenes (PCNs) (Cl=>1)	Polychloronaphthalenes	70776-03-3
		Pentachloronaphthalene	1321-64-8
4	Polybrominated biphenyls (PBBs)	Tetrabromobiphenyl	40088-45-7
		Hexabromobiphenyl	59080-40-9
		Octabromobiphenyl	61288-13-9
		Decabromobiphenyl	13654-09-6
5	Polybrominated diphenyl ethers (PBDEs)	Hexabromodiphenyl ether	36483-60-0
		Heptabromodiphenyl ether	36483-60-0
		Octabromodiphenyl ether	68928-80-3
		Nonabromodiphenyl ether	32536-52-0
		Decabromobiphenyl ether	63936-56-1
6	Short chain chlorinated paraffins	Chlorinated paraffins (with 10-13 carbon atoms)	85535-84-8
7	Asbestos	Asbestos	7440-43-9
		Actinolite	1306-19-0
		Amosite (Grunerite)	1306-23-6
		Anthophyllite	10108-64-2
		Chrysotile	10124-36-4
		Crocidolite	7440-43-9
		Tremolite	1306-19-0
8	Ozone Layer Depleting Substances CFCs Annex A Group I substances **1 Substances likely to be used commercially are shown on the right. Also included are isomers of these substances.	CFC-11 ($CFCl_3$)	
		CFC-12 (CF_2Cl_2)	
		CFC-113 ($C_2F_3Cl_3$)	
		CFC-114 ($C_2F_4Cl_2$)	
		CFC-115 (C_2F_5Cl)	
	Ozone Layer Depleting Substances Halons Annex A Group II substances **1	Halon-1211 (CF_2BrCl)	
		Halon-1301 (CF_3Br)	
		Halon-2402 ($CC_2F_4Br_2$)	
	Ozone Layer Depleting Substances Other CFCs Annex B Group I substances **1	CFC-13 (CF_3Cl)	
		CFC-111 (C_2FCl_5)	
		CFC-112 ($C_2F_2Cl_4$)	
		CFC-211 (C_3FCl_7)	
		CFC-212 ($C_3F_2Cl_6$)	
		CFC-213 ($C_3F_3Cl_5$)	
		CFC-214 ($C_3F_4Cl_4$)	
		CFC-215 ($C_3F_5Cl_3$)	
		CFC-216 ($C_3F_6Cl_2$)	
		CFC-217 (C_3F_7Cl)	
	Ozone Layer Depleting Substances Carbon tetrachloride Annex B Group II substances **1	Carbon tetrachloride (CCl_4)	
	Ozone Layer Depleting Substances 1,1,1-trichloroethane Annex B Group III substances **1	1,1,1-trichloroethane ($C_2H_3Cl_3$)	
	Ozone Layer Depleting Substances HBFC Annex C Group II substances **1	Dibromofluoromethane ($CCHFBr_2$)	
		Bromodifluoromethane ($CCHF_2Br$)	
		Bromofluoromethane (CH_2FBr)	
		Tetrabromofluoroethane (C_2HFBr_4)	
		Tribromodifluoroethane ($C_2HF_2Br_3$)	
		Dibromotrifluoroethane ($C_2HF_3Br_2$)	
		Bromotetrafluoroethane (C_2HF_4Br)	
		Tribromofluoroethane ($C_2H_2FBr_3$)	
		Dibromodifluoroethane ($C_2H_2F_2Br_2$)	
		Bromotrifluoroethane ($C_2H_2F_3Br$)	

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
		Dibromofluoroethane ($C_2H_3FBr_2$)	
		Bromodifluoroethane ($C_2H_3F_2Br$)	
		Bromofluoroethane (C_2H_4FBr)	
		Hexabromofluoropropane (C_3HFBr_6)	
		Pentabromodifluoropropane ($C_3HF_2Br_5$)	
		Tetrabromotrifluoropropane ($C_3HF_3Br_4$)	
		Tribromotetrafluoropropane ($C_3HF_4Br_3$)	
		Dibromopentafluoropropane ($C_3HF_5Br_2$)	
		Bromohexafluoropropane (C_3HF_6Br)	
		Pentabromofluoropropane ($C_3H_2FBr_5$)	
		Tetrabromodifluoropropane ($C_3H_2F_2Br_4$)	
		Tribromotrifluopropane ($CC_3H_2F_3Br_3$)	
		Dibromotetrafluoropropane ($C_3H_2F_4Br_2$)	
