

Eco Mark Product Category No.118

“Plastic Products Version 2.13” Certification Criteria

— Applicable Scope —

The percentage of plastic that is used for manufacturing products (as % by mass) is 50% or more.

Products which apply to (1), (2), etc. may not be certified depending on the certification committee’s decision:

- 1) Packaging materials which are generally considered as excessive
- 2) Products which are easy to scatter in the nature

NOTE: The following products for which the Eco Mark Product Categories have been set by their functional or material capability and also been in the “Applicable Products” shall be applied for the each Product Categories; Eco Mark Product Category No.103 “Clothes Version 3”, No.104 “Household Textile Products Version 3”, No.105 “Textile Products for Industrial Use Version 3”, No.112 “Stationery/Office Supplies Version 1”, No.123 “Building Products Using Recycled Material”, No.128 “Household Commodity Version 1”, No.131 “Products for Civil Engineering Version 1” and category G and J of No.140 “Containers and Packaging for Food and Beverages, Cosmetics, Household Goods Version 1”.

Established: September 1, 2005

Revised: September 1, 2023

Expiration date: August 31, 2025

Japan Environment Association

Eco Mark Office

NOTE: This document is a translation of the criteria written in Japanese. In the event of dispute, the original document should be taken as authoritative.

Eco Mark Product Category No.118 “Plastic Products Version 2.13”
Certification Criteria

Japan Environment Association
Eco Mark Office

1. Purpose of Establishing Certification Criteria

Plastic is the essential material widely used in today’s society. However, from the view of waste, used plastic products have accounted for large proportion of the waste. Total amount of general waste in recent Japan is 51-52 million tons per a year and approximately 5 million tons of plastics are disposed in a year, which account for approximately 10% of total waste. Plastic disposal has effect to the consumption of natural resources, emission of materials which cause global warming effect, contraction of landfill disposal sites, since the main raw material of plastic is petroleum, one of the fossil resources. In the statistics of 2003, the total amount of emission is about 10,010 thousand tons, which includes used plastic products produced in Japan and manufacturing loss during the production process. Approximately 15% of them is recycled as materials, and about 58% of waste plastic is recycled in some ways such as chemical recycling and energy recovery. The other 42% is treated by simple incineration or landfill, not made effective utilization.

In the manufacturing process of plastic products, many kinds of raw materials, stabilizer, coloring agent, etc are used, and some of them may contain harmful chemical substances for human health. In addition, the harmful effect for wild organisms caused by the chemical substances solved out from plastic products has become the important issue.

Based on the above understanding, for the investigation of this Product Category No.118 “Plastic Products Using Recycled Materials Version 2.0”, we consider that material recycling of used plastic products to reduce the volume of waste is the most effective way to reduce environmental burden, and waste plastic which is difficult to conduct material recycling should be reused by chemical recycling or energy recovery, not landfill. Therefore, the promotion of material recycling of used plastic products has been set as the main aim, and the recycling ability of used plastic products has been the objective of valuation. Consequently, almost all of the criteria items on this Product Category refer to the lifecycle of the recycled materials, including criteria item for use of chemical substances.

Regarding to the use of chemical substances which are recognized to have strong harmful effect, we also consider the prevention of intentional addition to the products, commingling of chemical substances with recycled materials, evolution and elution in the process of disposal for the used products. Especially, for eco toxicity caused by chemical substances, we ask to the manufacturer and related

industries to work for reducing harmful risk, including utilization of Pollutant Release and Transfer Register (PRTR) Law (Law Concerning Reporting, etc. of Release to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management, July 13, 1999, Law No. 86).

2. Applicable Scope

The percentage of plastic that is used for manufacturing products (as % by mass) is 50% or more.

Products which apply to (1), (2), etc. may not be certified depending on the certification committee's decision:

- 1) Packaging materials which are generally considered as excessive
- 2) Products which are easy to scatter in the nature

NOTE: The following products for which the Eco Mark Product Categories have been set by their functional or material capability and also been in the "Applicable Products" shall be applied for the each Product Categories; Eco Mark Product Category No.103 "Clothes Version 3", No.104 "Household Textile Products Version 3", No.105 "Textile Products for Industrial Use Version 3", No.112 "Paper Stationery Version 1", No.123 "Building Products(Materials for Interior Work) Version2", No.128 "Commodity Version 1", No.131 "Civil Engineering Products Version 1" and category G and J of No.140 "Containers and Packaging for Food and Beverages, Cosmetics, Household Goods Version 1".

