

## Eco Mark Product Category No.128

**“Household Commodity Version1.21”****Certification Criteria****K. Can Collectors**

Japan Environment Association

Eco Mark Office

**1. Purpose of Establishing Certification Criteria**

Commodities consist of various products, ranging broadly from kitchen utensils to tableware, home and living supplies, etc. They are the most closely related daily-use products to consumers. Setting an Eco Mark Category for such a group of commodities to recommend eco-friendly products within the category to consumers would therefore contribute enormously to reducing environmental impact in daily living, as well as enhance the environmental awareness of consumers. For this reason, the establishment of this Product Category is considered to have vast environmental significance.

Under the Eco Mark program, the certification criteria of several current product categories have been established taking material into account, namely Product Category No.115 “Wooden Products Using Waste Wood, Thinned-Out Wood, Small-Diameter Logs, etc.”, No. 118 “Plastic Products Using Recycled Materials”, and No.124 “Glass Products”. This new Product Category was established by integrating the commodity products included in those product categories and adding tableware, kitchen utensils, footwear, and home and living supplies to cover a broad range of products.

Existed eight categories of the Eco Mark program cover kitchen utensils including sponges, coffee filters, cooking oil filters, rubber gloves, waste oil absorbers, draining filter bags, strainers, and triangle strainers for kitchen sinks. They have also been organized and integrated into this Commodity category. For these types of products, previous criteria were established from the environmental perspective of preventing discharge of water pollutants, using natural materials, and non-bleaching, but as a result of a general evaluation based on the new product lifecycle concept, they were reviewed also from the perspectives of effective use of resources and chemical substances this time.

As a specific example, Product Category No.5 “Absorbents for Used Cooking Oil” was established for the purpose of reducing waste by preventing the discharge of waste oil which causes water pollution and the use of recycled material, while in this Product Category, the effective use of thinned-wood and waste fiber (cloth, etc.) as unused material differing from recycled material was selected as a new criteria.

**2. Applicable Scope**

Can collectors (manual type excluded)

For products whose mass ratio of leather materials, and stone that make up 50% or

more of the total product mass are excluded.

### 3. Terminology

Terms for the common criteria	
Disposable products	Products not intended for repeated use while other products in the same area are used repeatedly with durability.
Reusable	Nature of products and packaging designed for repeated use for a certain number of times through recycling.
Recycling	Indicates material recycling. Does not include energy recovery (thermal recycling).
Prescription constituents	Components intentionally added with the purpose of providing specific characteristics to the product. Impurities which are inevitably mixed during the manufacturing process are excluded.
Plastic sheet	Plate-like thin plastic with 0.25mm and more thickness
Terms for material	
Recycled material	Materials made of post-consumer materials, pre-consumer materials, or a mixture of these. In this Product Category, includes waste fiber.
Pre-consumer material	Materials or defective products generated from disposal route of manufacturing process. However, excludes those recycled within the same process as the raw material (same plant).
Post-consumer material	Materials or products disposed after used as a product.
Terms for paper	
Percentage of waste paper in the pulp mixture	Weight percentage of waste pulp in pulp contained in product. Expressed by $(\text{waste paper pulp}) / (\text{virgin pulp} + \text{waste paper pulp}) \times 100 (\%)$ . However, the weight of the pulp is measured under the condition of containing 10% moisture. For materials with 100% yield such as pulp mold and cushioning made of cut waste paper, percentage of waste paper in pulp mixture is taken to be 100% regardless of the actual percentage.
Terms for wood	
Reused/Unused wood	Indicates the following: thinned wood, waste wood, construction waste wood, and less useful wood.
Thinned wood	Wood produced from work activities adjusting the individual density of the objective tree type according to the congested state of forest stand.
Waste wood	Used wood (used packaging material, etc.), remainder material generated in wood processing plants (shavings generated in plywood and lumber plants, etc, low quality chips not used as raw