		Bromopentafluoropropane ($C_3H_2F_5Br$)	
		Tetrabromofluoropropane ($C_3H_3FBr_4$)	
		Tribromodifluoropropane ($C_3H_3F_2Br_3$)	
		Dibromotrifluoropropane ($C_3H_3F_3Br_2$)	
		Bromotetrafluoropropane ($C_3H_3F_4Br$)	
		Tribromofluoropropane ($C_3H_4FBr_3$)	
		Dibromodifluoropropane ($C_3H_4F_2Br_2$)	
		Bromotrifluoropropane ($C_3H_4F_3Br$)	
		Dibromofluoropropane ($C_3H_5FBr_2$)	
		Bromodifluoropropane ($C_3H_5F_2Br$)	
		Bromofluoropropane (C_3H_6FBr)	
	Ozone Layer Depleting Substances Bromochloromethane Annex C Group III substances **1	Bromofluoropropane (CH_2BrCl)	
	Ozone Layer Depleting Substances Methyl bromide Annex E Group I substances **1	Bromofluoropropane (CH_3Br)	
	Ozone Layer Depleting Substances HCFCs Annex C Group I substances **1	HCFC-21 ($CHFCl_2$)	
		HCFC-22 (CHF_2Cl)	
		HCFC-31 (CH_2FCl)	
		HCFC-121 (C_2HFCl_4)	
		HCFC-122 ($C_2HF_2Cl_3$)	
		HCFC-123 ($C_2HF_3Cl_2$)	
		HCFC-123* ($CHCl_2CF_3$)	
		HCFC-124 (C_2HF_4Cl)	
		HCFC-124* ($CHFClCF_3$)	
		HCFC-131 ($C_2H_2FCl_3$)	
		HCFC-132 ($C_2H_2F_2Cl_2$)	
		HCFC-133 ($C_2H_2F_3Cl$)	
		HCFC-141 ($C_2H_3FCl_2$)	
		HCFC-141b* (CH_3CFCl_2)	
		HCFC-142 ($C_2H_3F_2Cl$)	
		HCFC-142b* (CH_3CF_2Cl)	
		HCFC-151 (C_2H_4FCl)	
		HCFC-221 (C_3HFCl_6)	
		HCFC-222 ($C_3HF_2Cl_5$)	
		HCFC-223 ($C_3HF_3Cl_4$)	
		HCFC-224 ($C_3HF_4Cl_3$)	
		HCFC-225$C_3HF_5Cl_2$)	
		HCFC-225ca* ($CF_3CF_2CHCl_2$)	
		HCFC-225cb* (CF_2ClCF_2CHClF)	
		HCFC-226 (C_3HF_6Cl)	
		HCFC-231 ($C_3H_2FCl_5$)	
		HCFC-232 ($C_3H_2F_2Cl_4$)	
		HCFC-233 ($C_3H_2F_3Cl_3$)	
		HCFC-234 ($C_3H_2F_4Cl_2$)	
		HCFC-235 ($C_3H_2F_5Cl$)	
		HCFC-241 ($C_3H_3FCl_4$)	
		HCFC-242 ($C_3H_3F_2Cl_3$)	
		HCFC-243 ($C_3H_3F_3Cl_2$)	
		HCFC-244 ($C_3H_3F_4Cl$)	

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
		HCFC-251 ($C_3H_4FCl_3$)	
		HCFC-252 ($C_3H_4F_2Cl_2$)	
		HCFC-253 ($C_3H_4F_3Cl$)	
		HCFC-261 ($C_3H_5FCl_2$)	
		HCFC-262 ($C_3H_5F_2Cl$)	
		HCFC-271 (C_3H_6FCl)	
9	Cadmium and its compounds	Cadmiumestos	7440-43-9
		Cadmium oxide	1306-19-0
		Cadmium sulfide	1306-23-6
		Cadmium chloride	10108-64-2
		Cadmium sulfate	10124-36-4
10	Hexavalent chromium compounds	Barium chromate	10294-40-3
		Calcium chromate	13765-19-0
		Chromium trioxide	1333-82-0
		Lead(II)chromate	7758-97-6
		Sodiumchromate	7775-11-3
		Sodium bichromate	10588-01-9
		Strontium chromate	7789-06-2
		Potassium dichromate	7778-50-9
		Potassium chromate	7789-00-6
		Zinc chromate	13530-65-9
11	Lead and its compounds	Lead	7439-92-1
		Lead (II) sulfate	7446-14-2
		Lead(II)carbonate	598-63-0
		Lead hydrocarbonate	1319-46-6
		Lead acetate	301-04-2
		Lead (II) acetate, trihydrate	6080-56-4
		Lead phosphate	7446-27-7
		Lead selenide	12069-00-0
		Lead(IV)oxide	1309-60-0
		Lead (II, IV) oxide	1314-41-6
		Lead(II)sulfide	1314-87-0
		Lead (II) oxide	1317-36-8
		Lead (II) carbonate basic	1319-46-6
		Lead hydroxidcarbonate	1344-36-1