3. Terminology

| | |
|--------------------|---|
| Plastics | Material composed of single or plural polymers, plus additives, fillers, etc. which are added to the polymer(s) to give specific characteristics |
| Polymer | High molecular material which is main constituent of plastic |
| Recycled materials | Post-consumer materials or pre-consumer materials, which are reused as raw materials not to be treated or disposed as waste; these went through the recovery process such as collection and segregation to be raw materials as an alternative for new materials in the recycling or production process. |

| | |
|---|--|
| Recycled plastic materials | Recycled materials mainly composed of polymer materials; recycled materials which contain additives not to be separated from polymers during the process of material recycling, such as plasticizer, etc. shall be regarded as recycled plastic materials |
| Pre-consumer material | Material or rejected product generated from a disposal route in a product manufacturing process, and went through the recovery process such as collection and segregation, excluding those which are recycled within the same process (plant) |
| Post-consumer material | Material or product which was disposed of after being used as a product |
| Recycle | Material recycling only; energy recovery, gasification and use as reducing agent for blast furnace & raw material for coke oven are not included. |
| Prescription constituents | Material components added for intended purpose to give any characteristics to the products. Impurities that are technically unavoidable in the manufacturing process are not included. |
| Disposable product and one-time use product | Product which is not designed to be used repeatedly in a particular field, whereas its original product is durable and used repeatedly is called “disposable product”. On the other hand, “one-time use product” refers to the product which is impossible to be used repeatedly due to the reasons such as purpose of use, its functions, consideration for hygiene standpoint, regulations, etc. |
| Collection rate | Value to show the proportion of collection (as % by mass) to the shipments of certified products during one year; the amount of collection includes the materials to be placed back from distribution channel. |
| Self-recycling products | Products for which the collection route of used products has been established, and which are newly produced from the recycled plastic materials (made by material recycling of the collected products) |
| Reused part | Part to be reused, retrieved from used products without processing and appropriately treated such as cleansing/grinding, etc. |

4. Certification Criteria and Certification Procedure

For certification of conformity to each reference items, submit the attached certification.

When certified products under Product Category No. 118 “Plastic Products Using Recycled Materials” are reexamined under this product category, the certification procedure of 4-2. (19) may be substituted by stating in the attached certificate that there is no change in the requirements and the existing accredited product (*the person stipulated in brackets (< >) is the person who gives certification).

4-1. Environmental Criteria and Certification Procedure

4-1-1. Material criteria and certification procedure

- (1) The weight percentage of recycled plastic materials in the total weight of the product shall satisfy the standard value specified for each product group in accordance with the Attachment 1. In case of using pre-consumer material and post-consumer material to blend each other, the value to be calculated according to the method in Attachment 2 shall meet the standard ratio of pre-consumer material.

[Certification Procedure] <Applicant>

Applicant shall indicate total weight of product, weight of plastic materials, weight of materials other than plastic, and weight percentage of recycled plastic materials on the attached certificates, to prove that 50% and more plastic materials are used in the product (weight percentage), and the value (%) of recycled materials in plastic materials meets the requirement in Attachment 1. In addition, for recycled materials, raw material certificate issued by recycled material collector shall be submitted.

- (2) For self recycling products, 90% and more plastic part of used products to be collected should be recycled as material (including reused part). Regarding to the standard ratio of recycled plastic materials in the self recycling products, the recycled plastic materials obtained from the self recycling products shall be used 20% and more (see Attachment 1). (For recycled plastic materials which are not produced from the self recycling products, there is no limitation for use, but it is not permitted to add the weight percentage of recycled materials.)

[Certificate Procedure] <Applicant>

For self recycling products, the document to indicate the collection rate, outline of the manufacturing process to produce the same quality product by using recycled plastic materials, and the actual performance of 90% or more material recycling of

used products to be collected shall be submitted. The standard of compounding ratio shall be proved by “4-1-1 Material criteria and certification procedure (1)”.

- (3) For the products to use plastics containing halogens to the polymer backbone, 70% or more of the plastic part of the used products shall be collected. Moreover, 70% or more collected plastic part shall be recycled as materials.