	material for paper, etc.), and wood and wooden materials such as trimmed branches, bark, etc.
Construction waste wood	Wood and wooden materials disposed as waste in construction work such as dismantling of buildings, construction of new buildings, building extensions, renovation, and construction related to other work.
Less useful wood	Abandoned lumber in the forest, shrubs, tree roots, wood obtained from lumber damaged by disease, pests, disasters, bent or small diameter logs, etc. Also includes bamboo cut down in bamboo groves for the purpose of maintenance and management in environment preservation. Small diameter logs measuring less than 14 cm in diameter corresponding to “a” or “b” below must be certified as forests sustainably managed by an independent third party. a. Small diameter logs from logs felled from natural forests. b. Small diameter logs from logs produced by clear cutting, patch logging, and strip logging in plantation forests.
Waste plant fiber	Fiber made from agricultural residue (such as stalks that are usually disposed, etc.) generated in harvesting and manufacturing process of crop.
Wooden part	Actual wood (including plant fiber)
Terms for plastic	
Plastic	Materials made of single or multiple polymers, additives, fillers, etc. added to give characteristics
Polymer	Macromolecules, which are the main components of plastic.
Plant-based plastic	Plastic made of bio-based synthetic polymer whose materials are plant. This certification criteria covers polyethylene (PE), polyethylene terephthalate (PET), polylactic acid (PLA) and polytrimethylene terephthalate (PTT).
Bio-based synthetic polymer	Polymer obtained through chemical and/or biological industrial process(es) wholly or partly from biomass resources.
Bio-based synthetic polymer content rate	Amount of biomass resource origin part in biobased synthetic polymer present in the product (or the portion specified in the certification criteria). Natural polymers such as starch are not included. This is defined in ISO 16620-1 3.1.5. (original :biobased synthetic polymer content: amount of biobased synthetic polymer present in the product.)
Terms for glass	
Glass cullet content	Percentage of glass cullet in the whole glass materials used in a product. i.e. Glass cullet content = Glass cullet/Whole glass materials (per product), (materials are expressed in mass)

Cullet	Glass materials recycle-processed (sorting, elimination of foreign bodies, etc.) from waste glass
Terms for fiber	
Unused fibers:	Fibers using unused materials such as cotton linters, staples produced during spinning (thread that cannot be used as the same grade, or ones that require some processing when used), fibers extracted from waste plant fiber materials (banana fiber, etc.) , etc.
Cotton linter:	Short cotton linters that start to protrude from the plant four to twelve days after flowering
Waste plant fiber material	Unused plant fibers including cane, etc., which are usually wasted, such as agricultural residue generated in harvesting and manufacturing process of crop.
Recycled fibers:	Fibers recycled from pre-consumer and post-consumer materials. Depending on the recycling method, there are reclaimed fibers, recycled polymer fibers, chemically recycled fibers and other recycled fibers (fibers directly recycled from recovered fiber by twisting, cutting, tearing, etc.).
Recovered fibers:	Waste fiber products including used clothing that have become unnecessary. It refers to both "wasted clothing", the used clothing and used cloth material collected from homes and plants. This term also means "wasted fibers", which are generated from manufacturing processes such as thread wastes from a weaving mill and cutting wastes from a sewing plant.
Reclaimed fibers:	Fiber which returned to flocculating fiber by raveling a recovered fiber of pre-consumer and post-consumer material with Rag machines
Recycled polymer fiber:	Fibers recycled from synthetic resin or regenerated materials of synthetic resins in a polymer structure using regenerate flakes or pellets.
Chemically recycled fiber:	Fibers consisting of polymer from polymerizing monomers obtained by depolymerizing the polymers of regenerated materials of synthetic resin, or synthetic fibers such as nylon and polyester.
Fiber-based recycled fibers	Recycled fibers whose main contents are recovered fibers from recycled polymer fibers or chemically recycled fibers. Although recovered fibers from pre-consumer and post-consumer materials may be considered materials, they shall only be applied in the event of using recovered fibers from post-consumer materials to be recycled. If major materials of regenerated materials, which are put through a series of recycled processes for the formation of fibers are recovered fibers, even when only a part of the regenerated materials include

	waste plastic, the total amount of regenerated materials included can be considered recovered fiber-based.
Plant-based synthetic fiber	Synthetic fiber whose material is plant-based plastic.

#### 4. Certification Criteria and Certification Procedure

To show conformance to the individual criteria item, the respective Attached Certificates shall be submitted.