		Lead (II) chromate	7758-97-6
		Lead (II) titanate	12060-00-3
		Lead sulfate	15739-80-7
		Lead sulphate	12202-17-4
		Lead stearate	1072-35-1
12	Mercury and its compounds	Mercury	7439-97-6
		Mercuric chloride	33631-63-9
		Mercury (II) chloride	7487-94-7
		Mercuric sulfate	7783-35-9
		Mercuric nitrate	10045-94-0
		Mercuric(II)oxide	21908-53-2
		Mercuric sulfide	1344-48-5
13	Perfluorooctanesulfonic acid and its salts (PFOS)	Definition: Perfluorooctanesulfonic acid and its salts (PFOS) derived from the following molecular formula are controlled. [Molecular formula] C7F17SO2X (X = OH, Metal salt, halide, amide, and other derivatives including polymers).	
		Perfluorooctanesulfonic acid	1763-23-1
		Perfluorooctanesulfonic acid (ammonium salt)	29081-56-9
		Perfluorooctanesulfonic acid (diethanol amine salt)	70225-14-8
		Perfluorooctanesulfonic acid (potassium salt)	2795-39-3
		Perfluorooctanesulfonic acid (lithium salt)	29457-72-5
14	Certain Azocolourants and Azodyes that form certain amines *Certain azocolourants and azodyes which form certain aromatic amines by decomposition have no specific example information for example substances. *A detailed list of certain amines is shown on the right.	4- aminoazobenzene ($C_{12}H_{11}N_3$)	1960/9/3
		o- anisidine (C_7H_9NO)	90-04-0
		2- naphthylamine ($C_{10}H_9N$)	91-59-8
		3,3'- dichlorobenzidine ($C_{12}H_{10}C_{l2}N_2$)	91-94-1
		4- Biphenyl-4-ylamine ($C_{12}H_{11}N$)	92-67-1
		benzidine ($C_{12}H_{12}N_2$)	92-87-5
		o- toluidine (C_7H_9N)	95-53-4
		4- chloro-2-methylamine (C_7H_8ClN)	95-69-2
		2,4- toluenediamine ($C_7H_{10}N_2$)	95-80-7
		o- aminoazotoluene ($C_{14}H_{15}N_3$)	97-56-3

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
		5- nitro-o-toluidine ($C_7H_8N_2O_2$)	99-55-8
		3,3'- Dichloro-4,4'-diaminodiphenylmethane ($C_{13}H_{12}Cl_2N_2$)	101-14-4
		4,4'- methylenedianiline ($C_{13}H_{14}N_2$)	101-77-9
		4,4'- diaminodiphenylether ($C_{12}H_{12}N_2O$)	101-80-4
		p- chloraniline (C_6H_6ClN)	106-47-8
		3,3'- dimethoxybenzidine ($C_{14}H_{16}N_2O_2$)	119-90-4
		3,3'- dimethylbenzidine ($C_{14}H_{16}N_2$)	119-93-7
		2- methoxy-5-methylamiline ($C_8H_{11}NO$)	120-71-8
		2,4,5- trimethylaniline ($C_9H_{13}N$)	137-17-7
		4,4'- thiodianiline ($C_{12}H_{12}N_2S$)	139-65-1
		2,4- methoxy-m-phenylenediamine ($C_7H_{10}N_2O$)	615-05-4
		4,4'-dimethyl-3,3'-diaminodiphenylmethane ($C_{15}H_{18}N_2$)	838-88-0
15	Trisubstituted organotin compound *Includes bis tributyltin oxide (TBTO), tributyltins (TBTs) and triphenyltin (TPTs).	Bis tributyltin oxide	56-35-9
		Triphenyltin N,N-dimethyldithiocarbamate	1803-12-9
		Triphenyltin fluoride	379-52-2
		Triphenyltin acetate	900-95-8
		Triphenyltin chloride	639-58-7
		Triphenyltin hydroxide	76-87-9
		Triphenyltin fatty acid salts (C=9-11)	18380-71-7 18380-72-8 47672-31-1 94850-90-5
