

Canon  
Green Procurement Standards



**Green**

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# Canon Green Procurement Standards

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# Canon

## Green Procurement Standards

### 1. Objective

Guided by its corporate philosophy of “*Kyosei*”, Canon group (this is hereinafter referred to as “Canon”) has been conducting global environmental conservation activities. One of these activities is green procurement, in which procurement and purchasing of environment-friendly materials, parts, and products are prioritized when necessary resources are procured and purchased. Canon would like to proceed with “Maximization of Resource Efficiency” together with suppliers to realize global environment conservation. To attain this objective, the Canon Green Procurement Standards prescribe the conditions for starting dealings with suppliers.

### 2. Scope

These standards apply to the following parts and materials constituting Canon products, OEM products, and packaging for these products.

#### 1. Products

(1) Parts, Units

(2) Materials

(3) Accessories packaged or used with product main units

In Canon sales companies, the following accessories are included:

(a) Regular commodities packaged with Canon products

(b) OEM goods that add value to Canon products

(c) Standard commodities physically connected to Canon products

(4) Consumables, manuals, attached documents, etc.

(5) Auxiliary materials used in products, such as adhesives, lubricants, and paint for identification

#### 2. Packaging

Packaging herein includes packaging that is used to wrap, protect and distribute parts and materials delivered to Canon. The standards, however, do not apply for the time being to packaging in such cases as each Canon group’s delivery site agrees that these materials are discarded at each Canon site at the present moment.

### 3. Definitions of Terms

#### 1. Environmental impact of business activities

Refer to the impact that business activities have on the environment, such as use of energy, chemical substances, and water, as well as the emission of waste.

#### 2. Environment-related laws and regulations

Refer to laws and regulations, municipal bylaws, and agreements, etc. related to environmental conservation, such as the prevention of air, water and soil pollution.

#### 3. Production environmental impact substances

Refer to chemical substances used in the process of production, or sales of parts and materials delivered to Canon. These chemical substances are specified in the “List of Production Environmental Impact Substances” (Attachment 1) and classified into the following two categories.

(1) Prohibited substances: Chemical substances whose use is prohibited or strictly limited according to international treaties, etc.

- (2) Substances targeted for reduced levels of use: Chemical substances that are believed to have a high possibility of being subject to limits on their use according to international treaties, etc.
4. Preventive measures against pollution of soil and groundwater  
Refer to measures taken to predict and prevent soil and groundwater contamination.  
Examples 1: Spill trays, linings, fluid-proof dikes, wiping cloth and spill mats in locations where chemical substances are stored and used  
Examples 2: Inspections of facilities, usage locations and storage locations
5. Product environmental impact substances  
Refer to chemical substances contained in parts and materials delivered to Canon. These chemical substances are specified in the "List of Product Environmental Impact Substances" (Attachment 2) and classified into the following three categories.
- (1) Prohibited substances: Chemical substances that must not be used in parts and materials
- (2) Use-restricted substances: Chemical substances that are allowed to be used in parts and materials for a specified period
- (3) Controlled substances: Chemical substances that require tracking of the absence/presence of each substance in parts and materials, its content, purpose, and where it is contained, etc.
6. Chemical substance  
A chemical element or compound that either exists in nature or is obtained through a manufacturing process.
7. Mixture  
A mixture intentionally comprising two or more chemical substances.  
Examples : Paints, inks, alloy ingot, solder, resin pellets containing additive , etc.
8. Article  
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.  
Examples: metal plates, gears, integrated circuits, electric appliances, transport equipment etc.
9. Chemical product  
Chemical substance or mixture.  
(The definitions of the terms 6. through 9. were taken from the "Guidelines for the Management of Chemical Substances in Products" issued by JAMP (Joint Article Management Promotion-Consortium)).
10. Contain  
It means that a particular chemical substance is originally present in a part or a material that constitutes a product. This term also refers to cases in which a substance exists as a result of addition, filling, mixing, or deposition, as well as results from a manufacturing process.
11. Intentional addition  
Refers to a state where a chemical substance is added to a product with a purpose, such as to give a certain quality.

## 12. Impurity

An impurity refers to a chemical substance which has no intended role with respect to the product's functionality and whose chemical composition differs from those of substances/substance groups identified as environmental impact substances in products. Chemical substances that remain in products after common industrial refining processes are also regarded as impurities.

However, such impurities are not regarded as inclusions in practice if they are technically unpredictable or their amounts are too small to obtain content information, except when limits or allowable values are prescribed by laws, ordinances, or standards.

When a substance is intentionally added or inclusion is intended, it is not regarded as an impurity regardless of its concentration.

## 13. Scope (Scope in List of Product Environmental Impact Substances)

This term refers to the types, purposes of use, and other conditions of products, parts, or materials to which the standards of environmental impact substances in products are applicable.

## 14. Threshold

This term refers to the concentration, intentional use, or other conditions of an environmental impact substance in products to which the standards are applicable.

When a concentration is specified for an environmental impact substance, the standards are applicable to cases in which the substance content is equal to or exceeding the specified concentration level.

The concentration of a substance is calculated using the following formula:

$$(\text{Concentration}) = \frac{(\text{content by mass of a specified chemical substance})}{(\text{mass of a part element that contains the substance})}$$

Note 1: Denominator of the concentration formula

"A part element that contains the substance", which is a denominator in the formula, differs depending on the law that applies. A denominator such as "in homogeneous materials", "in parts" or , etc., is indicated in "Threshold" . So, please use an appropriate denominator for calculation of the concentration.

Note 2: Homogeneous materials

"Homogeneous material" means an identical material of a part element that contains the specified chemical substance, and that cannot be mechanically disjointed into different materials.

Note 3: Unit of the concentration

The unit of concentration is expressed as a percent by weight, using the % and ppm (or ppb) notations. ppm is an abbreviation of "parts per million," that is, one millionth. 1 ppm equals 1 mg/kg. ppb is an abbreviation of "parts per billion," that is, one billionth. 1000 ppb equals 1 ppm.

Note 4: Elements converted value

When the applicable range is stipulated according to specific elements, the content and concentration of that element must be calculated with element equivalents. Element equivalents are calculated by multiplying the content or concentration of the compound containing the element in question by the conversion coefficient.

Note that the conversion coefficient is calculated by dividing the total atomic weight of the element in question by the molecular weight of the compound containing said element.

Ex.: Conversion coefficient for tin in dibutyltin dichloride ( $C_8H_{18}Cl_2Sn$ )

$$\text{Conversion coefficient (0.39)} = \frac{\text{Atomic weight of tin (118.7)}}{\text{Total molecular weight of dibutyltin dichloride (303.85)}}$$

15. Exemption

This term refers to uses or products to which the standards for environmental impact substances in products are not applicable because they meet conditions of exemptions from legal restrictions.

16. IEC62474

One of the international standards published by the International Electrotechnical Commission (IEC).

A document that specifies material declarations related to products and the electricity/electronic industry. For related lists, etc., please refer to the below URL.

<http://std.iec.ch/iec62474/iec62474.nsf>

17. DLS of IEC62474

DLS is an acronym for the Declarable Substance List established by IEC62474.

18. chemSHERPA

Generic name given to the new scheme for communicating information on chemical substances in products. This scheme was developed under the leadership of the Ministry of Economy, Trade and Industry of Japan. The details are referred to the below URL.

<https://chemsherpa.net/english>

19. Canon supplier

In this standard, "Canon supplier" means Canon Group's tier 1 supplier.

20. Supplier

In this standard, "supplier" means supplier who delivers parts/materials to "Canon supplier".

#### **4. “Production Environmental Impact Substances” and “Product Environmental Impact Substances”**

Canon prescribes the management criteria for the production environmental impact substances in Attachment 1, and the management criteria for the product environmental impact substances in Attachment 2.

##### 1. Production environmental impact substances

###### (1) Prohibited substances

Use of “1A Prohibited substances” is prohibited in the process of production, and sales of parts and materials delivered to Canon.

###### (2) Substances targeted for reduced levels of use

Use of “1B Substances targeted for reduced levels of use” must be reduced in the process of production, and sales of parts and materials delivered to Canon.

##### 2. Product environmental impact substances

The “List of Product Environmental Impact Substances” contains chemical substances selected as follows:

Substances contained in DSL of IEC62474, substances for packing or substances added by Canon according to social trends and changes in laws and regulations.

###### (1) Prohibited substances

The inclusion of “2A Prohibited substances” in amounts equal to or exceeding thresholds for applicable substances is prohibited in products/packings delivered to Canon, except for the exempted items, if any, specified in the lists.

The inclusion of “3A Prohibited Substances for Package only” in amounts equal to or exceeding thresholds for applicable substances is prohibited in packaging delivered to Canon, except for the exempted items, if any, specified in the lists adding to 2A prohibited substances.

Non-target products/packings and exempted items must be controlled in the same manner as the controlled substances.

However, in cases where products/packings delivered to Canon contain the prohibited substance(s) in the form of chemical substances or mixtures, if Canon judges that such substance does not remain in final Canon products/packings or OEM products, or that it satisfied laws, regulations, standards, etc. with respect to certain usage conditions, there are cases where they may be delivered to Canon.

###### (2) Use-restricted substances.

The inclusion of “2B Use-restricted substances” in amounts equal to or exceeding thresholds for applicable substances specified in the lists after the deadline dates is prohibited in products/packings delivered to Canon, except for the exempted items, if any, specified in those lists.

Non-target products/packings and exempted items must be controlled in the same manner as the controlled substances.

###### (3) Controlled substances

Regarding “2C Controlled substances,” it is necessary to monitor whether each substance is contained in products/packings delivered to Canon and, if so, keep track of its content, area of use, application, etc., except for the exempted items, if any, specified in the lists.

The inclusion of controlled substances in parts and materials delivered to Canon is neither prohibited nor restricted.

## 5. Principles behind the Requirements of the Canon Green Procurement Standards

To promote environmental conservation activities, Canon thinks it essential that the following four frameworks A through D function effectively:

A : Environmental management system for business activities

A company must construct and operate a system to reduce environmental impact caused by its business activities

B : Performance of business activities

As the result of constructing and operating an environmental management system, the following must be achieved: compliance with environment-related laws and regulations and other applicable legal requirements, no use of the prohibited substances, reduction in the use of substances targeted for reduced levels of use, and implementation of preventive measures against pollution of soil and groundwater.

C : Management of chemical substances in products (environmental management system for parts and materials)

A system must be constructed and operated to keep track of and manage chemical substances contained in parts and materials delivered to Canon.

D : Performance of parts and materials

No "prohibited substances" are contained in parts and materials delivered to Canon, and no "use-restricted substances" are contained after a specified period.

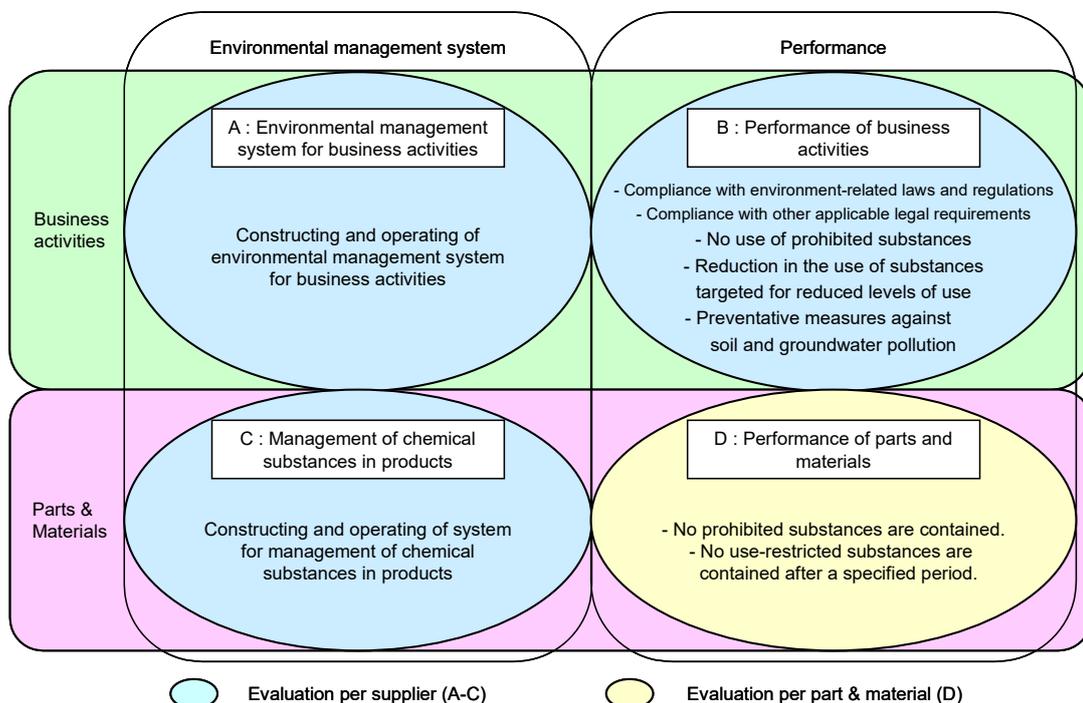


Figure 1 Four frameworks

## 6. Procedure for Starting Dealings

Each supplier is asked to develop and operate an environmental management system related to business activities and the system for management of chemical substances in products to achieve the expected performance level based on the "7.Requirements" stipulated in the Canon Green Procurement Standards.