##### 4-1. Environmental Criteria and Certification Procedure

###### 4-1-1. Common Criteria and Certification Procedure

(1) 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]

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.

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 (organizational chart with roles, etc.);
  - 3) Bylaws stipulating retention of recording documents;
  - 4) Recurrence prevention measures (future preventive measures);
  - 5) State of implementation based on recurrence prevention measures (result of checking of the state of compliance, including the result of onsite inspection).

- (2) Products shall be shipped in the unpackaged state or in simple packaging at the retail stage. Material labeling of plastic materials used for packaging shall conform to JIS K 6899-1:2000. However, labeling can be omitted in accordance with the standards on ID marks in the “report developed by the Package Labeling Review Committee” (Ministry of Economics, Trade and Industry) such as “labeling for plain containers”, “labeling for containers with physical restrictions of display space, etc.”, “labeling conditions and methods for multi-layer containers, etc.”, “labeling for packaging printed with company/brand name”, and “labeling on export products”.

[Certification Procedure]

The packaging state in the retail stage of products, packaging material used (content rate of recycled materials), material labeling state shall be indicated in the Attached Certificate. (Drawings and photographs can be used to supplement description). If material labeling is omitted, the reason shall be indicated.

- (3) Plastic materials used for packaging shall not be added with polymers including halogens, and organic halogenides shall not be added to products as prescription constituents.

[Certification Procedure]

Whether polymers including halogens and organic halogenides have been added to packaging shall be indicated in the Attached Certificate.

#### 4-1-2. Material criteria and Certification Procedure

Materials of which the product is composed shall meet the material criteria specified below. However, the following material criteria shall not apply to small accessories (screws, shoestrings and other small parts required by the product function) and (13) shall apply to adhesive and the other material criteria shall not apply to adhesives.

#### A. Paper

- (4) Percentage of waste paper in the pulp mixture shall be above 70%.
- (5) The coating amount on coated printing paper shall be 30 g/m<sup>2</sup> or less on both sides. However, the maximum amount per side shall be 17g/ m<sup>2</sup>.
- (6) The brightness of uncoated printing paper shall be about less than 70%.
- (7) Addition of fluorescent whitening agents as a prescription constituent shall be minimized.
- (8) Chlorine gas shall not be used in the bleaching process of pulp.

[Certification Procedure]

Certificates issued by the paper manufacturer shall be submitted. For (4) and (5), the waste paper pulp content, and specific coating amount (numerical value) on either and both sides shall be indicated. Documents indicating the results of brightness tests by the Hunter method or based on the ISO whiteness (diffuse blue reflectance factor) shall be submitted. These documents shall indicate the

specific whiteness value for the test results, whether florescent whiteners are added. If added, the amount used in the documents submitted.  
Whether chlorine has is used in the pulp whitening process shall be indicated.

#### B. Wood

- (9) The percentage of reused/unused wood or waste plant fiber provided by terminology as materials for wooden parts shall be 100% (mass ratio). Less useful wood with small diameters shall satisfy Attachment 1 for forest certification if corresponding to “a” or “b”.

(Note) The weight percentage means the weight percentage of the product or each material at the air dried state<sup>\*1</sup> or at the point of constant weight<sup>\*2</sup> under the condition of a temperature of 20±2°C and humidity of 65±5%.

\*1: Indicates leaving in a well-ventilated room for seven days or more.

\*2: Change is less than 0.1% when mass is measured every 24 hours.

\*1 is not applicable if lumber and logs are used. It can be applied when using wood corresponding to the water content percentage of 15% or below in domestic and overseas public dried material water content percentage criteria.

#### [Certification Procedure]

Documents issued by the raw material vendor certifying that the raw material is reused /unused wood or waste plant fibers shall be submitted. If there are multiple vendors, a list of the vendors and list of certification of the top 10 vendors in terms of volume of material traded shall be submitted.

If using thinned wood as the material, a certificate of origin that includes information on the place of production, type of tree, and year of planting shall be submitted with photographs of the forest concerned (showing clearly that the forest stand has been thinned). The thinning percentage and how many times the forest stand has been thinned, including the most recent thinning shall also be indicated if possible.