However, this article is not applied to the products to be used continuously for 20 years or more, those of which the weight percentage of plastics containing halogens to the polymer backbone in the plastic weight is 5% or less, industrial waste under special management specified by the “Waste Disposal and Public Cleansing Law”, and radioactive waste provided by the “Law for Control of Nuclear Materials”, “Nuclear Fuel Materials and Atomic Reactors” or the “Law for Prevention of Damage from Radioactive Isotopes”.

[Certification Procedure] <Applicant>

Fill in the attached certificate that whether the applied product falls under this criteria item or not. In case that the product falls under this criteria item, document certifying that collection and recycling of the product is ensured at disposal or the product is to be used continuously for 20 years or more shall be submitted. Eco Mark Office may ask the applicant to report the collection rate after approving to use Eco Mark (or Eco Mark Office may supervise), and the applicant shall cooperate with the act.

4-1-2. Recycling criteria and certification procedure

- (4) The product body shall be marked the type of polymers to facilitate recycling. To indicate a type of polymers, a symbol of JIS K 6899-1 or ISO 1043-1 is used, and the indicating method shall follow the JIS K 6999. When the indication of material types is obligated by other laws, etc., the indication can substitute it. In addition, for the product to use multiple types of polymers, the indication such as “R-PE, PP, PS” can be used. (In case to use three or more types of polymers, indicate the top two polymers and the rest can be omitted.) If visibility cannot be ensured due to a limited space of indication, product shape, and any technical reasons, the indication on packaging of products to be purchased by consumers shall also be acceptable.

[Certification Procedure] <Applicant>

Photographs and/ or design drawings to show the contents and the labeled portion of indication shall be submitted.

- (5) Concerning a product combined with multiple materials (paper, wood, metals, glass, etc.) and plastic, separation and segregation of parts by the type of

materials (paper, wood, metals, glass, etc.) shall be well considered to facilitate its recycling. (For the product composed of single material, this item is not applicable.). This item does not apply to parts that cannot be separated between different types of materials due to functionality.

[Certification Procedure] <Applicant>

Documents to explain the method to separate plastic from other materials shall be submitted. For the product mixed with plastic and other materials, explanation certifying that recycling, collection and treatment are not difficult (“difficult” means, for example, that recycling is not actually done or pulverization requires large energy) shall be also submitted.

4-1-3. Harmful substances criteria and certification criteria

- (6) For products and packaging materials, ozone-depleting substances including HCFC shall not be used in the manufacturing process.

[Certification Procedure] <Applicant>

A certificate to show that no ozone-depleting substances including HCFC is not used in the manufacturing process shall be submitted.

- (7) Plastic additives to be used for products including plasticizers, color materials, stabilizers, lubricants, etc. shall conform to the positive list system of food utensils, containers and packaging, etc.

In case of using the plastic additives which are not listed in the positive lists, the additives have only to meet the requirements of harmful substances described in ISO 8124-3, etc.

[Certification Procedure] <Manufacturer of each process>

A certificate to indicate that plastic additives to be used for products including plasticizers, color materials, stabilizers, lubricants, etc. conform to the positive list system of food utensils, containers and packaging, etc. shall be submitted. In case of using the plastic additives which are not listed in the positive lists, the test results to show the plastic additives meet the requirements of harmful substances described in ISO 8124-3, etc. shall be submitted.

- (8) The product shall not contain Cd, Pb, Cr⁶⁺, Hg and their compounds as prescription constituents. In addition, the product shall have no flame retardant of Polybrominated biphenyl (PBB), Polybrominated diphenyl ether (PBDE) or short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) added as prescription constituent. The product shall not use antimicrobial agents as far as possible. In the case of use, the product shall be certified by the SIAA Mark of Society of Industrial technology

for Antimicrobial Articles, etc.

[Certification Procedure] <Applicant>

A certificate to indicate not to add corresponding chemical substances as prescription constituents during manufacturing process shall be submitted. In case of using flame retardant, a certificate that proves neither Polybrominated biphenyl (PBB), Polybrominated diphenyl ether (PBDE) nor short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) is added as prescription constituents shall be submitted. In the case of using antimicrobial agents, documents certifying SIAA Mark of Society of Industrial technology for Antimicrobial Articles, etc. shall be submitted.

- (9) The products relevant to “2. Accessories/personal adornments”, and “3. Toys/play set/sporting goods” shown in Attachment 1 shall not be added the substances classified as Groups 1, 2A and 2B by IARC (International Agency for Research on Cancer) as prescription constituents. However, this item excludes the chemical substances to use for the purpose of making polymers by polymerization reaction (ex; polyvinyl monomer, styrene).