1. Evaluation of suppliers (A through C shown in Figure 1)
  - (1) Canon will request suppliers to submit "Self-Evaluation Sheet" based on "9.(1)Supplier Environmental Evaluation" .
  - (2) Suppliers are asked to carry out self-evaluation of the conditions of activities performed to satisfy the "Requirements" and submit the result to Canon.
  - (3) Canon will carry out evaluation and make a judgment based on the results of self-evaluation submitted and start dealings with suppliers who satisfy the "Requirements".
2. Evaluation of parts and materials (D shown in Figure 1)
  - (1) Canon will request suppliers to submit information on product environmental impact substance related to parts and materials delivered to Canon based on "9.(2)Parts and Materials Evaluation".
  - (2) Suppliers are asked to submit the survey result.
  - (3) Canon will make a judgment based on the submitted survey result and only purchase parts and materials that satisfy the "Requirements".

## 7. Requirements

### [Requirements Related to Business Activities]

#### **A : Requirements Related to an Environmental Management System for Business Activities**

##### I. Construction of an Environmental management System

Responsibilities and procedures for conducting the following shall be defined and documented:

1. Policy
  - Draw up policy related to environmental management activities.
  - Communicate to all persons working for or on behalf of the organization
2. Planning
  - 2.1 Environmental aspect (Investigations of the current situation)
    - Survey on environmental impact of business activities
    - Survey on environment-related laws and regulations and other applicable legal requirements
    - Survey on production environmental impact substances
    - Survey on preventive measures against pollution of soil and groundwater
  - 2.2 Establishment targets and programme(s)
    - Draw up targets and programme(s) to reduce environmental impact based on the investigation results of the current situation.

### 3. Operational Control

- Appoint management representative(s) of the environmental management system
- Establish procedures necessary for achieving the targets.
- Communicate the procedures necessary for achieving the targets.

### 4. Performance Evaluation and Improvement

- Evaluate the progress of the programme(s), attainment of the targets, and the sufficiency of the environmental management system, and report the evaluation results to management.

### 5. Management Review

- Evaluate performance involving top management, check compliance with laws and regulations related to environment and other applicable legal requirements, and find solutions to problems.
- Reflect the above results on "1. Policy" and "2.2 Establishment of targets and programme(s)".

## II. Operation of an Environmental Management System

Activities shall be performed according to the responsibilities and procedures established to meet the above requirements (1. Construction of an Environmental Management System).

The results of activities shall be recorded, and their records kept.

## **B : Requirements Related to Performance of Business Activities**

### 1. Compliance with laws and regulations

- Suppliers must comply with environment-related laws and regulations.
- Suppliers must comply with other applicable legal requirements.

### 2. Management of production environmental impact substances

#### 2.1 Prohibited substances

- None of the "1A Prohibited Substances" defined in the "List of Production Environmental Impact Substances" (Attachment 1) shall be used in the process of development, production, and sales of parts and materials delivered to Canon.

#### 2.2 Substances Targeted for Reduced Levels of Use

- "1B Substances Targeted for Reduced Levels of Use" defined in the "List of Production Environmental Impact Substances" (Attachment 1) shall be reduced in the process of development, production, or sales of parts and materials delivered to Canon.

### 3. Preventive measures against pollution of soil and groundwater

Measures shall be taken to prevent the pollution of soil and groundwater by chemical substances.

Note: "1A Prohibited Substances" in the "List of Production Environmental Impact Substances" (Attachment 1) are, in principle, banned from use. Contact Canon if any of these substances is not banned by any regulations in the country or region and its substitution is technically difficult.

## [Requirements Related to Parts and Materials]

### **C : Requirements related to the Management of Chemical Substances in Products**

Responsibilities and procedures shall be defined and documented to conduct activities in conformity with the Action Items for Management of Chemical Substances in Products and action details in the "Guidelines for the Management of Chemical Substances in Products" issued by the JAMP (Joint Article Management Promotion-consortium). Then activities shall be carried out according to the established procedures.

The requirements prescribed in this document make it indispensable that the substances defined in the "List of Product Environmental Impact Substances" (Attachment 2) be included as objects of the management.

\*Please access the below websites to see the "Guidelines for the Management of Chemical Substances in Products."

Ver. 3 : <https://chemsherpa.net/english/docs/guidelines/archive?id=6>

Ver. 4 : <https://chemsherpa.net/english/docs/guidelines>

For the time being, either Ver. 3 or Ver. 4 may be used.

### **D : Requirements Related to Performance of Parts and Materials**

#### 1. Management of product environmental impact substances

##### 1.1 Prohibited substances

- None of the "2A and 3A Prohibited Substances" defined in the "List of Product Environmental Impact Substances" (Attachment 2) shall be contained in parts and materials delivered to Canon.

##### 1.2 Use-restricted substances

- None of the "2B Use-restricted Substances" defined in the "List of Product Environmental Impact Substances" (Attachment 2) shall be contained in parts and materials delivered to Canon after a specified period.

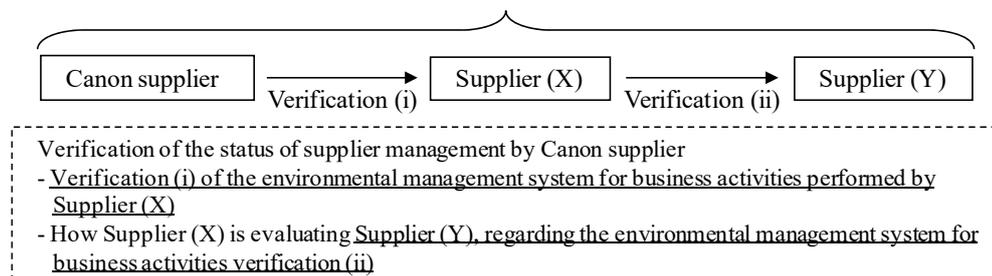
#### 2. Concerning the following chemical substances related to environmental information, when no inclusion is indicated in reply to parts & materials surveys or instructed in specifications (e.g., drawings, delivery specifications), these substances shall not be contained in parts and materials to be delivered to Canon:

- Environmental label substances (Attachment 2 "2D Environmental label substances in plastic exterior enclosure members/cabinets for business machine products")
- Chemical substances for which Canon must comply with customer requirements (Example :Attachment 2 "2E Prohibited substances in LBP (Laser Printer) parts")
- Chemical substances added according to changes in laws and regulations, as well as social trends.

## 8. Explanation of the Requirements

1. Requirements related to an environmental management system for business activities
  - (1) The “construction” of an environmental management system means to document who (“responsibilities”) should draw up guidelines and identify environmental aspects, etc., and how (“procedures”) these tasks should be carried out. The “operation” means to perform activities and keep records in accordance with the determined responsibilities and procedures. “Responsibilities” refer to responsible persons or organizations, such as a committee, etc.
  - (2) When the supplier has already constructed and operated a system toward ISO14001 reduction of environmental burdens, and satisfied the “Requirements” stipulated in the Canon Green Procurement Standards, a new system need not be constructed.
  - (3) To promote global environmental conservation activities, all the suppliers in the supply chain must construct and operate environmental management systems designed to reduce environmental impact in business activities. For this reason, when a Canon supplier (including a trading company) selects or continues dealings with supplier (X), they have to ask this supplier (X) to operate the environmental management system, and verify the operation (Requirement A and B). The verification of supplier (X) includes a process to examine how supplier (X) is verifying the environmental management system performed by supplier (Y), who is in the upstream of the supply chain.

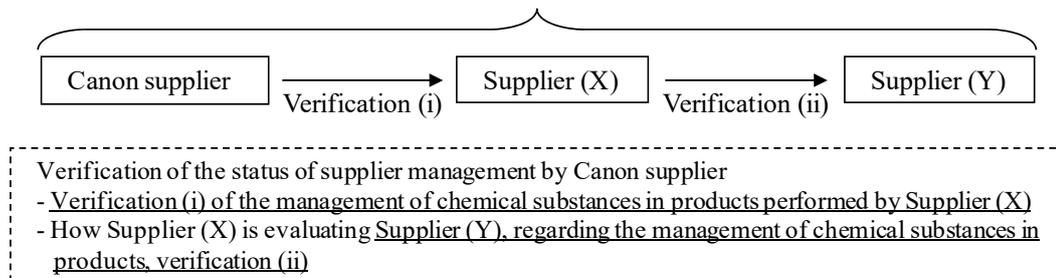
Implementation & operation of system for the environmental management system for business activities



2. Requirements related to the Management of Chemical Substances in Products
  - (1) The “management of chemical substances in products” refers to a system that keeps track of and manages throughout the supply chain chemical substances contained in parts and materials delivered to Canon. This term also means systems established by suppliers to keep track of and manage chemical substances in parts and materials delivered to them from their own suppliers.
  - (2) Refer to the “Guidelines for the Management of Chemical Substances in Products (Ver. 3)” for the action items related to the management of chemical substances in products.  
The “Action Details” provide descriptions common to the entire supply chain, with consideration given to varying businesses. When taking action, each company is asked to interpret each item in more specific terms in accordance with the “Sample Answer, note &point of management” and their own situation.

- (3) To ensure information on chemical substances in products, all the suppliers in the supply chain must implement and operate the management of chemical substances in products. For this reason, when a Canon supplier (including a trading company) selects or continues dealings with supplier (X), they have to ask this supplier (X) to operate the management of chemical substances in products, and verify the operation (Requirement C and D). The verification of supplier (X) includes a process to examine how supplier (X) is verifying the management of chemical substances in products performed by supplier (Y), who is in the upstream of the supply chain.

Implementation & operation of system for the management of chemical substances in products



- (4) Suppliers who have already constructed and operated a system such as ISO14001 or ISO9001, are recommended to make full use of their existing management systems.
- (5) Regarding parts and materials that constitute a product to be certified with an environmental label, the standards of the environmental label may prohibit or restrict the use of certain chemical substances, in addition to the product environmental impact substances. There are also chemical substances whose use is prohibited or restricted according to requests from Canon OEM clients. For this reason, when a supplier indicates no inclusion of a chemical substance in reply to a parts and materials survey, the supplier shall continue not to use this substance. Suppliers who deliver such parts and materials to Canon may be instructed not to use concerned chemical substances by means of drawings, delivery specifications, etc.
- Example of an environmental label that specifies substances: Blue Angel standards that business machine products are designed to comply with (Attachment 2 "2D Environmental label substances in plastic exterior enclosure members/cabinets for business machine products")
  - Chemical substances to be managed in line with customer requirements: Parts used in LBP products (Attachment 2 "2E Prohibited substances in LBP (Laser Printer) parts")

### 3. Notification to Canon

- (1) When an engineering change or a process change, etc. is to be made in the supply chain, notify Canon of the change in advance.
- (2) When either of the following occurs in the supply chain, Canon shall be notified immediately:
- A public institution has ordered the person responsible for an operational site to take measures necessary for making improvement or imposed a penalty, regarding environment-related laws and regulations and other applicable legal requirements that are relevant to the operational site engaged in the development, production, and sales of parts and materials delivered to Canon.
  - Parts and materials delivered to Canon are found not to comply with "D: Requirements Related to Performance of Parts and Materials."

## 9. Evaluation by Canon

### (1) Supplier Environmental Evaluation

#### (1-1) Supplier environmental evaluation procedure

The following are the steps taken for a supplier environmental evaluation regarding "A: Environmental management system for business activities," "B: Performance of business activities," and "C: Management of chemical substances in products" shown in Figure 1 Four frameworks(page7) (see "Figure 2 Supplier Environmental Evaluation Flow" ).

- (a) Canon asks each supplier to perform a "self-evaluation" before dealing start.  
Suppliers are requested to submit the evaluation results at least once in two years after the start of dealings.
- (b) The supplier is requested to perform a self-evaluation on the status of their activities with respect to the "Requirements" and submit the results using the format designated by Canon. Said format may be downloaded from Canon's website.  
In addition to the results of self-evaluation explained, Canon may request suppliers to submit materials that will verify the construction and operation of an "environmental management system for business activities" and "system for management of chemical substances in products".
- (c) Based on the results of self-evaluation submitted by suppliers, Canon evaluates whether the suppliers satisfy the requirements of "A: Environmental management system for business activities", "B: Performance of business activities", and "C: Management of chemical substances in products" shown in Figure 1 and makes a judgment.
- (d) The supplier will be informed of Canon's evaluation results.