		Triphenyltin chloroacetate	7094-94-2
		Tributyltin methacrylate	2155-70-6
		Bis (tributyltin) fumarate	6454-35-9
		Tributyltin fluoride	1983-10-4
		Bis(tributyltin)=2,3-dibromosuccinate	31732-71-5
		Tributyltin acetate	56-36-0
		Tributyltin laurate	3090-36-6
		Bis (tributyltin) phthalate	4782-29-0
		Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate (alkyl; C=8)	67772-01-4
		Tributyltin sulfamate	6517-25-5
		Bis(tributyltin)maleate	14275-57-1
		Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)	5409-17-2
		Tributyltin-1,2,3,4,4A,4B,5,6,10,10A-decahydro-7-isoplopyl-1,4A-dimethyl phenanthrencarboxylatemix	26239-64-5
		Trimethyltin chloride	1066-45-1
		Trimethyltinsulphate	63869-87-4
		Trimethyltin (IV) hydroxide	56-24-6
		Triethyltin(IV) chloride	994-31-0
		Triethyltin hydroxide	994-32-1
		Tripropyltin chloride	2279-76-7
		Tripropyltin iodoacetate	73927-92-1
16	Dibutyltin compounds	Dibutyltin	1002-53-5
		Dibutyltin maleate	10192-92-4
		Bis[[(Z)-4-methoxy-1,4-dioxo-2-butenyl]oxy]dibutylstannane	15546-11-9
		Bis(2-ethylhexanoic acid)dibutyltin	2781-10-4
		Dibutyltin dichloride; (DBTC)	683-18-1
		Dibutyltin oxide	818-08-6
17	Dioctyltin compounds	Dialkyl(C＝1～8)tin bis［alkyl (or alkenyl, C=6～18) thioglycollate)	15571-58-1
		Dioctyltin maleate	16091-18-2
		Dioctyltin	26401-97-8
		Dioctyltinbis (Maleic acid monoalkyl(C＝6～224) ester) salt	33568-99-9
		Dibutyltin dichloride	3542-36-7
18	Dimetylfumarate (dimethyl fumarate（DMF）)	Dimetylfumarate (dimethyl fumarate（DMF）)	624-49-7
19	Polycyclic aromatic hydrocarbons (PAHs) * Regulated substances are shown on the right.	BENZO(a)PYRENE ($C_{20}H_{12}$)	50-32-8
		BENZO(e)PYRENE ($C_{20}H_{12}$)	192-97-2
		BENZO(a)ANTHRACENE ($C_{18}H_{12}$)	56-55-3
		CHRYSENE ($C_{18}H_{12}$)	218-01-9
		BENZO(b)FLUORANTHENE ($C_{20}H_{12}$)	205-99-2
		BENZO(j)FLUORANTHENE ($C_{20}H_{12}$)	205-82-3
		BENZO(k)FLUORANTHENE ($C_{20}H_{12}$)	207-08-9
		DIBENZO(a,h)ANTHRACENE ($C_{22}H_{14}$)	53-70-3

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
20(a)	Perfluorooctanoic acid (PFOA) and any related substances 1: Eight substances regulated by Norwegian law *Regulated substances are shown on the right.	PFOA-perfluorooctanoic acid	335-67-1
		Ammonium salt of PFOA	3825-26-1
		Perfluorooctanoic acid sodium salt: Sodium salt of PFOA	335-95-5
		Potassium salt of PFOA	2395-00-8
		Perfluorooctanoic acid sodium salt: Sodium salt of PFOA	335-93-3
		Pentadecafluorooctyl fluoride	335-66-0
		Pentadecafluoro-octanoicacid methylester	376-27-2
		Pentadecafluoro-octanoicacid ethylester	3108-24-5