If using less useful wood, the following information shall be submitted. At the same time, official documents stating that the forest has been certified as sustainable by a third party shall be submitted.

- Type of forest (natural or man-made, etc.), place of production, type of tree, and year of tree planting if man-made forest.
- Under what conditions was the wood produced (damaged by disease/pests, damaged by disaster, bent or narrow trees, etc.). For small diameter log, indicate logging method and tip end diameter.

If using bamboo as the raw material in less useful wood, certificates indicating the following information and photographs/maps of the surroundings of the bamboo grove shall be submitted.

- Type of bamboo, place of production, surrounding conditions, and description that logging is carried out for the purpose of appropriate maintenance and management in environment preservation, as well as management plans and quantity.

- (10) Products shall not use wood preserving agents (wood termicides, preservatives, pesticides, and fungicides) as prescription constituents.

#### [Certification Procedure]

Whether termiticides, preservatives, and pesticides are used as prescription constituents shall be indicated in the Attached Certificate.

- (11) Regarding products used indoors, no emissions of toluene or xylene shall be detected at product shipment. “No emissions detected” means less than the minimum value measured by JIS A 1901. “Measuring methods for emission of volatile organic chemicals (VOC), formaldehyde and other carbonyl compounds—small chamber method.”

[Certification Procedure]

Results of tests prescribed in JIS shall be submitted. The test method shall be based on JIS A 1901. However tests can be exempted for products not added with toluene and xylene as prescription constituents.

- (12) For products used indoors and using adhesive or paint, emissions of formaldehyde from the product, wood material, adhesive or paint shall be of the F\*\*\*\* grade in accordance with JIS or JAS, or falling outside the scope of regulations by the Ministry of the Land, Infrastructure and Transport. The products should meet the numerical criteria of “a” or “b” below. However, this item is not applied to “incense stick”.
- a. The amount of Formaldehyde emissions measured by JIS A 1460 “Building boards Determination of formaldehyde emission -- Desicator method” shall be below 0.3 mg/l for average value and below 0.4 mg/l for maximum value.
  - b. The emission rate of formaldehyde measured by JIS A 1901 “Determination of the emission of volatile organic compounds and formaldehydes for building products -- Small chamber method” shall be less than 5µg/(m<sup>2</sup>-h).

[Certification Procedure]

Results of tests prescribed in JIS A 1460 or JIS A 1901 or tests by methods prescribed in specific JIS or JAS criteria shall be submitted to indicate that standard values are met. For materials and products permitted to be labeled F\*\*\*\* grade in accordance with JIS and JAS, documents certifying this or copies of such documents can be submitted in place of test results. For materials and products authorized as falling outside the scope of regulations by the Ministry of Land, Infrastructure and Transport, documents certifying this or copies of such documents can be submitted in place of test results. For materials and products permitted to be labeled as using non-formaldehyde adhesives by JAS, documents certifying this or copies of such documents can be submitted in place of test results.

**C. Plastic**

- (13) Mass ratio of recycled polymer in the total raw material polymer of the product shall be 50% or more for products made of post-consumer materials as the raw material polymer. However, for products made of pre-consumer materials as the raw material polymer, mass ratio of recycled polymer made from pre-consumer materials in the total raw material polymer of the product shall be 60% or more.

For film products, mass ratio of recycled polymer in the total mass of raw



material polymer shall be over 40%.

For synthetic paper, mass ratio of recycled polymer in the total mass of raw material polymer shall be over 50%.

Products using plant-based plastic shall meet the criteria item (14) instead of this item

[Certification Procedure]

The mass ratio of pre-consumer materials and post-consumer materials making up the whole product shall be indicated in the Attached Certificate. Raw material certificates issued by the raw material supplier shall also be attached.