[Certification Procedure] <Applicant>

Fill in the attached certificate that if the applied product falls under this criteria item or not. In case that the product falls under this criteria item, documents certifying that the products do not contain chemical substances described in each criteria item as prescription constituents shall be submitted.

- (10) Of the products relevant to “2. Accessories/personal adornments” and “3. Toys/play set/sporting goods” shown in Attachment 1, toys which may impair health of infants and toddlers by contact with them (toys, accessory toys, etc. which are essentially intended for infants and toddlers to bring them in contact with their mouths) prescribed in the Enforcement Regulation of Food Sanitation Act (Ministry of Health and Welfare Ordinance No. 23, 1948) shall satisfy the requirements of harmful substance in the Food Sanitation Act (December 24, 1947, Law No. 233). The products other than the foregoing relevant to “2. Accessories/personal adornments” and “3. Toys/play set/sporting goods” shall meet the requirements of harmful substances described in ISO 8124-3 (Corresponding standard: 88/378/EEC EN-71 Part 3).

[Certification Procedure] <Third party testing body, applicant or manufacturer>

Test results certifying that the products do not contain the corresponding harmful substances shall be submitted.

- (11) Elusion of chemical substances from products (excluding miscellaneous materials

such as metal, paper, etc.) shall meet the requirements of the following eight items (cadmium, lead, hexavalent chromium, arsenic, total mercury, PCB, benzene and selenium) shown in Attachment 4 of the enforcement regulations of the environmental standard concerning soil contamination (2002, Environment Ministerial Ordinance No.29). However, in that an elusion test of the ISO 8124-3 (Corresponding standard: 88/378/EEC EN-71 Part 3) is conducted, and the result is reported, it is not necessary to conduct additional tests for cadmium, lead, hexavalent chromium, arsenic, total mercury and selenium.

[Certification Procedure] <Third party testing body, applicant or manufacturer>
Test results to certifying that the products do not contain the corresponding harmful substances shall be submitted.

- (12) In manufacturing, the use of chemical substances must be managed appropriately. Specifically, for the Class 1 specified chemical substances in Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, the site and amount of their emission and transfer shall be reported.

(Note) Certification criteria of harmful substances for each product categories are shown in Attachment 1.

[Certification Procedure] < Finished product manufacturing plant>
Certificate indicating the used amount, site of emission and transportation, amount of emission and transportation of the Class 1 chemical substances in the previous fiscal year in accordance with the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof shall be submitted.

4-1-4. Other criteria and certification criteria

- (13) The product shall be durable and shall not be “disposable type” in principle. However, this article may not apply to “disposable product” as defined in Terminology, if a recycling system after use has been established and its performance is shown. “One-time use product” in “3. Terminology” is applicable to this Product Category.

[Certification Procedure] <Applicant>
Fill in the attached certificate that the product is not “disposable product”. However, in case that a system of collection and recycling after use has been established, the document to indicate the practical methods of collection and recycling shall be submitted.

- (14) The product packaging shall be designed to facilitate reducing and re-cycling. The packaging materials to use plastics containing halogens in the polymer backbone

shall satisfy the collection rate and material recycling rate in “4-1-1. Material criteria and Certification Procedure (3)”.

[Certification Procedure] <Applicant>

Fill in the packaging condition, packaging materials and their raw materials in the attached certificate. Photographs and drawings can be attached.

- (15) In manufacturing the applied product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the “Environmental Laws, etc.”) must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous substances in the area where the plant performing the final manufacturing process is located. In addition, the state of compliance with the Environmental Laws, etc. for the past five years from the date of application (whether there is any violation) must be reported. If there is any violation, proper remedies and preventive measures shall have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.

[Certification Procedure] <Applicant>

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the business of manufacturing the applied product or the relevant plant manager (entry or Attachment of a list of names of the Environmental Laws, etc.) must be submitted. (Entry example 3)

In addition, the applicants shall report whether there is any violation in the past five years, including a violation subject to administrative punishment or administrative guidance, and if there is, the following documents in a and b must be submitted:

- a. With respect to the fact of violation, guidance documents from administrative agencies (including order of correction and warning) and copies of written answers (including those reporting causes and results of correction) to such documents (clearly indicating a series of communication);
- b. Following materials (copies of recording documents, etc.) concerning the management system for compliance with the Environmental Laws, etc. in 1)-5):
 - 1) List of the Environmental Laws, etc. related to the area where the plant is located;
 - 2) Implementation system (organization chart with roles, etc.);
 - 3) Bylaws stipulating retention of recording documents;
 - 4) Recurrence prevention measures (future preventive measures)
 - 5) State of implementation based on the recurrence prevention measures

(check results of on-site inspection, etc. as compliance condition).