20(b)	Perfluorooctanoic acid (PFOA) and any related substances 2: Substance regulated by EU POPs regulation	Definition： (i)perfluorooctanoic acid, including any of its branched isomers; (ii)its salts; (iii)PFOA-related compounds which, for the purposes of the Convention, are any substances that degrade to PFOA, including any substances (including salts and polymers) having a linear or branched perfluoroheptyl group with the moiety (C7F15)C as one of the structural elements. The following compounds are not included as PFOA-related compounds: (i)C8F17-X, where X = F, Cl, Br; (ii)fluoropolymers that are covered by CF3[CF2]n-R', where R'=any group, n> 16; (iii)perfluoroalkyl carboxylic acids (including their salts, esters, halides and anhydrides) with ≥ 8 perfluorinated carbons; (iv)perfluoroalkane sulfonic acids and perfluoro phosphonic acids (including their salts, esters, halides and anhydrides) with ≥ 9 perfluorinated carbons; (v)perfluorooctane sulfonic acid and its derivatives (PFOS)	
21	Hexabromocyclododecane (HBCDD) *Regulated substances are shown on the right.	Hexabromocyclododecane (HBCDD)	25637-99-4
			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
		1,2,5,6,9,10-Hexabromocyclododecane (HBCDD)	3194-55-6
		α-Hexabromocyclododecane (HBCDD)	134237-50-6
		β-Hexabromocyclododecane (HBCDD)	134237-51-7
		γ-Hexabromocyclododecane (HBCDD)	134237-52-8
22	Biz (2-ethylhexyl) phthalate (DEHP)	Same as left	117-81-7
23	Benzyl butyl phthalate (BBP)	Same as left	85-68-7
24	Dibutyl phthalate (DBP)	Same as left	84-74-2
25	Diisobutyl phthalate (DIBP)	Same as left	84-69-5
26	Polymers in which halogens are contained structurally *"Polymers in which halogens are contained structurally and polymers to which halogenated compounds are added" cover the scope of "halogencontaining polymers" described in both German Blue Angel and "Japanese Eco-mark".	PVC etc.	-
27	Typical perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances *Definitions and main subject substances are shown on the right.	Definition： Linear and branched perfluorocarboxylic acids of the formula CnF2n+1-C(= O)OH where n = 8, 9, 10, 11, 12, or 13 (C9-C14 PFCAs), including their salts, and any combinations thereof; Any C9-C14 PFCA-related substance having a perfluoro group with the formula CnF2n+1- directly attached to another carbon atom, where n = 8, 9, 10, 11, 12, or 13, including their salts and any combinations thereof; Any C9-C14 PFCA-related substance having a perfluoro group with the formula CnF2n+1- that it is not directly attached to another carbon atom, where n = 9, 10, 11, 12, 13 or 14 as one of the structural elements, including their salts and any combinations thereof. The following substances are excluded from this designation - CnF2n+1-X, where X = F, Cl, or Br where n = 9, 10, 11, 12, 13 or 14, including any combinations thereof, - CnF2n+1-C(= O)OX' where n> 13 and X'=any group, including salts. C9-C14 PFCA-related substances are substances that, based on their molecular structure, are considered to have the potential to degrade or be transformed to C9-C14 PFCAs.'	