- (14) Products using plant-based plastic shall meet all requirements in the following a) to c). Regarding plant-based synthetic plastic, PE, PET, PLA and PTT shall be applicable.
- a) The content of bio-based synthetic polymer in the product shall be equal to or higher than 25%;
  - b) The Applicant shall have the understanding of the supply chain from cultivation of plant materials to manufacturing of plant-based plastic (raw resin). Each process shall conform to the checklist in the Attachment 2; and
  - c) The Applicant shall have confirmed by the life cycle assessment (LCA) that for the plant-based plastic (raw resin), greenhouse gas emissions (CO<sub>2</sub> conversion) from raw material procurement to discarding/recycling does not increase, when compared with conventional resin that is to be replaced. Note that if any increase in the emissions is offset by the reliable carbon offset (such as purchasing clean electric power, etc.), the applied product shall also conform to this item.

[Certification Procedure]

a) Certificates indicating the calculated content of bio-based synthetic polymers in the product shall be submitted. For the plant-based plastic (raw resin) thereof, measurement results of the bio-based synthetic polymer content calculated with the method specified in ISO 16620-3, using measurement results of the bio-based carbon content and element composition by the 14C method specified in ISO 16620-2 or ASTM D6866 shall be mentioned. Should there be any deviation of 10% or higher between the measurement results and the content of bio-based synthetic polymer in the standard, a description of a reason(s) therefor shall also be included. The measurement results of the bio-based carbon content shall be submitted as an attached document.

In addition, for appropriate maintenance of the content of bio-based synthetic polymer after certification, any of the following certificates issued by a raw resin supplier (including a dealer) shall be submitted.

- An explanatory document stating that measurements of the content of bio-based carbon will be regularly carried out, and that measurement results can be disclosed as per a request of the Eco Mark Office; and
- A certificate that the Applicant has been audited or certified by a third party for management of the content of the bio-based synthetic polymer.

b) Certificates issued by a raw resin supplier (including a dealer) indicating the supply chain (flow diagram, etc. and including purification, fermentation, etc.) from the cultivation area (country, state, city, etc.) to manufacturing of

plant-based plastic (raw resin), and status of conformance to the Attachment X shall be submitted.

- c) Results of the LCA assessment of the plant-based plastic (raw resin) shall be submitted (reference to the existing paper, etc. is acceptable). If carbon offset is adopted, data describing content of the carbon offset and reliability shall be submitted together.

- (15) HCFCs shall not be used during the manufacture of plastic materials.

[Certification Procedure]

Certificates issued by the manager of the plant manufacturing the plastic material shall be submitted.

- (16) Polymers including halogens and organic halogen compounds shall not be added to plastic products as prescription constituents. For automatic can collectors, polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE), and chlorinated paraffin (chain carbon number of 10-13, content chloride concentration of above 50%) shall not be added to plastic materials as prescription constituents.

[Certification Procedure]

Whether polymers including halogens and organic halogenides have been added to packaging shall be indicated in the Attached Certificate. For automatic can collectors, it shall be indicated in the Attached Certificate whether polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE), and chlorinated paraffin (chain carbon number of 10-13, content chloride concentration of above 50%) have been added.

- (17) Products shall not contain harmful substances such as heavy metal, etc. prescribed in laws and voluntary criteria of the industry concerned as prescription constituents.

Plastic additives shall conform to the positive list prescribed in the voluntary criteria of each industry such as the Japan Hygienic Olefin And Styrene Plastics Association.

The plastic color material shall conform to the "color material criteria" of the Japan Hygienic Olefin And Styrene Plastics Association for the content and emissions of heavy metal, etc.

[Certification Procedure]

Certificates issued by the raw material supplier, or documents certifying results of tests performed by a third party testing center or public institution shall be submitted. However, if all the raw materials used do not contain the corresponding chemical substances as prescription components, documents certifying this issued by the raw material suppliers or applicant can be submitted instead.

- (18) The product shall not contain Polybrominated biphenyl (PBB), Polybrominated diphenylether (PBDE) or short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) as a

prescription constituent when flame retardant is used in plastics.

[Certification Procedure]  
 Compliance with this item shall be indicated in the Attached Certificate. In the case of using flame retardant, the applicant shall submit a document specifying the names of chemical substances.

**D. Glass**

(19) Use of glass cullet shall be above 70% (weight percentage). It shall be above 20% (weight percentage) in heat-resistant glass.