- (16) Manufacturing plant shall consider reducing energy consumption, gas emission effecting global warming, and wastes.

[Certification Procedure] <Finished product manufacturing plant>

Document to explain the outline of manufacturing process and practical efforts of manufacturing plant to reduce energy consumption, gas emission effecting global warming and wastes shall be submitted.

- (17) Indication to promote the appropriate treatment for users, including methods of separation and segregation by each different material-part of the used product shall be put on the product, manuals, labeling or catalogue. (For the product composed of single material, this item is not applicable.) For the products relevant to the certification criteria 4-1-1(2)(3), collection method (contact information, etc.) shall be indicated on the product or catalogue to inform to users.

[Certification Procedure] <Applicant>

Photographs or design drawings showing the labeled contents and portion of the product shall be submitted.

4-2. Quality Criteria and Certification Procedure

- (18) The product shall meet the following requirements of 1) to 3) for its quality.

- 1) The quality of the product shall meet laws and regulations such as JIS.
- 2) The product which is not relevant to 1) on the above, its quality shall meet industry's own standard.
- 3) The product which is not relevant to 1) or 2) on the above, there shall be the own quality standard and sufficient quality management shall be conducted.

[Certification Procedure] <Third party testing body or applicant>

Test results based on quality criteria such as corresponding laws, JIS standard and own quality standard, or a copy of the document certifying that the plant is JIS-certified shall be submitted.

5. Product Classification, Indication and Others

- (1) A product certification group shall correspond to a product function group (6 or 7 digits in principle) based on Classification of Standard Goods in Japan and shall represent a brand. Further division by color or size shall not be done. Two products of different materials are separated, without depending on material composition ratio.

- (2) To label the Eco Mark on Eco Mark certified packaging materials one by one, “Eco Mark certified as a packaging material using recycled plastic” or similar remarks shall be indicated to clarify that the Eco Mark is not related to the contents of the container or packaging.
- (3) In principle, Eco Mark shown as below shall be indicated on the product. The licensees of Eco Mark Utilization Contract who own Eco Mark products shall also be allowed to use the indication of the logo and certification number as before.



(Note for the indication)

- *For indicating the logo, Eco Mark certification number (eight-digit number) or the name of the licensee using the logo shall be appeared.
- * Such expression as “Eco Mark product” can be used following the 2.(2) of the Guide to Eco Mark Usage.
“Eco Mark product”, “#Eco Mark”, “www.ecomark.jp”, “Eco Mark Certificate”
- * In accordance with “Environmental Labeling Guidelines” of the Ministry of the Environment of Japan, etc., the environmental claims of certified products may be indicated in association with Eco Mark.
(<https://www.env.go.jp/policy/hozen/green/ecolabel/guideline/>)
- * The Guide to Eco Mark Usage shall be followed for any cases not listed above.
(<https://www.ecomark.jp/office/guideline/guide/>)

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|-------------------|--|
| September 1, 2005 | Established (Version 2.0) |
| November 20, 2005 | Revised (Version2.1) |
| June 27, 2006 | Revised (4-1-3(7)(10)(11) Version2.2) |
| October 19, 2006 | Revised (5(5) Version2.3) |
| August 21, 2008 | Revised (4-1-3 (10)(11) (16) Version2.4) |
| March 1, 2011 | Revised (Version2.5) |
| July 5, 2012 | Revised (Version 2.6) |
| February 1, 2014 | Extension of Expiration date |
| April 1, 2015 | Revised (Version2.7) |
| June 1, 2015 | Revised (Version2.8) |
| February 1, 2017 | Revised (Version2.9) |
| January 7, 2019 | Extension of Expiration date |
| April 1, 2019 | Revised (Mark indication) |
| November 1, 2020 | Revised (Applicable scope, 4-1-3(7) Version2.10) |
| December 15, 2022 | Revised (4-1-3(3), (8) 4-1-4(14),Version2.11) |

| | |
|-------------------|--------------------------------|
| March 15, 2023 | Revised (4-1-1(5) Version2.12) |
| September 1, 2023 | Revised (4-1-1(3) Version2.13) |
| August 31, 2025 | Expiration date |

The Certification Criteria for the Product Category will be revised when necessary.