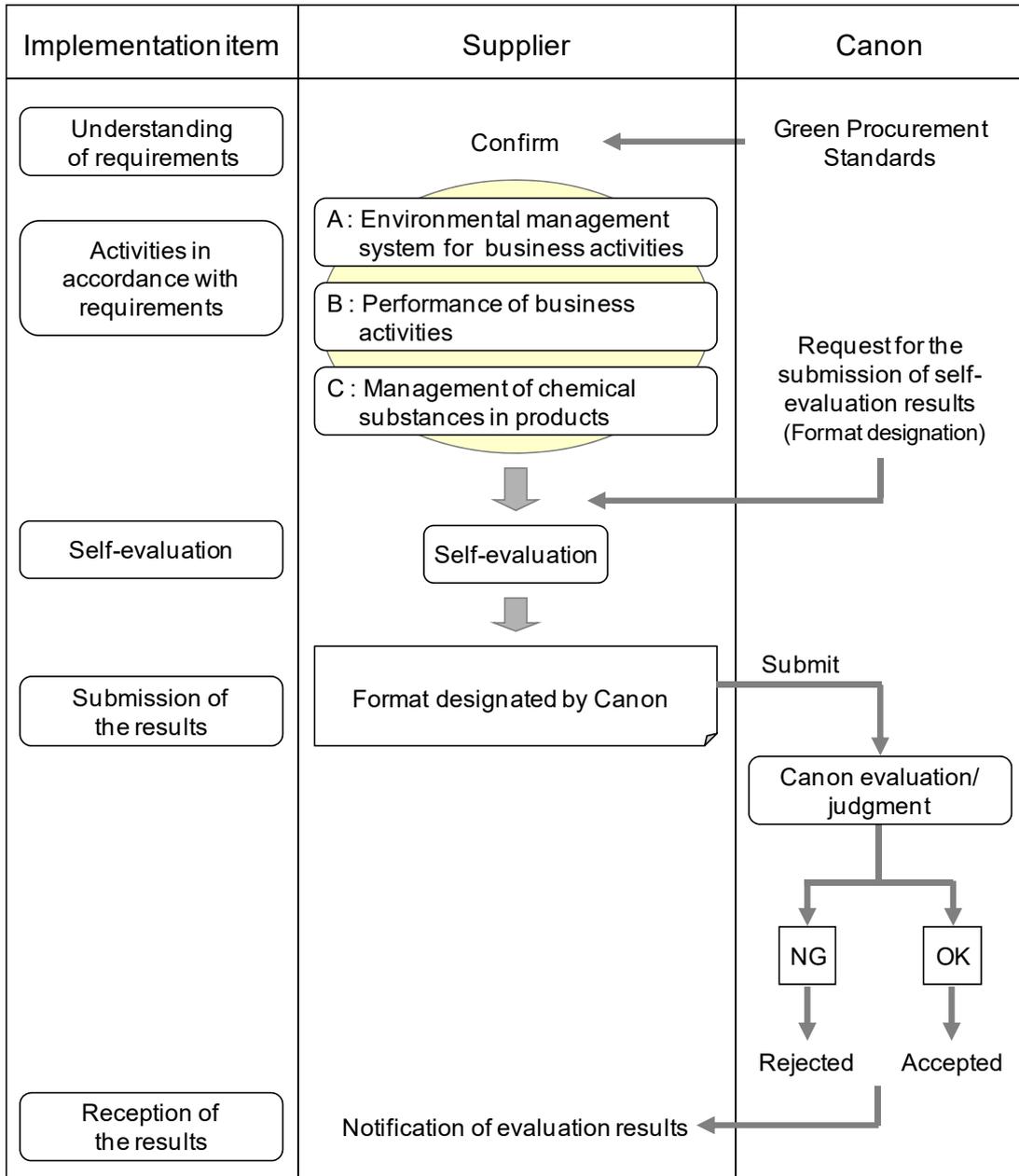


Figure2 Supplier Environmental Evaluation Flow

## (1-2) Suppliers concerned with “self-evaluation”

## (a) Concerned companies

Companies meeting either of the following conditions are concerned:

## (1) Supplier (Supplier who does business directly with Canon)

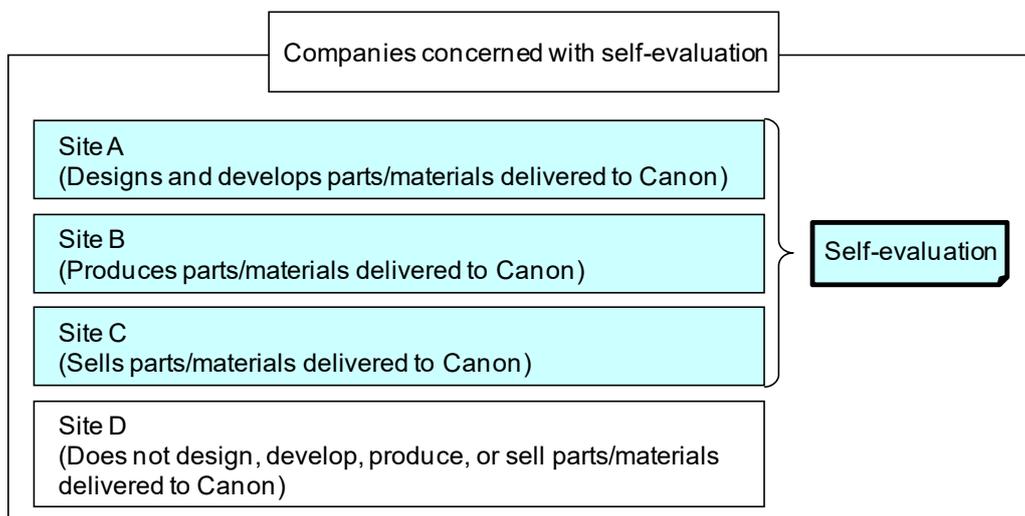
If the supplier is a trading company and currently unable to perform purchasing management in accordance with these Standards, the supplier takes the responsibility for checking the status of supplier management by manufacturers or subcontractor sites/plants that produce parts and materials delivered to Canon, and Canon provides for cooperation in this check for the time being.

## (2) Companies operating throughout the supply chain

- Suppliers manufacturing parts and materials (e.g., resin material, sheet steel, or general-purpose electrical part, etc.) specified by Canon
- Specific companies designated by Canon to consign processing works, etc.

## (b) Concerned sites and plants

All the sites and plants that design, develop, produce, or sell parts and materials delivered to Canon are concerned.



Regarding the evaluation of “C: Management of chemical substances in products” in Figure 1 Four frameworks(page7), if the management of chemical substances in products does not complete within one site (plant), all the concerned sections outside the site (plant) are also subjected to the evaluation.

Example: When a site (plant) has only manufacturing sections and headquarters sections (parent company) select raw materials to be designed and used, the headquarters sections (parent company) are also subject to the evaluation.

When the same system for the management of chemical substances in products is developed and implemented, an evaluation may be performed for the entire group.

## (2) Parts and Materials Evaluation

## (2-1) Parts and materials evaluation procedures

The followings are the procedures of evaluation to be performed on each part and material concerning "D: Performance of parts and materials" shown in Figure 1 (see "Figure 3 Parts and Materials Evaluation Flow").

- (a) Suppliers are asked to verify in advance information on product environmental impact substances in parts and materials delivered to Canon.
- (b) Canon requests each supplier to provide answers to the parts and materials survey through (1) and (2) below.

In addition, we may make a request equivalent to (1) and (2) using different methods/forms.

## (1) "chemSHERPA-AI file" and "chemSHERPA-CI file"

Necessity of each information is as follows when you fill in "chem SHERPA-AI file":

- Compliance : Required
- Composition : Please enter information as much as possible

Necessity of each information is as follows when you fill in "chem SHERPA-CI file":

- Composition : Required

You may use the data creation support tool provided by chemSHERPA for entry. For detailed methods on providing responses using this tool, please refer to the manual and usage rules provided by chemSHERPA. These will be obtained at the following URL.

<https://chemsherpa.net/english/tool>

## (2) "Canon Survey sheet for packaging" and "Canon's Additional Survey Form"

This survey form will be used to find information required in the following cases, separately from the product environmental impact substances specified in the chemSHERPA file. Canon will request surveys as needed.

- Product environmental impact substances specified in these Standards but not the subject of the chemSHERPA file
- When material information, chemical substance information, etc. related to eco-label certification is necessary

Examples of required information: environmental label substances in resin covers and casing of business machine products certified by Eco Mark or Blue Angel

- When surveys are necessary to comply with environmental laws and regulations for substances in packaging materials, batteries, and other specific applications.
- When a need arises to obtain environmental information judged necessary according to social trends and changes in laws and regulations
- When measures must be taken to respond to customer requests, etc.

For the detailed method of reply, refer to the "Canon Survey Form Entry Manual" issued separately by Canon.

<https://global.canon/en/procurement/green03.html>

- (c) Suppliers are asked to fill in the requested survey form with their answers and submit it.

- (d) When an engineering change or a process change, etc. is to be made, notify Canon of the change in advance. When such a change is likely to alter answers of parts and materials survey, Canon will re-examine the contained chemical substances and re-evaluate product performance.

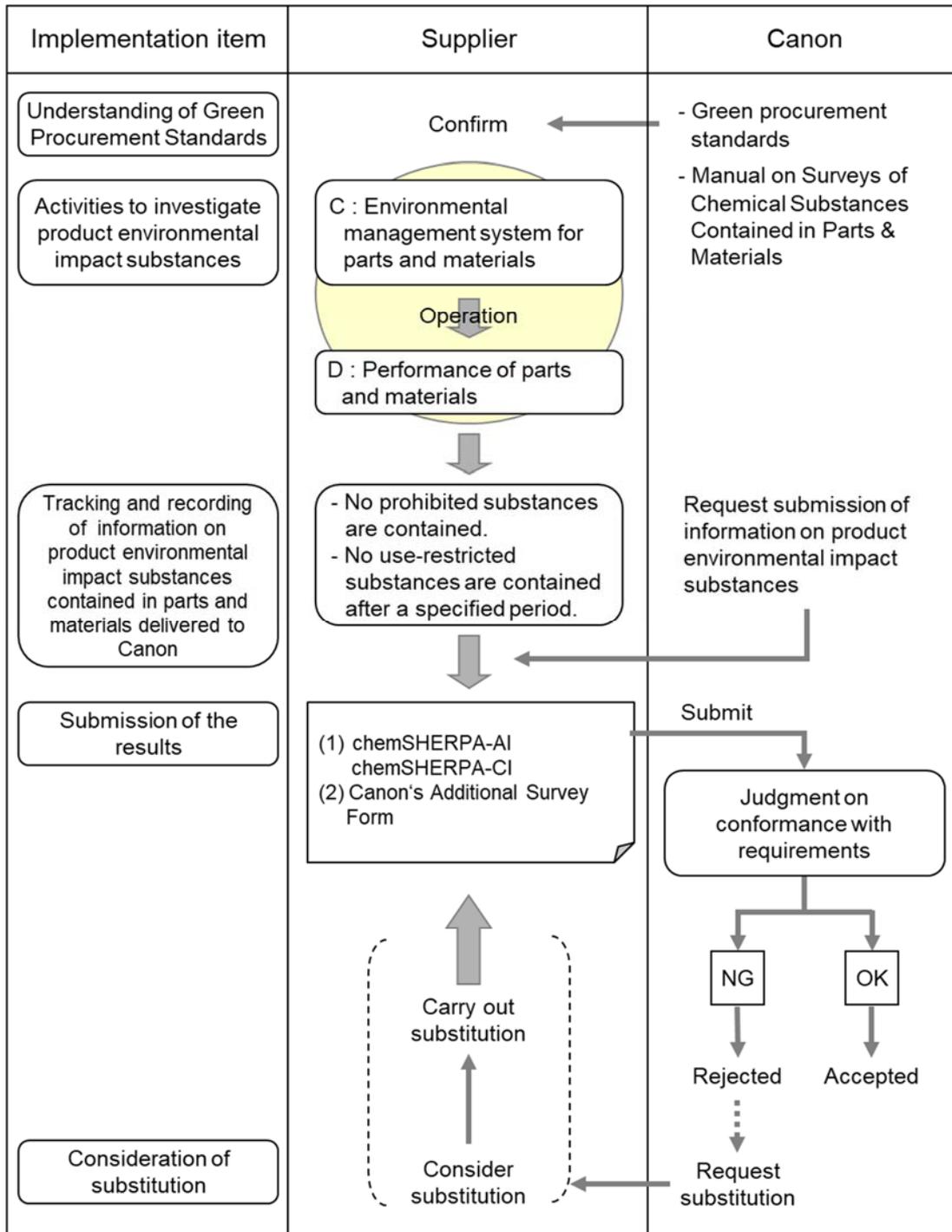


Figure3 Parts and Materials Evaluation Flow

## 10. Handling of Information

Information provided by suppliers for the purpose of the management of chemical substances in products will be shared only within the Canon group.