[Certification Procedure]  
 The utilization rate of glass cullet and weight percentage of glass materials making up the whole product shall be indicated in the Attached Certificate.

(20) Safety of the glass bottle (elution of total mercury, chromium, arsenic, selenium) shall be verified and explained. The elution of the subject materials shall conform to the requirement of the Environmental Standard concerning soil pollution (the Ministry of Environment Notice No.46, Aug.23, 1991). ).

[Certification Procedure]  
 Purchasing methods and acceptance test standards (for cadmium, lead, mercury, chromium, arsenic, and selenium; tests may not be required for certain substances) of glass cullet shall be submitted.

(21) Coloring agents used in products shall not contain cadmium, lead, mercury, chromium, arsenic, selenium and their compounds as prescription constituents.

[Certification Procedure]  
 Component list issued by the manufacturer of coloring agents or the Material Safety Data Sheet (MSDS) shall be submitted.

**E. Fibers**

(22) The mass ratio of waste fibers or recycled fibers in the total mass of the product shall meet the standard content rate shown in Table 2. Products using plant-based plastic shall meet the criteria item (23) instead of this item.

Table 2. Standard Content Rate of Fiber Versus Total Mass of Product

Type of Fiber	Standard Content Rate		
Waste fibers	10% or more		70% or more for products using cupra fibers, and unused material shall be 10% or more
Recycled fiber	Reclaimed fiber	10% or more	
	Recycled polymer fiber	50% or more	For the amount of resin content, Recycled polymer shall be 50% or more.

		25% or more	For fiber-based recycled fibers, the recovered fiber-based recycled polymer shall be 25% or more.
	Chemically recycled fiber	50% or more	Recycled monomer as monomer content shall be 50% or more.
		25% or more	For fiber-based recycled fibers, the recovered fiber-based recycled polymer shall be 25% or more.
	Other recycled fiber	50% or more	

[Certification Procedure]

The applicant or the manufacturer shall submit a certificate indicating the mass ratio of the fiber material. They shall submit a material certificate indicating the details of unused/recycled materials, recycled methods, content rate, management methods, etc. which was issued by the supplier of the fiber material. When criteria for fiber-based recycled fibers are applied, amounts of recycled materials received (amounts used) and their breakdown (recovered fiber, other waste plastic, etc.) and results from a recent year, as well as their receiving system and results of recovered fiber from post-consumer materials shall be reported. However, when Eco Mark-certified products are used for the cloth, the indication of the "Product brand name", "Certification number" and "Model (product number)" in relation to the cloth, etc. in the attached certificate may be substituted for a materials certificate.

- (23) The product containing plant-based synthetic fiber shall meet all the following requirements, a-c.
- a. The content ratio of bio-based synthetic polymer in the total mass of the fiber portions shall be 10% or more. Also, the mass ratio of plant-based synthetic fiber in the total mass of the fiber portions shall be 25% or more. Regarding plant-based synthetic resin, PE fibers, PET fibers, PLA fibers and PTT fibers shall be applicable.
  - b. The applicant shall have the understanding of the supply chain from cultivation of plant materials to manufacturing of plant-based plastic (raw resin). Each process shall conform to the checklist in the Appendix X; and
  - c. The applicant shall have confirmed by the life cycle assessment (LCA) that for the plant-based plastic (raw resin), greenhouse gas emissions (CO<sub>2</sub> conversion) from raw material procurement to discarding/recycling does not increase, when compared with conventional resin that is to be replaced. Note that if any increase in the emissions is offset by the reliable carbon offset (such as purchasing clean electric power, etc.), the applied product shall also conform to this item.

## [Certification Procedure]

- a. The applicant or the manufacturer shall submit a certificate calculating the bio-based synthetic polymer content ratio and the mass ratio of plant-based synthetic fibers in the fiber portion and a material certificate indicating bio-based synthetic polymer content ratio in the bio-based synthetic fiber material issued by a fiber material supplier or a raw resin supplier. For the plant-based plastic (raw resin) thereof, measurement results of the bio-based synthetic polymer content calculated with the method specified using bio-based carbon content in ISO 16620-3, using measurement results of the bio-based carbon content and element composition by according to the 14C method specified in ISO 16620-2 or ASTM D6866-05 shall be mentioned. Should there be any deviation of 10% or higher between the measurement results and the bio-based synthetic polymer content rate in the standard, a description of a reason(s) therefor shall also be included.