Attachment 1 Classification of Products (Purpose of use, Characteristics), Standard Ratio for Recycled Materials, and Number of Criteria Items to be Applied

| Category | | | Standard ratio for recycled materials (%) | | Number of criteria items to be applied (○: Applied item) | | | | | | | | | | |
|----------|--|--|---|-------------------------|--|-----|-----|-------|-----|-------|-----|-----|-------|------|------|
| Grouping | Basis of grouping | Examples | Pre-consumer materials | Post-consumer materials | 4-1-1 | | | 4-1-2 | | 4-1-3 | | | 4-1-4 | 4-2 | |
| | | | | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 2 | Accessories/personal adornments | Products to contact with human body (skin, etc.) for relatively long time such as accessories | Accessories other than clothes and fiber (bracelet, jewel, etc.), cigar lighter, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 3 | Toys/play set/sporting goods | Products to contact with human body (skin, etc.) for relatively short time as tools | Toys, sporting goods, industrial tools, play equipment (fishing gear, etc.), musical instruments, entertainment equipment, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4 | Recording media, etc. | Products to temporarily contact with human body (skin, etc.), and for the purpose of long-term use to save data, etc. | Film, CD-ROM, MD cassettes, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | | | ○ | ○ | ○ |
| 6 | Indoor facilities/equipment | Products with little opportunity to contact with human body, and to be installed for relatively long time in doors | Indoor facilities, bulletin board, notice plate, figurine, mat, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | | | ○ | ○ | ○ |
| 7 | Products for agriculture, fisheries and forestry | Products with a little opportunity to contact with human body, but relate to ecological system such as food resources for long time | Fishing equipment for aqua-farming, sheets for agriculture and forestry, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | | | ○ | ○ | ○ |
| 8 | Outdoor facilities/equipment | Products with little opportunity to contact with human body, and to be installed for relatively long time in outdoor location (contact with rain and wind, soil, and water region) | Outdoor facilities, bulletin board, notice plate, figurine, etc. | 50 | 25 | ○ | | ○*1 | ○ | ○ | | | ○ | ○ | ○ |
| 9 | Self recycling products | Products manufactured by using recycled materials obtained from collected products | - | - | 20 | ○ | ○ | ○*1 | ○ | ○*2 | ○*2 | | ○ | ○ | ○ |
| 10 | Other products | Products not to be included 1 to 9 on the above | | 50 | 25 | ○ | | ○ | ○ | ○ | | | ○ | ○ | ○ |

*1) It is applicable only in the case to relevant to the requirement of 4-1-1.(3)

*2) For self recycling products, products classified into 2 and 3 shall meet the requirements in 2 and 3.

Attachment 2 Standard Ratio and Weight Percentage for Recycled Materials

| | | | |
|----------------|--|--|-----------------------------|
| Product (A) | Plastic part (B) $(B/A) \times 100 \geq 50$ | Recycled plastic materials (C) $(C/B) \times 100 \geq$ Standard ratio for recycled materials | Post-consumer materials (D) |
| | | | Pre-consumer materials (E) |
| | | Virgin materials | Polymers |
| | | | Additives |
| | Other materials (metal, wooden part, etc.) | | |

- * Requirement for plastic product: $(B/A) \times 100 \geq 50$
- * Weight percentage of recycled materials: $Y = (C/B) \times 100 \geq$ Standard ratio for recycled materials (Attachment 1)
- * In case of using pre-consumer materials and post-consumer materials together:
Assign the value “ $C1 = (2.0 \times D) + E$ ” to C
 $Y1 = ((2.0 \times D) + E)/B \times 100 \geq$ Attachment 1 standard ratio for “pre-consumer materials”

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| Y: Weight percentage of recycled materials |
| Y1: Weight percentage of recycled materials to make an adjustment to weight of post-consumer materials |
| A: Weight of whole product |
| B: Weight of plastic part |
| C: Weight of recycled plastic materials |
| C1: Weight of recycled plastic materials to make an adjustment with coefficient to weight of post-consumer materials |
| D: Weight of post-consumer materials |
| E: Weight of pre-consumer materials |