Information provided by suppliers may be furnished to a non-Canon third party as it was originally provided or in a processed state in the following cases.

- (1) To disclose or provide supplier information to government judicial agencies or administrative agencies based on directives from those agencies.
- (2) To disclose or provide supplier information to an audit corporation who performs an audit based on relevant laws.
- (3) To disclose or provide supplier information to obtain or maintain certifications from a certification authority.
- (4) To disclose or provide supplier information based on a request for disclosure from important customers, corporate investors and citizen groups.

Suppliers who are inconvenienced by the disclosure of this information are asked to contact Canon. For information on the handling of personal information, please see the Canon website.

Note that in the case of (4) above, suppliers will be notified in advance if Canon is to disclose or furnish information as it was originally provided by suppliers to a third party. "In a processed state" means that Canon may edit and furnish information provided by suppliers to a third party as part of Canon product-related information.

## 11. Acknowledgement of Revisions

The handling of the "Canon Green Procurement Standards—Acknowledgement of Revision\*"

1. When revisions (1) and/or (2) are made, suppliers having direct dealings with Canon are to submit the "Canon Green Procurement Standards—Acknowledgement of Revision\*".
  - (1) Revisions of the requirements
  - (2) Revisions pertaining to "1A Prohibited substances," "2A Prohibited substances," "3A Prohibited Substances for Package only" "2B Use-restricted substances" (prohibition to be placed within one year), (When substances to be prohibited or restricted are newly added)
2. When revisions (1), (2), and/or (3) are made, suppliers need not submit the "Canon Green Procurement Standards—Acknowledgement of Revision\*" but must comply with the Standards including all revisions.
  - (1) Revisions pertaining to "1B Substances targeted for reduced levels of use", "1C Controlled substances", "2B Use-restricted substances" (prohibition to be placed one year or more later), "2C Controlled substances,"
  - (2) Revision of supplements for the requirements
  - (3) Corrections of typos

\* "Acknowledgement of Revision" is a document to acknowledge compliance with the revised Standards when revisions are made.

## 12. Starting Date for Application

This version of Canon Green Procurement Standards shall start to be applied from August 1st, 2020.

**Major changes in Ver.12.1**

Ver.12.1	July 2020	Revision of Attachment 2 "Product Environmental Impact Substances List" 2A Prohibited Substances 3A Prohibited Substances for Package only 2A-2 Items for Prohibition of the Use of Heavy Metals in Batteries 2C-1 Controlled substances (Candidate SVHC for authorization of REACH) 2F Controlled Substances in Medical Equipment Products
Ver.12.1a	August 2020	- Correction of errors in writing - 2A Prohibited Substances; Revise Threshold of Cadmium/Cadmium compounds from 0.1 mass% (1000 ppm) to 0.01 mass% (100 ppm)
Ver.12.1a1	October 2020	- Correction of errors in writing - 2E Prohibited Substances in LBP (Laser Printer) parts; Revise Threshold value of ppm (from 100 ppm to 1000 ppm)

Documentation, survey sheets (forms) and other materials related to green procurement are available by download from the following URL

English (English and Chinese)

<http://global.canon/en/procurement/green03.html>

Japanese (English, Japanese and Chinese)

<http://global.canon/ja/procurement/green03.html>

**Inquiries**

Canon's each site of your dealing

Canon Green Procurement Standards Ver.12.1a1

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## **Appendix 1 List of Production Environmental Impact Substances**

This Appendix 1 makes a list of management criteria for the production environmental impact substances specified in Canon Green Procurement Standards. The management criteria specified in the "List of Production Environmental Impact Substances" should be satisfied production, and sales of parts and materials delivered to Canon.

- 1A Prohibited Substances
- 1B Substances Targeted for Reduced Levels of Use

**1A Prohibited Substances**

(Chemical substances prohibited to be used production, or sales of parts and materials delivered to Canon.)

<b>1A-1 Montreal Protocol (Annex A/B/C/E)</b>		
No.	CAS.No.	Substance
1	-	CFCs
2	-	Halon
3	56-23-5	Carbon tetrachloride
4	71-55-6	1,1,1-Trichloroethane
5	-	HCFCs
6	-	HBFCs
7	74-97-5	Bromochloromethane
8	74-83-9	Methyl bromide
<b>1A-2 Convention concerning safety in the use of asbestos</b>		
No.	CAS.No.	Substance
9	-	Asbestos
<b>1A-3 Stockholm convention on Persistent Organic Pollutants (Annex A/B)</b>		
No.	CAS.No.	Substance
10	-	Polychlorinated biphenyls (PCB)
11	-	Polychlorinated naphthalene (2 or more chlorine atoms)
12	118-74-1	Hexachlorobenzene
13	309-00-2	Aldrin
14	60-57-1	Dieldrin
15	72-20-8	Endrin
16	50-29-3	DDT
17	57-74-9	Chlordane
18	76-44-8	Heptachlor
19	8001-35-2	Toxaphene
20	2385-85-5	Mirex
21	87-68-3	Hexachlorobutadiene
22	-	Perfluorooctane sulfonic acid (PFOS) and its salts <sup>a)</sup> Perfluorooctane sulfonyl fluoride (PFOSF)
23	608-93-5	Pentachlorobenzene
24	319-84-6	Alpha hexachlorocyclohexane
25	319-85-7	Beta hexachlorocyclohexane
26	58-89-9	Lindane
27	143-50-0	Chlordecone
28	36555-01-8	Hexabromobiphenyl
29	-	Tetrabromodiphenyl ether and pentabromodiphenyl ether
30	-	Hexabromodiphenyl ether and heptabromodiphenyl ether
31	115-29-7 959-98-8 33213-65-9	Technical endosulfan and its related isomers

<b>1A-3 Stockholm convention on Persistent Organic Pollutants (Annex A/B)</b>		
No.	CAS.No.	Substance
32	25637-99-4 3194-55-6 4736-49-6 65701-47-5 134237-50-6 134237-51-7 134237-52-8 138257-17-7 138257-18-8 138257-19-9 169102-57-2 678970-15-5 678970-16-6 678970-17-7	Hexabromocyclododecane
33	-	Pentachlorophenol and its salts and esters
34	85535-84-8 68920-70-7 71011-12-6 85536-22-7 85681-73-8 108171-26-2	Short-chain chlorinated paraffins (Alkanes, C10-13, chloro): straight-chain chlorinated hydrocarbons with chain lengths ranging from C10 to C13 and a content of chlorine greater than 48 per cent by weight
35	1163-19-5	Decabromodiphenyl ether (commercial mixture, c-decaBDE)
<p>Note : In Japan, targets substances of Stockholm treaty is prohibited as specified chemical substances Class I of Chemical Substances Control Law. And some substances except the above substances are listed in specified chemical substances Class I.</p> <p>Note <sup>a)</sup> Perfluorooctane sulfonic acid (PFOS) and its salts may be used for the following applications:</p> <ul style="list-style-type: none"> <li>- Manufacture of etching agents (limited to those used in the manufacture of compound semiconductors that enable piezoelectric filters or radio devices to transmit/receive a frequency of 3 MHz or above)</li> <li>- Manufacture of resist for semiconductors</li> <li>- Manufacture of photo films for industrial use</li> </ul>		
<b>1A-4 Prohibited Substances for Preventing Soil Contamination (Canon Standards)</b>		
No.	CAS.No.	Substance
(3)	56-23-5	Carbon tetrachloride <sup>a)</sup>
36	107-06-2	1,2-Dichloroethane
37	75-35-4	Vinylidene (di) chloride
38	540-59-0 156-59-2 156-60-5	1,2-Dichloroethylene
39	542-75-6	1,3-dichloropropene
40	75-09-2	Dichloromethane
41	127-18-4	Tetrachloroethylene
(4)	71-55-6	1,1,1-Trichloroethane <sup>a)</sup>
42	79-00-5	1,1,2-Trichloroethane
43	79-01-6	Trichloroethylene
44	71-43-2	Benzene
45	75-01-4	Chloroethylene <sup>b)</sup>
<p>Note <sup>a)</sup> These substances are prohibited by other categories (International treaties). However, these are listed again in the light of importance of preventing soil contamination.</p> <p>Note <sup>b)</sup> Chloroethylene is not prohibited as synthetic raw material for resin and/or paint, etc.</p>		

<b>1A-5 Substances having a significant impact on human health (Canon Standards)</b>		
No.	CAS.No.	Substance
46	-	Tetraphosphorus
47	-	Benzidine and its salt
48	-	4-Aminobiphenyl and its salt
49	-	4-Nitrobiphenyl and its salt
50	-	Bis(chloromethyl) ether
51	-	$\beta$ -Naphthylamine and its salt
<p>Note The above is set as Canon based on the banned substances under the Industrial Safety and Health Act in Japan. The also Industrial Safety and Health Act regulates asbestos and benzene-containing rubber paste (benzene capacity: &gt;5%) as prohibited substances.</p>		

### **1B Substances Targeted for Reduced Levels of Use**

(Chemical substances targeted for reduced levels of use production, or sales of parts and materials delivered to Canon.)

No applicable substances at present.

Note: New "substances targeted for reduced levels of use" may be set in the future.

## Appendix 2 List of Product Environmental Impact Substances

- 2A Prohibited Substances  
(Prohibited Substances including in product/packing to delivery to Canon)
  
- 3A Prohibited Substances for Package only
  - Attached table 2A-1 Details of Prohibited substances
  - Attached table 2A-2 Items for Prohibition of the Use of Heavy Metals in Batteries
  - Attached table 2A-3 Exempted Applications of Heavy Metals Restricted by EU RoHS Directive
  - Attached table 2A-4 Product Categories in EU RoHS Directives
  
- 2B Use-restricted Substances  
(For product/package delivery to Canon, Canon should make the deadline, and contain of the substances will be prohibited after the deadline.)  
\*No stipulations at present
  
- 2C Controlled Substances  
(Substances to be managed use-for, part (portion) of use and including product to be delivered to Canon.)  
  
Attached table 2C-1 Controlled substances (Candidate SVHC for authorization of REACH)
  
- 2D Environmental label substances in plastic exterior enclosure members/  
cabinets or business machine products (EcoMark, BlueAngel)
  
- 2E Prohibited Substances in LBP (Laser Printer) parts
  
- 3E Prohibited Substances in packaging LBP (Laser Printer) parts
  
- 2F Controlled Substances in Medical Equipment Products
  
- Reference laws and regulations and Numberings in Attached Tables

## 2A Prohibited Substances (Prohibited Substances including in product/packing to delivery to Canon)

No.	Substance/Substance group	Applicable Substances CAS No.	Typical applications	Scope	Threshold	Exemption	Reference laws and regulations	ID of IEC62474 DSL
1	Cadmium/Cadmium compounds	—	Pigments, anti-corrosion surface treatments, optical glass, heat stabilizers, plating, fluorescent materials, electrodes, low melting solders, electric contacts, zinc plating, photoelectric applications, phosphor coatings, bearing alloys	All, except batteries	0.01 mass% (100ppm) of total Cd in homogenous material	Attached Table 2A-3	1,2,3,4, 5-1	00010
			Relay contact; photodiode voltaic cell, Ni/Cd battery	Batteries	Refer to Attached Table 2A-2 Prohibited Heavy Metals in Batteries			00011
2	Chromium (VI) Compounds	—	Pigment, paint, ink, catalyst, plating, anticorrosion surface treatment, dye, paint dryer, surface treatment	All	0.1 mass% (1000ppm) of total Cr+6 in homogenous material	Attached Table 2A-3	1,2,3,4	00012
				Leather products / leather components that come into contact with the skin	0.0003 mass% (3ppm) of total Cr+6 in the total dry weight of leather		5-1	—
3	Lead/Lead Compounds	—	Rubber hardener, pigment, paint, lubricant, plastic stabilizer, materials for battery, free-machining alloy, free-cutting steels, optical materials, X-ray shielding in CRT glass, electrical solder material, mechanical solder materials, curing agent, vulcanizing agent, ferroelectrics, resin stabilizer, plating, metal alloy, resin additives	All, except batteries	0.1 mass% (1000ppm) of total Pb in homogenous material	Attached Table 2A-3	1,2,3,4, 5-1	00021
			Pigment, paint, stabilizer, colorant	Consumer products designed or intended primarily for children 12 years of age or younger	0.01 mass% (100ppm) of total Pb in product		13	00022
			Pigment, paint, stabilizer, colorant	Paint and similar surface coatings of toys and other articles intended for use by children	0.009 mass% (90ppm) of surface coating material		13	00023
			Cables/cords	Cables/cords with thermoset or thermoplastic coatings	0.03 mass% (300ppm) of surface coating material		6	00024
			Zinc carbon batteries, alkaline button cells	Batteries	Refer to Attached Table 2A-2 Prohibited Heavy Metals in Batteries			00025
4	Mercury/Mercury Compounds	—	Fluorescent bulb, contact point material, pigment, anti-corrosion, switches, antibacterial treatment	All, except batteries	Intentionally added or 0.1 mass% (1000ppm) of total Hg in homogenous material	Attached Table 2A-3	1,2,3,4, 5-1,31	00029
			Silver-oxide button cells, alkaline batteries, zinc carbon batteries	Batteries	Refer to Attached Table 2A-2 Prohibited Heavy Metals in Batteries			00030 00132
5	Asbestos	—	Insulator, filler, pigment, paint, talc	All	Intentionally added		5-1,7,8	00003
6	Bis(tributyltin) oxide (TBTO)	56-35-9	Antiseptic, antifungal agent, paint, pigment, antistaining, refrigerant, foaming agent, extinguishant, solvent cleaner	All	Intentionally added		9	00054
7	Dibutyltin (DBT) compounds	—	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin	All	0.1 mass% (1000ppm) of tin in the part		5-1	00014