		Perfluorononan-1-oic acid (PFNA)	375-95-1
		Nonadecafluorodecanoic acid (PFDA)	335-76-2
		Henicosafluoroundecanoic acid (PFUnDA)	2058-94-8
		Tricosafluorododecanoic acid (PFDoDA)	307-55-1
		Pentacosafluorotridecanoic acid (PFTrDA)	72629-94-8
		Heptacosafluorotetradecanoic acid (PFTDA)	376-06-7
		perfluorononan-1-oic acid sodium salts	21049-39-8
		ammonium nonadecafluorodecanoate	3108-42-7

Appendices Table 2: Detailed List of Environmentally Sensitive Chemical Substances

(Note) Substances listed in this table are some of the specific examples. This list does not include all of the environmentally sensitive chemical substances.

No.	Substances	Definition/Example Substance Name	CAS No.
		sodium nonadecafluorodecanoate	3830-45-3
		Perfluorononan-1-oic acid ammonium salts	4149-60-4
28	Phenol, isopropylated phosphate (3:1) (PIP (3:1))	Same as left	68937-41-7
29	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	Definition： Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds means the following (i) perfluorohexane sulfonic acid, including any of its branched isomers; (ii) its salts (iii) PFHxS-related compounds which are any substance that contains the chemical moiety C6F13S- as one of its structural elements and that degrades to PFHxS.	355-46-4
30	Dechlorane Plus	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca7,15-diene (Dechlorane Plus)	13560-89-9
		cis isomer	135821-03-3
		anti-isomer	135821-74-8
31	UV-328	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	25973-55-1
32	Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances	Definition： Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances means the following (i)Having a linear or branched perfluoropentyl group with the formula C5F11- directly attached to another carbon atom as one of the structural elements (ii)Having a linear or branched perfluorohexyl group with the formula C6F13-. (iii)PFHxA-related substances are substances that, based on their molecular structure, are considered to have the potential to degrade or be transformed to PFHxA. The following substances are excluded from this designation: (i)C6F14 (ii)C6F13-C(=O)OH、C6F13-C(=O)O-X' or C6F13-CF2-X' (where X'=any group, including salts) (iii)Any substance having a perfluoroalkyl group C6F13- directly attached to an oxygen atom at one of the non-terminal carbon atoms.	
33	Halogenated flame retardants	Bromine, chlorine, fluorinated flame retardants, etc.	
34	Fluorinated greenhouse gases (HFCs, PFCs, SF6, HFOs)	Fluorinated greenhouse gases (HFCs, PFCs, SF6, HFOs) https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202400573#d1e2327-1-1	

Revision history

Revision date	Edition	Revision Page	Content of the revision
Aug., 2013	Version 1.0	–	First issue
Oct., 2014	Version 2.0	P5, 6, 7, 8	Revise some List name “JGPSSI”->”Green Procurement (Former JGPSSI)” “limited liability intermediate corporation”->”Institute”
Dec., 2015	-	Guideline, Table, Format	Completely revised Addition of substance list and revision of related documents in order to align with the prohibited materials defined by Ricoh Company
Apr., 2017	Version 3.0	Table 1,2,6	1. Background of revision The establishment and revision of laws and regulations related to chemical substances contained in products have been reflected. 2. Main points of revision (1) Changed the value of Polychloronaphthalenes from (Cl=>3) to (Cl=>1).