The measurement results of the bio-based carbon content rate shall be submitted as an attached document.

In addition, for appropriate maintenance of the bio-based synthetic polymer content rate after certification, any of the following certificates issued by a raw resin supplier (including a dealer) shall be submitted.

- An explanatory document stating that measurements of the bio-based carbon polymer content rate will be regularly carried out, and that measurement results can be disclosed as per a request of the Eco Mark Office; and
  - A certificate that the Applicant has been audited or certified by a third party for management of the bio-based synthetic polymer content rate.
- b. Certificates issued by a raw resin supplier (including a dealer) indicating the supply chain (flow diagram, etc. and including purification, fermentation, etc.) from the cultivation area (country, state, city, etc.) to manufacturing of plant-based plastic (raw resin), and status of conformance to the Attachment 2 shall be submitted.
- c. Results of the LCA assessment of the plant-based plastic (raw resin) shall be submitted (reference to the existing paper, etc. is acceptable). If carbon offset is adopted, data describing content of the carbon offset and reliability shall be submitted together.

However, when an Eco Mark certified product is used for an intermediate product, the indication of the "Product name (Product brand name)", "Certification number" and "Model (product number)" in relation to the thread, cloth, etc. in the attached certificate may be substituted for the certificate for a raw resin supplier (including a dealer) or a fiber material supplier (a material certificate, measurement results of the bio-based synthetic polymer content, a certificate of the appropriate maintenance of bio-based synthetic polymer content rate after certification, Checklist of Traceability of Plant-based Plastic (Raw Resin), LCA evaluation result).

- (24) Use of chemical substances in products shall meet all the following requirements, a-c.

- a. Adequate consideration shall be given so that various processing (mildew proofing, fluorescent whitening, flame retarding, softening, sanitation, antimicrobial finishing, product bleaching) is limited to a necessity minimum, products will not be subjected to excessive processing, and that use of any processing agent that is suspected to affect safety to human body should be

refrained voluntarily. Also, standard values in Attachment 2-1 shall be met.

The product shall not contain such flame retardants as Polybrominated biphenyl (PBB), Polybrominated diphenylether (PBDE), short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) or Hexabromocyclododecane (HBCD) when flame retardant is used.

b. The amount of free formaldehyd shall conform to a standard value in Attachment2-2. However, this item shall not be applied to a product which is installed outside the buildings; and

c. For a dye and pigment to be used in the product, dyes and pigments and chrome defined in 1), 2), and 3) of the Attachment 2-3 shall not be added as a prescription constituent.

[Certification Procedure]

a. The applicant or the manufacturer shall submit a certificate indicating the processing or non-processing of the product. If a type of processing or chemical agent that is being considered is made or used, a safety data sheet which confirms the non-use of the substance in Table 7, or a certified document of the test results, etc. shall be submitted.

b. For amount of free formaldehyde, test result by a third-party testing organization or an applying company itself shall be submitted.

c. The non-use substance or test results issued by the dye plant (including spin-dyeing and printing) shall be submitted. If the non-use of dyes, pigment and chromate stipulated in 1), 2) and 3) of Table 9 at each phase of the supply chain in relation to fiber materials excluding small accessories is confirmed by complying with voluntary standards (Japan Textile Federation), regarding the non-use of hazardous substances on fiber products and management is implemented by clarifying traceability, a certificate (including a sample of the confirmed documents), which describes the management method issued by the applicant or the manufacturer is acceptable

(25) Products shall not use resins made of halogens. (This item applies to resin fibers and post-processes and does not apply to coloring materials and fluorine-based additives).

[Certification Procedure]

Whether resins composed of halogens are used shall be indicated in the Attached Certificate

**F. Rubber**

(26) The mass ratio of recycled rubber out of the total rubber used in the product shall be 10% more. However, this shall be 60% or more for normal temperature molded products using rubber powder.

[Certification Procedure]

The mass ratio of recycled rubber materials making up the total rubber mass shall be indicated in the Attached Certificate. Raw material certificates issued by raw material suppliers shall be attached.