## 2A Prohibited Substances (Prohibited Substances including in product/packing to delivery to Canon)

No.	Substance/Substance group	Applicable Substances CAS No.	Typical applications	Scope	Threshold	Exemption	Reference laws and regulations	ID of IEC62474 DSL
8	Diocetyl tin (DOT) compounds	—	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin	(1) textile and leather articles intended to come into contact with the skin, (2) childcare articles, (3) two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)	0.1 mass% (1000ppm) of tin in the part		5-1	00015
9	Tri-substituted organostannic compounds	—	Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, anti-fungal agent, paint, pigment, antistaining	All	Intentionally added or 0.1 mass% (1000ppm) of tin in the part		5-1,9,11	00055
10	Polybrominated biphenyls (PBB)	—	Flame retardant	All	0.1 mass% (1000ppm) in homogenous material		1,2,4	00044
11	Polybrominated diphenyl ethers (PBDE)	—	Flame retardant	All	Intentionally added or 0.1 mass% (1000ppm) in homogenous material		1,2,4,9	00045
12	Hexabromocyclododecane (HBCDD)	Refer to Attached Table 2A-1(Details of Prohibited substances1)	Flame retardant; mainly used for expanded polystyrene and some types of fiber	All	Intentionally added or 0.01 mass% (100ppm) of article		9,10	00020
13	Polychlorinated Biphenyls (PCBs) and specific substitutes	Refer to Attached Table 2A-1(Details of Prohibited substances2)	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution, plasticizers, fire retardants, dielectric sealants	All	Intentionally added		5-1, 7,9,10	00046
14	Polychlorinated Terphenyls (PCTs)	—	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution, plasticizers, fire retardants, coatings for electrical wire and cable, dielectric sealants	All	0.005 mass% (50ppm) in material		5-1	00047
15	Polychlorinated naphthalenes	—	Lubricant, paint, stabilizer (electric characteristic, flame-resistant, water-resistant) insulator, flame retardant	All	Intentionally added		9,10	00048
16	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	—	Plasticizer for PVC, flame retardant	All	Intentionally added or 0.1 mass% (1000ppm) of article		38	00052
17	Perfluorooctane sulfonates (PFOS)	—	Antistatic agent for films and plastics	Textiles or other coated materials	Intentionally added or 1 microgram/m <sup>2</sup> of coated material	- Any photographic coatings applied to films, papers, or printing plates - Any photoresists or anti-reflective coatings for photolithography processes	9,10,12	00124
			Antistatic agent for films and plastics	All except textiles or other coated materials	Intentionally added or 0.1 mass% (1000ppm) of the part (as the sum of PFOS)			00125
18	Fluorinated Greenhouse Gases (PFC, SF <sub>6</sub> , HFC)	Refer to Attached Table 2A-1(Details of Prohibited substances3)	Refrigerants, blowing agents, extinguishing agents, cleaning agents, insulating media, caustic gas	All	Intentionally added	except for "Scope" in Attached Table 2A-1(Details of Prohibited substances3)	14	00018
19	Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others)	Refer to Attached Table 2A-1(Details of Prohibited substances4)	Refrigerant, foaming agent, extinguishant, solvent cleaner	All	Intentionally added		15,16,17	00032

## 2A Prohibited Substances (Prohibited Substances including in product/packing to delivery to Canon)

No.	Substance/Substance group	Applicable Substances CAS No.	Typical applications	Scope	Threshold	Exemption	Reference laws and regulations	ID of IEC62474 DSL
20	Azocolourants and azodyes which form certain aromatic amines	—	Pigment, dyes, colorants	Textiles and Leather	0.003% (30ppm) by weight of the finished textile/leather product (Refer to attached table 2A-1)		5-1	00004
21	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	UV-stabilizer in adhesives, paints, printing inks, plastics, inked ribbons, putty, caulking or sealing fillers	All	Intentionally added		9	00035
22	Dimethylfumarate (DMF)	624-49-7	Biocide, mold prevention treatment of electronic leather seats, including recliners, massage chairs	All	0.00001 mass% (0.1ppm) of the part		5-1	00016
23	Polycyclic aromatic hydrocarbons (PAH)	Refer to Attached Table 2A-1(Details of Prohibited substances <sup>6</sup> )	Impurities in carbon black, which is used as coloring agent in plastics and softener in rubbers	Rubber or plastic parts that come into direct, prolonged or repetitive skin or oral cavity contact except those for toys or childcare articles	0.0001 mass% (1ppm) of the plastic or rubber part		5-1	00108, 00109, 00110, 00111, 00112, 00113, 00114, 00115
				Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact	0.00005 mass%(0.5ppm) of the plastic or rubber part			00116, 00117, 00118, 00119, 00120, 00121, 00122, 00123
24	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	0.1 mass% (1000ppm) in homogenous material		1	00038
25	Dibutyl phthalate (DBP)	84-74-2	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	0.1 mass% (1000ppm) in homogenous material		1	00039
26	Benzyl butyl phthalate (BBP)	85-68-7	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	0.1 mass% (1000ppm) in homogenous material		1	00040
27	Diisobutyl phthalate	84-69-5	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	0.1 mass% (1000ppm) in homogenous material		1	00041
28	Phthalates, Selected Group 1 (DEHP, DBP, BBP, DIBP)	117-81-7 84-74-2 85-68-7 84-69-5	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	(1)Packaging material (2)Promotional materials and accessories	0.1 mass% (1000ppm) as the sum of the phthalate concentrations in plasticized material		5-1	00036
29	Perfluorooctanoic acid and its salts	—	Greases, textiles and other coated consumer products, and emulsifiers used for manufacturing the Fluoropolymers and fluoroelastomers	All	Intentionally added or 0.000025 mass% (25ppb) of PFOA including its salts in article or mixture	Note <sup>3)</sup> regarding PFOA and its salts/related substances	5-1	00160
30	PFOA-related substances	—	Greases, textiles and other coated consumer products, and emulsifiers used for manufacturing the Fluoropolymers and fluoroelastomers	All	Intentionally added or 0.0001 mass% (1000ppb) of one or a combination of PFOA-related substances, in article or mixture			00161

## [Notes for 2A as a whole]

- The "Applicable Substance CAS No." column shows CAS No. when substance(s) is specified. The "--" in the column means the substance is defined as substance group.  
- The numbers in the "Reference laws and regulations" column correspond to the numbers in Attached "Reference laws and regulations". "Reference laws and regulations" in this Attached Table do not include all laws, ordinances, and standards to be the basis, but give only examples.

[Note<sup>3)</sup> regarding PFOA and its salts/related substances ]

- Photolithography process or etching process in semiconductor manufacturing (Deliverable deadline: July 4th, 2024). However, when the content of applicable substances in parts is 0.1% or more, delivery is prohibited regardless of the usage or deadline (IEC62474 DSL Reference ID: 00104)  
- Photo-coating that applies to films (Deliverable deadline: July 4th, 2024). However, when the content of applicable substances in parts is 1µg/m<sup>2</sup> or more, delivery is prohibited regardless of the usage or deadline (IEC62474 DSL Reference ID: 00103).

## 3A Prohibited Substances for Package only

No.	Substance/Substance group	Applicable Substances CAS No.	Typical applications	Scope	Threshold	Exemption	Reference laws and regulations
1	Four heavy metals: Cadmium and its compounds /Hexavalent chromium compounds /Lead and its compounds /Mercury and its compounds	—	Pigment, paint, stabilizer for PVC	Package	Intentionally added or Sum of cadmium, hexavalent chromium, lead and mercury contained in excess of 0.01 mass% (100ppm) by weight in homogeneous material		23,24
2	Arsenic Compounds	—	Wood preservative	When used in timber as antiseptic agent			5-1
3	Cobalt dichloride	—	Humidity Indicator Cards (HIC), moisture indicator in silica gel	The substance is contained as an indicator in a drying agent			5-1
4	Polyvinyl chloride/polyvinylidene chloride	—	Resin material Chemical-resistant material	When used as packaging material			25

## 【Notes for 3A as a whole】

- The "Applicable Substance CAS No." column shows CAS No. when substance(s) is specified. The "-" in the column means the substance is defined as substance group.

- The numbers in the "Reference laws and regulations" column correspond to the numbers in Attached "Reference laws and regulations". "Reference laws and regulations" in this Attached Table do not include all laws, ordinances, and standards to be the basis, but give only examples.

## 2A-1 Details of Prohibited Substances 1

No.		Applicable substances	CAS No.
12	Hexabromocyclododecane (HBCDD)	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	3194-55-6
		$\alpha$ -hexabromocyclododecane	134237-50-6
		$\beta$ -hexabromocyclododecane	134237-51-7
		$\gamma$ -hexabromocyclododecane	134237-52-8

## 2A-1 Details of Prohibited substances 2

No.		Applicable substances	CAS No.
13	Polychlorinated Biphenyls (PCBs) and specific substitutes	Polychlorinated biphenyls (all isomers and homologs)	1336-36-3
		Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6
		Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	81161-70-8
		Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8

## 2A-1 Details of Prohibited Substances 3

No.	Applicable substances	CAS No.
18	Tetrafluoromethane (PFC-14)	75-73-0
	Hexafluoroethane (PFC-116)	76-16-4
	Octafluoropropane (PFC-218)	76-19-7
	Decafluorobutane (PFC-31-10)	355-25-9
	Dodecafluoropentane (PFC41-12)	678-26-2
	Tetradecafluorohexane (PFC-51-14)	355-42-0
	Octafluorocyclobutane (PFC-c318)	115-25-3
	Sulfur hexafluoride (SF <sub>6</sub> )	2551-62-4
	Trifluoromethane (HFC-23)	75-46-7
	Difluoromethane (HFC-32)	75-10-5
	Methyl fluoride (HFC-41)	593-53-3
	2H,3H-Decafluoropentane (HFC-43-10mee)	138495-42-8
	Pentafluoroethane (HFC-125)	354-33-6
	1,1,2,2-Tetrafluoroethane (HFC-134)	359-35-3
	1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2
	1,1-Difluoroethane (HFC-152a)	75-37-6
	1,1,2-Trifluoroethane (HFC-143)	430-66-0
	1,1,1-Trifluoroethane (HFC-143a)	420-46-2
	2H-Heptafluoropropane (HFC-227ea)	431-89-0
	1,1,1,2,2,3-Hexafluoropropane (HFC-236cb)	677-56-5
1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)	431-63-0	
1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)	690-39-1	
1,1,2,2,3-Pentafluoropropane (HFC-245ca)	679-86-7	
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	460-73-1	
1,1,1,3,3-Pentafluorobutane (HFC-365mfc)	406-58-6	
1,2-difluoroethane (HFC-152)	624-72-6	
Fluoroethane (HFC-161)	353-36-6	
	<p>[Scope]</p> <p>When the following substances are used intentionally for the specific uses respectively.</p> <p>1) PFCs, HFCs, SF<sub>6</sub></p> <ul style="list-style-type: none"> <li>- Non-refillable containers, Windows, Footwear, Tires</li> <li>- One component foams, except when required to meet national safety standards</li> </ul> <p>2) HFCs, PFCs</p> <ul style="list-style-type: none"> <li>- Non-confined direct evaporation systems containing refrigerants</li> </ul> <p>3) PFCs, HFC-23</p> <ul style="list-style-type: none"> <li>- Fire protection equipments</li> </ul> <p>4) HFCs (GWP<sup>a)</sup> 150 or more)</p> <ul style="list-style-type: none"> <li>- Novelty aerosols</li> <li>- Domestic refrigerators and freezers</li> <li>- Technical aerosols (Legal application start day: 2018/1/1)</li> <li>- Stationary refrigeration equipment (GWP2500 or more), Refrigerators and freezers for commercial use (GWP2500 or more), Movable room air-conditioning equipment, Foams (Extruded polystyrene (XPS) (Legal application start day: 2020/1/1)</li> <li>- Refrigerators and freezers for commercial use (less than GWP2500), Multipack centralised refrigeration systems for commercial use with a rated capacity of 40 kW or more (Legal application start day: 2022/1/1)</li> <li>- Foams (except extruded polystyrene(Legal application start day: 2023/1/1)</li> <li>- 3 Single split air-conditioning systems containing less than 3 kg of fluorinated greenhouse gases (GWP750 or more) (Legal application start day: 2025/1/1)</li> </ul> <p>Note <sup>a)</sup> "GWP" means Global Warming Potential.</p>	