Nov., 2017	-	Table 2	Period when delivery is prohibited
Dec., 2018	Version 4.0	Guideline P6 Table1.2,6	1. Background Relevant parts were revised in accordance with switching of controlled chemical substance information transmission tool (AIS →chemSHERPA). Furthermore, it reflects the revised information of laws and regulations. 2. Main points of revision (1) Changed the name from AIS to chemSHERPA (2) Deleted N-Phenyl-benzenamine reaction products with styrene and 2,4,4-trimethylpentene (BNST)
May, 2019	-	Table1.2,6	1. Background of revision The establishment and revision of laws and regulations related to chemical substances contained in products have been reflected. 2. Main points of revision (1) Changed a part of exempted use for No. 11 (Lead and lead compounds) (2) Added the following substances to the list of substances of which inclusion is banned. “Polymers in which halogens are contained structurally and polymers to which halogenated compounds are added”
Apr., 2020	-	Table 1, 2, 3, 6, 10	1. Background of revision The establishment and revision of laws and regulations related to chemical substances contained in products have been reflected. 2. Main points of revision (1) Excluded application of lead and its compounds applicable conditions for "lead contained in solder necessary for reliable electrical connection between intemal semiconductor die and carrier of intergated circuit package (flip chip)" were added. (2) The name of "perfluorooctanoic acid (PFOA) and its salts and esters "has been changed to "perfluorooctancoic acid (PFOA) -related substances", and management standards and substances such usage and application examples, content thresholds, etc. The detail list was changed. (3) Added management standards for products that are not subject to EU RoHS directivesfor "bis (2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP), diisobutyl phthalate (DIBP)" The management standard of wood was changed.
Mar., 2022	-	Table 1, 2, 6, 10, 12	1. Background of revision The establishment and revision of laws and regulations related to chemical substances contained in products have been reflected. 2. Main points of revision (1) Add the following 2 substances to the list of substances of which inclusion is banned. ・Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances ・Phenol,isopropylated phosphate (3:1) (PIP (3:1)) (2) In table 2, Perfluorooctanoic acid (PFOA) and any related substances, Change management standards which are substances name, exemptions, examples of purposes and uses. (3) In table 2, Polybrominated Diphenyl ethers (PBDEs), Change threshold value. (4) In table 2, Hexabromocyclododecane (HBCDD), Change threshold value. (5) Add 2 substances described in the above (1) to Table 6. (6) In Appendices Table 10: List of applicable Perfluorooctanoic acid (PFOA) and any related substances, correct the definition of above substances since subjected regulation is changed from EU REACH regulation to EU POPs regulation. (7) Add Appendices Table12. Typical perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances.
Oct., 2022	-	Format 2	In Format 2, The object substances changed from Table 4 and Table 5 to Table 5.
Sep., 2023	-	Table 2, 3	1. Revision history Reflected the revision of laws and regulations related to chemical substances in products. 2. Main revisions (1) The management standards for the following substances in Table 2, such as exempted uses, etc., were changed. ・Mercury and mercury compounds Some exemptions were deleted or changed and deadlines were added. ・Perfluorooctanoic acid (PFOA) and any related substances Some exemptions removed. ・Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances Some exemptions removed. (2) Added note to Table 2 "Polymers containing halogens in the structure and polymers with halogen compounds added". (3) Table 3 was deleted and the management standards for packaging materials were reflected in Table 2.
Dec., 2023	Version 5.0	P3, 4, 5, 6, 7Table 1,2,3,6	1. Revision history Reflected the revision of laws and regulations related to chemical substances in products. In addition, a section on substances whose inclusion is a candidate for prohibition. 2. Main revisions (1) The following substances were added to Tables 1, 2, and 6 due to the addition of substances whose inclusion is banned. ・Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds (2) The management standards for the following substances in Table 2, such as applications, use cases, threshold values, etc. ・Cadmium and cadmium compounds ・Lead and lead compounds ・Mercury and mercury compounds (3) List of substances whose inclusion is candidate for prohibition is newly established as Table 3 (4) Otther Table 4 in 5. 2) Non-use of substances which are prohibited to use while production deleted. Contact information for this document is changed from phone number to e-mail address.

Revision history

Revision date	Edition	Revision Page	Content of the revision
May, 2024	-	Table 1,2,3	1. Revision history Reflected the revision of laws and regulations related to chemical substances in products. 2. Main revisions (1) Addition of Inclusion prohibited substance ・Dechlorane Plus ・UV-328 (2) The management standards for the following substances in Table 2, such as applications, Substance name, exempted uses, threshold values, etc. ・Lead and Lead Compounds ・Polymers in which halogens are contained structurally and polymers to which halogenated compounds are added ・Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances ・Phenol, isopropylated phosphate (3:1) (PIP (3:1)) (3) Addition of Inclusion prohibited candidate substance ・Per- and polyfluoroalkyl substances (PFAS)
July, 2025	Version 6.0	All, Format 1	1. Revision history Changes were made to the format and table layout with the aim of improving the accessibility of information. In addition, revisions to laws and regulations related to chemical substances contained in products have been reflected. The text and format were also reviewed. The text and format were also reviewed. 2. Main revisions (1) Change of format ・Pages after “4. Criteria for managing environmentally sensitive chemical substances” were set to landscape orientation. ・Requests for prohibition and exemption and information on CAS No. and reference laws and regulations are described in one line for each substance in the table of management criteria for prohibited substances. ・Detailed information was consolidated by combining into one detailed list of inclusion prohibited substances, and example substances subject to regulation or specific definitions were added to the detailed list of inclusion prohibited substances. ・Each reference law is assigned a number, and the reference law number is listed in criteria for inclusion prohibited substances. (2) Addition of inclusion prohibited substances/ inclusion prohibited candidate substances ・Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substance were added to the list of inclusion prohibited substances. ・Halogenated flame retardants were added to the list of inclusion prohibited substances. ・Fluorinated greenhouse gases (HFCs,PFCs,SF6, HFOs) were added to the list of inclusion prohibited substances. ・Medium-chain chlorinated paraffins(MCCP,C14-17) were added to the list of inclusion prohibited candidate substances. ・Long-chain perfluorocarboxylic acids (C15-C21 PFCAs), their salts and related compounds were added to the list of inclusion prohibited candidate substances. ・Each chlorine and bromine (mainly halogenated flame retardants) contained in plastic parts of office equipment such as copiers and printers were added to the list of inclusion prohibited candidate substances. (3) Revision of management criteria for the following substances in Table 4-1-2, including substance names, exempted uses, threshold values, and reference laws and regulations. ・The threshold for polychlorinated terphenyls (PCTs) was changed. ・The reference law of hexavalent chromium and its compounds was added. ・Some exempted uses of mercury and its compounds were deleted. ・The exempted uses of perfluorooctanesulfonic acid and its salts (PFOS) were deleted. ・Some exempted uses of Perfluorooctanoic acid (PFOA) and any related substances were deleted. ・The threshold for Hexabromocyclododecane (HBCDD) was changed. ・The description of target of regulation for Polymers in which halogens are contained structurally was changed and the exempted uses were deleted. ・Some exempted uses of Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances were deleted. ・Some exempted uses of Phenol, isopropylated phosphate (3:1) (PIP (3:1)) were deleted. ・The exempted uses of perfluorooctanesulfonic acid and its salts (PFOS) were deleted. ・Some exempted uses of Perfluorooctanoic acid (PFOA) and any related substances were deleted. ・The threshold for Hexabromocyclododecane (HBCDD) was changed. ・The description of target of regulation for Polymers in which halogens are contained structurally was changed and the exempted uses were deleted. ・Some exempted uses of Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances were deleted. ・Some exempted uses of Phenol, isopropylated phosphate (3:1) (PIP (3:1)) were deleted. (4) Changes to the main text ・Review of 2. Scope and 5. Requirements for suppliers (5) Changes to the response format ・The contents of Forms 1 to 4 have been integrated into Form 1, and the sample entries have been put into a separate file.