## 2A-1 Details of Prohibited substances 4

No.		Montreal Protocol Annex A					
19	Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others)	Group I	CFCl <sub>3</sub> (CFC-11)	Group II	CF <sub>2</sub> BrCl(halon-1211)		
			CF <sub>2</sub> Cl <sub>2</sub> (CFC-12)		CF <sub>3</sub> Br(halon-1301)		
			C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> (CFC-113)		C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> (halon-2402)		
			C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> (CFC-114)				
			C <sub>2</sub> F <sub>5</sub> Cl(CFC-115)				
		Montreal Protocol Annex B					
		Group I	CF <sub>3</sub> Cl(CFC-13)	Group I	C <sub>3</sub> F <sub>3</sub> Cl <sub>5</sub> (CFC-213)		
			C <sub>2</sub> FCl <sub>5</sub> (CFC-111)		C <sub>3</sub> F <sub>4</sub> Cl <sub>4</sub> (CFC-214)		
			C <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub> (CFC-112)		C <sub>3</sub> F <sub>5</sub> Cl <sub>3</sub> (CFC-215)		
			C <sub>3</sub> FCl <sub>7</sub> (CFC-211)		C <sub>3</sub> F <sub>6</sub> Cl <sub>2</sub> (CFC-216)		
			C <sub>3</sub> F <sub>2</sub> Cl <sub>6</sub> (CFC-212)		C <sub>3</sub> F <sub>7</sub> Cl(CFC-217)		
		Group II	CCl <sub>4</sub> Carbon tetrachloride				
		Group III	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> 1,1,1-trichloroethane (methylchloroform) Note : This does not contain 1,1,2-trichloroethane.				
		Montreal Protocol Annex C					
							Number of isomers
		Group I	CHFCl <sub>2</sub> (HCFC-21)	1			
			CHF <sub>2</sub> Cl(HCFC-22)	1			
			CH <sub>2</sub> FCl(HCFC-31)	1			
			C <sub>2</sub> HFCl <sub>4</sub> (HCFC-121)	2			
			C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub> (HCFC-122)	3			
			C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub> (HCFC-123)	3			
			CHCl <sub>2</sub> CF <sub>3</sub> (HCFC-123) <sup>a)</sup>	–			
			C <sub>2</sub> HF <sub>4</sub> Cl(HCFC-124)	2			
			CHFClCF <sub>3</sub> (HCFC-124) <sup>a)</sup>	–			
			C <sub>2</sub> H <sub>2</sub> FCl <sub>3</sub> (HCFC-131)	3			
			C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub> (HCFC-132)	4			
			C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl(HCFC-133)	3			
			C <sub>2</sub> H <sub>3</sub> FCl <sub>2</sub> (HCFC-141)	3			
			CH <sub>3</sub> CFCl <sub>2</sub> (HCFC-141b) <sup>a)</sup>	–			
			C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl(HCFC-142)	3			
			CH <sub>3</sub> CF <sub>2</sub> Cl(HCFC-142b) <sup>a)</sup>	–			
			C <sub>2</sub> H <sub>4</sub> FCl(HCFC-151)	2			
C <sub>3</sub> HFCl <sub>6</sub> (HCFC-221)	5						
C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub> (HCFC-222)	9						
C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub> (HCFC-223)	12						
C <sub>3</sub> HF <sub>4</sub> Cl <sub>3</sub> (HCFC-224)	12						
C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> (HCFC-225)	9						
CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub> (HCFC-225ca) <sup>a)</sup>	–						
CF <sub>2</sub> ClCF <sub>2</sub> CHClF(HCFC-225cb) <sup>a)</sup>	–						
C <sub>3</sub> HF <sub>6</sub> Cl(HCFC-226)	5						
C <sub>3</sub> H <sub>2</sub> FCl <sub>5</sub> (HCFC-231)	9						
C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub> (HCFC-232)	16						
C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> (HCFC-233)	18						
C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> (HCFC-234)	16						

## 2A-1 Details of Prohibited substances 4

No.	Montreal Protocol Annex C						
19	Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others)	Group I	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Cl(HCFC-235)		9		
			C <sub>3</sub> H <sub>3</sub> FCl <sub>4</sub> (HCFC-241)		12		
			C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Cl <sub>3</sub> (HCFC-242)		18		
			C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Cl <sub>2</sub> (HCFC-243)		18		
			C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Cl(HCFC-244)		12		
			C <sub>3</sub> H <sub>4</sub> FCl <sub>3</sub> (HCFC-251)		12		
			C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Cl <sub>2</sub> (HCFC-252)		16		
			C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Cl(HCFC-253)		12		
			C <sub>3</sub> H <sub>5</sub> FCl <sub>2</sub> (HCFC-261)		9		
			C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Cl(HCFC-262)		9		
			C <sub>3</sub> H <sub>6</sub> FCl(HCFC-271)		5		
					Number of isomers		Number of isomers
			Group II	CHBr <sub>2</sub>	1	CH <sub>2</sub> FBr	1
		CHF <sub>2</sub> Br(HBFC-22B1)		1	C <sub>2</sub> HFB <sub>4</sub>	2	
		C <sub>2</sub> HF <sub>2</sub> Br <sub>3</sub>		3	C <sub>2</sub> HF <sub>3</sub> Br <sub>2</sub>	3	
		C <sub>2</sub> HF <sub>4</sub> Br		2	C <sub>2</sub> H <sub>2</sub> FBr <sub>3</sub>	3	
		C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>2</sub>		4	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Br	3	
		C <sub>2</sub> H <sub>3</sub> FBr <sub>2</sub>		3	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Br	3	
		C <sub>2</sub> H <sub>4</sub> FBr		2	C <sub>3</sub> HFB <sub>6</sub>	5	
		C <sub>3</sub> HF <sub>2</sub> Br <sub>5</sub>		9	C <sub>3</sub> HF <sub>3</sub> Br <sub>4</sub>	12	
		C <sub>3</sub> HF <sub>4</sub> Br <sub>3</sub>		12	C <sub>3</sub> HF <sub>5</sub> Br <sub>2</sub>	9	
		C <sub>3</sub> HF <sub>6</sub> Br		5	C <sub>3</sub> H <sub>2</sub> FBr <sub>5</sub>	9	
		C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>4</sub>		16	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Br <sub>3</sub>	18	
		C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>		16	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Br	8	
		C <sub>3</sub> H <sub>3</sub> FBr <sub>4</sub>		12	C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Br <sub>3</sub>	18	
		C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Br <sub>2</sub>		18	C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Br	12	
		C <sub>3</sub> H <sub>4</sub> FBr <sub>3</sub>		12	C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Br <sub>2</sub>	16	
		C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Br		12	C <sub>3</sub> H <sub>5</sub> FBr <sub>2</sub>	9	
		C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Br		9	C <sub>3</sub> H <sub>6</sub> FBr	5	
		Group III		CH <sub>2</sub> BrCl Bromochloromethane			
		Montreal Protocol Annex E					
		Group I	CH <sub>3</sub> Br Methylbromide				

Note <sup>3)</sup> These are substances which have the highest possibility of being used commercially.

## 2A -1 Details of Prohibited substances 5

No.		Name of aromatic amine	CAS No.
20	Azocolourants and azodyes which form certain aromatic amines	4-Aminoazobenzene	60-09-3
		<i>o</i> -anisidine	90-04-0
		2-naphthylamine	91-59-8
		3,3'-dichlorobenzidine	91-94-1
		biphenyl-4-ylamine	92-67-1
		Benzidine	92-87-5
		<i>o</i> -toluidine	95-53-4
		4-chloro- <i>o</i> -toluidine	95-69-2
		2,4-toluenediamine	95-80-7
		<i>o</i> -aminoazotoluene	97-56-3
		5-nitro- <i>o</i> -toluidine	99-55-8
		3,3'-dichloro-4,4'-diaminodiphenylmethane	101-14-4
		4,4'-methylenedianiline	101-77-9
		4,4'-diaminodiphenylether	101-80-4
		<i>p</i> -chloroaniline	106-47-8
		3,3'-dimethoxybenzidine	119-90-4
		3,3'-dimethylbenzidine	119-93-7
		2-methoxy-5-methylaniline	120-71-8
		2,4,5-trimethylaniline	137-17-7
		4,4'-thiodianiline	139-65-1
4-methoxy- <i>m</i> -phenylenediamine	615-05-4		
4,4'-methylenedi- <i>o</i> -toluidine	838-88-0		
<p>Note The object of control under 2A is "Azocolourants and azodyes which form certain aromatic amines." This refers to azo compounds that form any of the amines listed in this Table during the reductive decomposition of azo groups.</p> <p>The threshold level of 0.003 weight % (30 ppm) applies not to azo dyes/pigments but to the amines listed in this Table.</p>			

## 2A-1 Details of Prohibited substances 6

No.		Applicable substances	CAS No.	IEC62474 DSLØID
23	Polycyclic aromatic hydrocarbons (PAH)	Benzo[a]pyrene (BaP)	50-32-8	00108
				00116
		Benzo[e]pyrene (BeP)	192-97-2	00109
				00117
		Benzo[a]anthracene (BaA)	56-55-3	00110
				00118
		Chrysen (CHR)	218-01-9	00111
				00119
		Benzo[b]fluoranthene (BbFA)	205-99-2	00112
				00120
		Benzo[j]fluoranthene (BjFA)	205-82-3	00113
				00121
		Benzo[k]fluoranthene (BkFA)	207-08-9	00114
				00122
Dibenzo[a,h]anthracene,(DBA <sub>h</sub> A)	53-70-3	00115		
		00123		

## 2A-2 Items for Prohibited of Use of Heavy Metals in Batteries

No.	Substance Group	Classification of batteries	Applicable range (Threshold level)	Reference laws and regulations
1	Cadmium/iCadmium compounds	A. All batteries except those indicated in B/C	Batteries containing equal to or more than 0.002% by weight (20ppm) of cadmium <Exemption> The battery of the use of following 1 and 2 1) Emergency and warning system including emergency lamps 2) Medical equipment	26,27,28
		B. Manganese battery, Alkaline battery	Batteries containing equal to or more than 0.001% by weight (10ppm) of cadmium	
		C. Nickel hydride (Ni-MH) secondary battery (excluding Button battery)	Batteries containing equal to or more than 0.001% by weight (10ppm) of cadmium	26,28
3	Lead/Lead compounds	A. Manganese battery	Batteries containing equal to or more than 0.1% by weight (1000ppm) of lead	27,29,30
		B. Alkaline battery	Batteries containing equal to or more than 0.004% by weight (40ppm) of lead	
		C. Nickel hydride (Ni-MH) secondary batteries (excluding Button battery)	Batteries containing equal to or more than 0.4% by weight (4000ppm) of lead	
4	Mercury/Mercury compounds	A. All batteries except those indicated in B to D	Batteries containing equal to or more than 0.0005% by weight (5ppm) of mercury	26,27,28, 31,32,33, 34,35,36, 37,38
		B. Manganese battery, Alkaline battery	1) Intentional use. 2) Batteries containing equal to or more than 0.0001% by weight (1ppm) of mercury or equal to or more than 0.0005% by weight (5ppm) of mercury in homogenous material	
		C. Nickel hydride (Ni-MH) secondary battery (excluding Button battery)	Batteries containing equal to or more than 0.0001% by weight (1ppm) of mercury or equal to or more than 0.0005% by weight (5ppm) of mercury in homogenous material	
		D. Mercury oxide cells, Mercury oxide button cells, Button-type air-zinc cell battery, Button-type silver oxide cell battery, All button batteries used in consumer products (excluding Alkaline button battery, Manganese button battery)	Intentional use. When the substance is contained as impurity, item A above shall apply	
<p>Note: Definition of batteries.</p> <p>1) A manganese battery: A battery that consists of a manganese dioxide positive electrode, a zinc negative electrode, and a non-alkaline electrolyte</p> <p>2) An alkaline battery: A battery that consists of a manganese dioxide positive electrode, a zinc negative electrode, and an alkaline electrolyte</p> <p>3) A nickel hydride (Ni-MH) secondary battery: A battery that consists of a nickel oxide positive electrode, a hydrogen storing alloy negative electrode, and an alkaline electrolyte</p> <p>4) A mercury oxide cell: A battery in which a mercuric-oxide electrode is used</p>				

## Attached Table2A-3 Exemptions from the EU RoHS Directive

Refer to the Exemption Lists at the IEC62474 website (URL below) for the exemptions and their details (concerned substance groups, categories, expiry dates, etc.) prescribed in the EU RoHS Directive.

<http://std.iec.ch/iec62474/iec62474.nsf>

Take note of the following when looking up the IEC62474 Exemption Lists:

- Refer to the EU RoHS ANNEX III List for the exemptions common to all categories set out in Annex III of the EU RoHS Directive.
- Refer to the EU RoHS ANNEX IV List for the exemptions of Categories 8 and 9 set out in Annex IV of the EU RoHS Directive.
- In the IEC62474 Exemption Lists, different IDs are separately given to the same exemption having the same No. when product categories or expiry dates are different. When looking up the lists, determine the concerned product category first, and then search for the appropriate entry.

Example: To find the legal expiry date of Exemption No. 6 (c) for lead/lead compounds in Category 4 products

regIndex (Exemption number in Regulation if specified)	Product Categories	Expiry Date
6(b)-II	1 to 7 and 10	Lead
6(c)	1 to 11	Lead
6(c)	1 to 11	Lead
6(c)	1 to 7 and 10	Lead
6(c)	8 and 9 other than in vii	Lead
6(c)	8 in nitro	Lead
6(c)	9 industrial and 11	Lead
7(c)	1 to 11	Lead

Check the expiry date in the entry relevant to Category 4 ("1 to 7 and 10" in this example).

- When the European Committee decides to change an expiry date or exemption details, it takes some time for the change to be reflected on the IEC62474 Exemption Lists, so care must be taken about this time lag.

Attached Table2A-4 EU Product categories set out in the EU RoHS Directive  
The EU RoHS Directive contains the table of categories shown below.

Category 1	Large household appliances
Category 2	Small household appliances
Category 3	IT and telecommunications equipment.
Category 4	Consumer equipment
Category 5	Lightning equipment
Category 6	Electrical and electronic tools
Category 7	Toys, leisure and sports equipment.
Category 8	Medical device
Category 9	Monitoring and control instruments including industrial monitoring and control instruments.
Category 10	Automatic dispensers
Category 11	Other EEE not covered by any of the categories above

Controlled Substances(Substances to be managed use-for, part (portion) of use and including product to be delivered to Canon.)

No.	Substance/ Substance Group	Applicable Substances CAS No.	Typical Applications	Scope	Threshold	Exemptions	Reference laws and regulations	ID of IEC62474 DSL
1	Nickel/Nickel Compounds	—	Stainless steel, plating	All, where prolonged skin contact is expected	Intentionally added		5-1	00031
2	Radioactive substances	—	Optical properties (thorium), measuring devices, gauges, detectors	All	Intentionally added		18,19,20	00049
3	Beryllium Oxide	1304-56-9	Ceramics	All	0.1 mass% (1000ppm) of product		42	00005
4	Perchlorates	—	Lithium batteries; coin cell batteries	All	6E-7 mass% (0.006ppm) of battery or product part		21	00033
5	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)	—	Flame retardant for housing, connectors, package molding sealing	Plastic materials except printed wiring board laminates	0.1 mass% (1000ppm) of bromine in plastic materials		40	00009
			Flame retardant in printed wiring board laminate	Printed wiring board laminate	0.09 mass% (900ppm) total bromine content in laminate		41	00008
6	Chlorinated Flame Retardants (CFR)	—	flame retardant for housing, connectors, package molding sealing	Plastic materials except printed wiring board laminates	0.1 mass% (1000ppm) chlorine in plastic materials		40	00062
			flame retardant	Printed Wiring Board (PWB) Laminates	0.09 mass% (900ppm) total chlorine content in laminate		41	00063
7	Polyvinyl chloride (PVC)/PVC Copolymers <sup>a)</sup>	—	Resin materials, insulators, chemical resistance, transparency, PVC Copolymers-sheath materials	plastic materials	0.1 mass% (1000ppm) chlorine in plastic materials		—	—

Controlled Substances(Substances to be managed use-for, part (portion) of use and including product to be delivered to Canon.)

No.	Substance/ Substance Group	Applicable Substances CAS No.	Typical Applications	Scope	Threshold	Exemptions	Reference laws and regulations	ID of IEC62474 DSL
8	Formaldehyde	50-00-0	Textiles	Textiles	0.0075 mass% (75ppm) of textile		22	00019
9	Phthalates, Selected Group 2 (DIDP, DINP, DNOP)	28553-12-0 68515-48-0 26761-40-0 68515-49-1 117-84-0	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	0.1 mass% (1000ppm) as the sum of the phthalate concentrations in plasticized material		5-1,13	00037
10	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	Used as a plasticizer for PVC	All	Intentionally added		6	00107
11	Di-isodecyl phthalate (DIDP)	68515-49-1 26761-40-0	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	Intentionally added		6	00090
12	Di-n-hexyl Phthalate (DnHP)	84-75-3	Plasticizer, dye, pigment, paint, ink, adhesive, lubricant	All	Intentionally added or 0.1 mass% (1000ppm) of article		5-2,6	00091
13	4,4'- isopropylidene diphenol	80-05-7	Antioxidant for plasticizer and PVC, ink, paint and adhesive; used as monomer in epoxy resins and plastics	All	Intentionally added or 0.1 mass% (1000ppm) of article		5-2,6	00141
14	REACH Regulation Candidate List of substances of very high concern for Authorisation( SVHC)	See Attached Table 2C-1 (Candidate List of substances of very high concern for Authorisation (SVHC))	—	All	0.1 mass% (1000ppm) of article		5-2	—

[Notes for Attached Table 2C as a whole]

- The "Applicable Substance CAS No." column shows CAS No. when substance(s) is specified. The "-" in the column means the substance is defined as substance group.

- The numbers in the "Reference laws and regulations" column correspond to the numbers in Attached "Reference laws and regulations". "Reference laws and regulations" in this Attached Table do not include all laws, ordinances, and standards to be the basis, but give only examples.

[Note <sup>a)</sup> ]

For "Polyvinyl chloride (PVC) /PVC polymer", additional survey will be carried out if necessary individually.

**Attached Table 2C-1 Controlled substances (Candidate List of substances of very high concern for Authorisation(SVHC))**

They are controlled substances when contained equal to or more than 0.1mass% (1,000 ppm) in an article\*.

However, each requirement shall take precedence, in the case that there is a description in the Note column and falls within the scope of Attached Table2A,3A (Prohibited substances) or Table2B (Use-restricted substances).

\*"Article" herein means "the minimum unit of a part designed to perform its function." (This interpretation is based upon the judgment of the European Court of Justice delivered in September 2015 pertaining to the denominator (article) for calculating concentrations under the REACH Regulations.

No.	Substance/ Substance Group	Applicable Substances CAS No.	Note	DSL ID of IEC62474
1	Diarsenic pentoxide	1303-28-2	Use for wood preservative is prohibited pursuant to Attached Table3A No.2	00001
2	Diarsenic trioxide	1327-53-3		00002
3	Cobalt Dichloride	7646-79-9	Use for indicator in a drying agent is prohibited pursuant to Attached Table3A No.3 (Cobalt dichloride).	00013
4	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	Use under the scope of Attached Table2A No.24-27 and 28, is prohibited.	00038
5	Dibutyl phthalate (DBP)	84-74-2		00039
6	Benzyl butyl phthalate (BBP)	85-68-7		00040
7	Diisobutyl phthalate	84-69-5		00041
8	Lead chromate	7758-97-6		00026
9	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	Use under the scope of Attached Table2A No.2 (Chromium (VI) Compounds) or No.3 (Lead/Lead Compounds), is prohibited.	00027
10	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2		00028
11	Aluminosilicate Refractory Ceramic Fibres	—	—	00050
12	Zirconia Aluminosilicate Refractory Ceramic Fibres	—	—	00051
13	Tris(2-chloroethyl) phosphate	115-96-8	—	00056
14	Boric acid	—	—	00007
15	Disodium tetraborate, anhydrous	—	—	00017
16	Tetraboron disodium heptaoxide, hydrate	12267-73-1	—	00163
17	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	—	00042
18	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	—	00043
19	Strontium chromate	7789-06-2	Use under the scope of Attached Table2A No.2(Chromium (VI) Compounds) is prohibited.	00053
20	Pentazinc chromate octahydroxide	49663-84-5		00060
21	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9		00061
22	Bis(2-methoxyethyl) phthalate	117-82-8	—	00059
23	Bis(2-methoxyethyl) ether	111-96-6	—	00058
24	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	—	00057
25	Diboron trioxide	1303-86-2	—	00075
26	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	—	00066
27	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	—	00068
28	Orange lead (lead tetroxide)	1314-41-6	Use under the scope of Attached Table 2A No.3 (Lead/Lead Compounds) is prohibited.	00071
29	Lead oxide sulfate	12036-76-9		00085
30	Sulfurous acid, lead salt, dibasic	62229-08-7		00065
31	Tetralead trioxide sulphate	12202-17-4		00070
32	Pentalead tetraoxide sulphate	12065-90-6		00073

Attached Table 2C-1 Controlled substances (Candidate List of substances of very high concern for Authorisation(SVHC))

No.	Substance/ Substance Group	Applicable Substances CAS No.	Note	DSL ID of IEC62474	
33	Lead dinitrate	10099-74-8	Use under the scope of Attached Table 2A No.3 (Lead/Lead Compounds) is prohibited.	00089	
34	Lead titanium trioxide	12060-00-3		00083	
35	Lead titanium zirconium oxide	12626-81-2		00084	
36	Trilead dioxide phosphonate	12141-20-7		00067	
37	Silicic acid (H <sub>2</sub> SiO <sub>5</sub> ), barium salt (1:1), lead-doped	68784-75-8		00079	
38	Fatty acids, C16-18, lead salts	91031-62-8		00088	
39	Dioxobis(stearato)trilead	12578-12-0		00087	
40	Lead cyanamidate	20837-86-9		00077	
41	[Phthalato(2-)]dioxotrilead	69011-06-9		00086	
42	Pyrochlore, antimony lead yellow	8012-00-8		00072	
43	Dibutyltin dichloride (DBTC)	683-18-1		Use under the scope of Attached Table 2A No.7 (Dibutyltin (DBT) compounds) is prohibited.	00076
44	Diisopentyl phthalate	605-50-5		—	00081
45	N-pentyl-isopentylphthalate	776297-69-9	—	00082	
46	Hexahydromethylphthalic anhydride	—	—	00092	
47	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0	—	00080	
48	1,2-Diethoxyethane	629-14-1	—	00074	
49	N,N-dimethylformamide	68-12-2	—	00078	
50	4-Aminoazobenzene	60-09-3	Use under the scope of Attached Table 2A No.20 (Azocolourants and azodyes which form certain aromatic amines) is prohibited.	00069	
51	Cadmium	7440-43-9	Use under the scope of Attached Table 2A No.1 (Cadmium/Cadmium compounds) is prohibited.	00093	
52	Cadmium oxide	1306-19-0		00094	
53	Cadmium sulphide	1306-23-6		00099	
54	Cadmium hydroxide	21041-95-2		00146	
55	Dipentyl phthalate (DPP)	131-18-0	—	00095	
56	4-Nonylphenol, branched and linear, ethoxylated	—	—	00098	
57	Trixylyl phosphate	25155-23-1	—	00100	
58	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	—	00105	
59	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	—	00126	
60	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	—	00102	
61	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	—	00106	
62	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	—	00130	
63	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	Use under the scope of Attached Table 2A No.8 (Dioctyltin (DOT) compounds) is prohibited.	00128	

Attached Table 2C-1 Controlled substances (Candidate List of substances of very high concern for Authorisation(SVHC))

No.	Substance/ Substance Group	Applicable Substances CAS No.	Note	DSL ID of IEC62474
64	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	—	Use under the scope of Attached Table2A No.8 (Dioctyltin (DOT) compounds) is prohibited.	00129
65	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	—	—	00131
66	1,3-propanesultone	1120-71-4	—	00133
67	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	—	00134
68	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	—	00135
69	Perfluorononan-1-oic-acid and its sodium and ammonium salts	—	—	00140
70	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	Use under the scope of the Table2A No. 23(Polycyclic aromatic hydrocarbons (PAH)) is prohibited.	00138
71	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	—	—	00142
72	Perfluorohexane-1-sulphonic acid and its salts	—	—	00143
73	Chrysene	218-01-9	Use under the scope of the Table2A No. 23(Polycyclic aromatic hydrocarbons	00144
74	Benz[a]anthracene	56-55-3	23(Polycyclic aromatic hydrocarbons	00145
75	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octa deca-7,15-diene ("Dechlorane Plus™")	—	Use for flame retardant and usage under the scope of Attached Table 2C No.6(Chlorinated Flame Retardants (CFR)), other special control has to be needed.	00147
76	Benzo[ghi]perylene	191-24-2	—	00148
77	Octamethylcyclotetrasiloxane	556-67-2	—	00149
78	Decamethylcyclopentasiloxane	541-02-6	—	00150
79	Dodecamethylcyclohexasiloxane	540-97-6	—	00151
80	Disodium octaborate	12008-41-2	—	00152
81	Terphenyl, hydrogenated	61788-32-7	—	00153
82	Lead	7439-92-1	Use under the scope of Attached Table 2A No.3 (Lead/Lead Compounds) is prohibited.	00154
83	Dicyclohexyl phthalate	84-61-7	—	00139
84	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	—	00155
85	Benzo[k]fluoranthene	207-08-9	Use under the scope of the Table2A No. 23(Polycyclic aromatic hydrocarbons (PAH)) is prohibited.	00156
86	Fluoranthene	206-44-0	—	00157
87	Phenanthrene	85-01-8	—	00158
88	Pyrene	129-00-0	—	00159
89	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	—	—	00162
90	Diisohexyl phthalate	71850-09-4	—	00164
91	Perfluorobutane sulfonic acid (PFBS) and its salts	—	—	00165

[Notes for Attached Table 2C-1 as a whole]  
- In principle, this table includes substances in DSL of IEC62474 which applies to electrical and electronic equipment only among substances on the candidate SVHC for authorization of REACH.  
- The "Applicable Substance CAS No." column shows CAS No. when substance(s) is specified. The "-" in the column means the substance is defined as substance group.

2D Environmental label substances in plastic exterior enclosure members/cabinets for business machine products (Eco Mark, Blue Angel)

Chemical substances for which surveys on inclusion information are required for parts and materials used for specific purposes and in specific portions in products in the category of specific business machine products related to Eco-label certification. Here, chemical substances classified as "2A Prohibited Substances" are excluded. Canon will individually contact suppliers to make a survey request. These substances are prohibited from use in parts & materials to be delivered to Canon, when no inclusion of these substances is indicated in reply to parts & materials surveys or when no inclusion is instructed by means of specifications (e.g., drawings, delivery specifications).

No.	Chemical substance and chemical substance group	Organization, law or list specified in eco-label standards	
		Organization, law, or list regulating chemical substance	Classification in the organization, law, or list on the left
1	Chlorinated Paraffin	-	-
2	Polymers containing halogen	-	-
3	Organohalogen compounds (in particular, flame retardants)	-	-
4	Carcinogenic substances	1272/2008/EC <sup>a)</sup> , ANNEX VI Table3.1	Category 1A
			Category 1B
5	Reproductive toxic substances	1272/2008/EC <sup>a)</sup> , ANNEX VI Table3.1	Category 1A
			Category 1B
6	Mutagenic substances	1272/2008/EC <sup>a)</sup> , ANNEX VI Table3.1	Category 1A
			Category 1B
7	Substances listed on the candidate list of SVHC(REACH) (Versions up to time of application)	Candidate List of Substances of Very High Concern for Authorisation disclosed by ECHA	-
Notes: <sup>a)</sup> 1272/2008/EC: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 [CLP Regulation] (EU) Annex VI of this EU Regulation was transferred from the old 67/548/EEC Annex I.			

## 2E Prohibited Substances in LBP (Laser Printer) parts

Prohibition of these substances applies to parts & materials used in LBP (OEM specifications) products, and parts & materials surveys will be conducted using the "Canon's Additional Survey Form (peripherals version)". When suppliers indicate no inclusion of these substances in reply to parts & materials surveys or no inclusion is instructed by means of specifications (e.g., drawings, delivery specifications), these substances are prohibited from use in parts & materials that are employed in LBP (OEM specifications) products to be delivered to Canon.

No.	Chemical substance and chemical substance group	Threshold	Conditions, etc.
1	Halogen Compounds	0.1 mass %(1000ppm) (in homogeneous materials)	Resin parts are concerned Exemptions are indicated in Supplement 1.
2	Latex element included in natural rubber	Intentional use	Excluding use inside components
3	Arsenic and its compounds	0.1 mass %(1000ppm) (in homogeneous materials)	Excluding use in semiconductor chips (dye only) and copper foil of printed circuit boards
4	Beryllium and its compounds	0.1 mass %(1000ppm) (in homogeneous materials)	Exemptions are made for the following: - Ceramic in electronic components - Electrical coupling use of beryllium copper(connectors, springs, EMI gaskets, etc.)
5	Polycyclic Aromatic Hydrocarbons (PAH)	Refer to Attached Table 2E for objective substances and threshold value	Applies to exterior components for LBP
<p>Supplement 1 Halogen Compounds</p> <ul style="list-style-type: none"> <li>- When the corresponding substances are contained in the grade of the primary material itself, and when the content material grade of the corresponding substance is indicated in drawings, etc., they are exempted even if they are "resin parts."</li> <li>- "Electrical parts and rubber parts" are exempted.</li> </ul> <p>(Exemption examples) Tapes, sponges, sheet, film, spacers, wire saddles, tie wraps, switches, fans, motors, photo sensors, inlets, power supply, connectors, printed-circuit boards, power cords, cables, etc</p>			

Attached Table 2E

No.	CAS NO.	Target substances	Threshold
1	50-32-8	Benzo(a)pyrene	<0.0001 mass%(1ppm)
2	192-97-2	Benzo(e)pyrene	<0.0001 mass%(1ppm)
3	56-55-3	Benzo(a)anthracene	<0.0001 mass%(1ppm)
4	205-99-2	Benzo(b)fluoranthene	<0.0001 mass%(1ppm)
5	205-82-3	Benzo(j)fluoranthene	<0.0001 mass%(1ppm)
6	207-08-9	Benzo(k)fluoranthene	<0.0001 mass%(1ppm)
7	218-01-9	Chrysene	<0.0001 mass%(1ppm)
8	53-70-3	Dibenzo(a,h)anthracene	<0.0001 mass%(1ppm)
9	191-24-2	Benzo(g,h,i)perylene	<0.0001 mass%(1ppm)
10	193-39-5	Indeno(1,2,3-cd)pyrene	<0.0001 mass%(1ppm)
11	83-32-9	Acenaphthene	Total <0.005 mass%(50ppm)
12	208-96-8	Acenaphthylene	
13	86-73-7	Fluorene	
14	85-01-8	Phenanthrene	
15	120-12-7	Anthracene	
16	206-44-0	Fluoranthene	
17	129-00-0	Pyrene	
18	91-20-3	Naphthalene	<0.0001 mass%(1ppm)
	Total of the above 18 substances		<0.005 mass%(50ppm)

## 3E Prohibited Substances in Packaging LBP (Laser Printer) parts

Prohibition of these substances applies to parts & materials used in packaging LBP (OEM specifications) products, and parts & materials surveys will be conducted using the "Canon's Additional Survey Form (peripherals version)"

When suppliers indicate no inclusion of these substances in reply to parts & materials surveys or no inclusion is instructed by means of specifications (e.g., drawings, delivery specifications), these substances are prohibited from use in parts & materials that are employed in packaging LBP (OEM specifications) products to be delivered to Canon.

No.	Chemical substance and chemical substance group	Threshold	Conditions, etc.
1	Latex element included in natural rubber	Intentional use	Excludes cases where Canon specified parts or materials that contain said element in advance
2	Elemental chlorine	Intentional use	Use as bleaching agent to whiten fibers contained in packaging made of paper (virgin or recycled materials) is prohibited

## 2F Controlled Substances in Medical Equipment Products

Chemical substances for which content information, etc. with respect to materials and parts that have specific uses/locations unique to medical equipment is required in certain cases

No.	Substance/ Substance Group	CAS number	Typical Applications	Scope	Reference laws and regulations
1	Bisphenol A (BPA) or substances originating from BPA	(80-05-7, 24936-68-3)	Resin materials, PVC additives	Patient contact parts	43

## Reference laws and regulations and Numberings in Attached Tables

Attached Legal references (numberings in attached tables)	Country, Area/Standards, etc.	Reference laws and regulations, etc.
1	EU	RoHS Directive 2011/65/EU and its amendments
2	China	Rules on the Restriction of Hazardous Substances in Electrical Appliances and Electronic Products
3	USA California	Electronic Waste Recycling Act (California RoHS) SB 20, amended by SB 50 and AB 575
4	Japan	Law for the Promotion of Effective Utilization of Resources
5-1	EU	REACH Regulation (EC) No.1907/2006 ANNEX XVII
5-2	EU	REACH Regulation (EC) No.1907/2006 Candidate List for Authorisation
6	USA California	Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
7	USA	Toxic Substances Control Act (TSCA)
8	Switzerland	Act of Reduction of Risks in Treatment of Specified Hazardous Substances, Preparations, and Articles in Switzerland (ChemRRV) Swiss Ordinance 814.81
9	Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
10	EU	Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
11	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
12	Canada	Prohibition of Certain Toxic Substances Regulations SOR/2012-285 and its amendment
13	USA	Consumer Product Safety Improvement Act of 2008 PUBLIC LAW 110-314
14	EU	REGULATION (EU) No 517/2014 on fluorinated greenhouse gases
15	International Treaty	Montreal Protocol on Substances that Deplete the Ozone Layer
16	Japan	Law concerning the Protection of the Ozone Layer
17	EU	Regulation on substances that deplete the ozone layer (EC) No. 1005/2009
18	Japan	Law Concerning Prevention from Radiation Hazards due to Radio-Isotopes, etc.
19	Japan	Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors

## Reference laws and regulations and Numberings in Attached Tables

Attached Legal references (numberings in attached tables)	Country, Area/Standards, etc.	Reference laws and regulations, etc.
20	EU	Directive 2013/59/Euratom
21	USA California	Perchlorate Contamination Prevention Act of 2003-AB 826
22	Austria	BGB I 1990/194: Formaldehyde Restriction §2, 12/2/1990
23	EU	EU Package Directive 94/62/EC
24	USA	Toxics in Packaging Prevention Act
25	Korea (the Republic of)	ACT ON THE PROMOTION OF SAVING AND RECYCLING OF RESOURCES
26	EU	Battery Directive 2006/66/EC
27	Korea (the Republic of)	Electrical Appliances and Consumer Products Safety Control Act (Battery Regulation)
28	Taiwan (Province of China)	Restrictions on the Manufacture, Import, and Sale of Dry Cell Batteries
29	Brazil	Brazil Battery Regulation Resolution No.401
30	China	Limitation of mercury, cadmium and lead contents for alkaline and non-alkaline zinc manganese dioxide batteries GB 24427-2009
31	Canada	Products containing Mercury Regulations SOR/2014-254
32	USA	Federal Mercury-Containing and Rechargeable Battery Management Act (104-142)
33	USA Iowa	Mercury Cell Regulations
34	USA Maine	Regulation concerning mercury added button-type cell (LD 1026)
35	USA Minnesota	Mercury Cell Regulations
36	USA New York	Battery Reduction Rules
37	USA Rhode Island	Mercury Reduction and Education Act SECTION 23-24.9-6
38	China	Regulations on the mercury content of battery products
39	Standard	IEC62474
40	Standard	JEDEC JS709
41	Standard	IPC-4101,IEC 61249-2-21
42	Guidance	EICTA, CECED and EERA Joint Position : Guidance on implementing article 11 of Directive 2002/96(EC) concerning information for treatment facilities
43	Canada	Medical Devices Regulations SOR/98-282