(27) Harmful substances contained in rubber shall conform to criteria on heavy

metals prescribed in the Ministry of Environment Notice No.46, Aug.23, 1991.

[Certification Procedure]

Certificates issued by raw material suppliers and documents certifying results of tests implemented by a third party testing center or public institution shall be submitted. However, if all the raw materials used do not contain the corresponding chemical substances as prescription components, documents certifying compliance with this criterion issued by the raw material suppliers or applicant can be submitted instead.

- (28) The product shall not contain Polybrominated biphenyl (PBB), Polybrominated diphenylether (PBDE) or short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) as a prescription constituent when flame retardant is used in rubber.

[Certification Procedure]

Compliance with this item shall be indicated in the Attached Certificate. In the case of using flame retardant, the applicant shall submit a document specifying the names of chemical substances.

- (29) Information on appropriate handling of products such as precautions on handling and storage and allergy information, etc. shall be provided in instruction manuals, on product labels, and in pamphlets.

For labeling of allergy information on products, the following requirements shall be observed:

- a. In material labeling, name of materials related to natural rubber, rubber, or plastic shall be indicated. For synthetic rubber and plastic, indicate the specific name in brackets behind the name of the material.

Example: Synthetic rubber (nitrile rubber), natural rubber

- b. For synthetic rubber, natural rubber and plastic products, in addition to the current precautions on use, also include precautions on use for allergy referring to Example 1 below. For natural rubber products, in addition to the current precautions on use, also include precautions on use for latex allergy referring to Example 2.

Example 1: May cause itchiness, skin irritation, rash. In such cases, discontinue use.

Example 2: This product is made of natural rubber. Natural rubber can rarely cause itchiness, redness, rash, bloating, fever, difficulty in breathing, asthma-like symptoms, drop in blood pressure, shock, and other allergic symptoms. In such cases, discontinue use promptly and consult your physician.

[Certification Procedure]

Labeling of allergy information shall be indicated specifically in the Attached Certificate. (Drawings and photographs can be used to supplement description)

**G. Ceramics**

(30) For ceramics, for each raw material category given in Table 3, the mass ratio of recycled materials in the total mass of the product shall meet the standard content rate shown. However, for products made of several recycled materials so that they apply to several standard content rate in Table 3 below, the total mass ratio of all recycled materials shall be above the standard content rate shown. The standard content rate lower limit is calculated using the following equation based on the proportional composition.

$$\text{Standard Content Rate (lower limit of recycled material)}(\%) = \frac{(AxX1+BxX2)}{(A+B)}$$

(Set for products using [Standard Content Rate X1% category material] = A% and [Standard Content Rate X2% category material] = B%)

Table 3 Raw Material Categories of Recycled Materials, Certification on Use, and Standard Content Rate

Category and name of waste serving as raw material of recycled materials		Standard Content Rate <sup>Note2)</sup> (mass%)
Category	Name of recycled material	
Waste from mines and quarries	-Waste sand from quarries and ceramics -Micro silica sand generated at separation of silica by water	35%
Metal industry waste	-Steel slug - Casting sand -Copper slug -Ferro-nickel slug -Electrical furnace slug	
Used pottery		15%
Glass cullet		Glass mass/product mass ≥ 15% Glass cullet use rate ≥ 70%
Other industrial waste	-Coal ash -Shell	50%

Note 1) For products in which a small amount of colorant is added to molten parts, the weight of colorant shall not be included in the weight of all materials used for calculating the standard content rate.

Note 2) For the products containing moisture, use dry weight, and for fired and molten products, the weight loss on burning shall not be included.

Note 3) For products applicable to several standard content rates in this table due to multiple recycled materials used, calculate the standard content rate on a proportional basis.

Example) Fired and molten parts using ceramic waste and sewer sludge

Ceramic waste A (%) (Standard mixture amount 35%)

Used pottery B (%) (Standard mixture amount 15%)

In this case, the standard content rate (lower limit of recycled material content) (%) is  $(Ax35+Bx15)/(A+B)$ .



Consequently, in this case, the A+B total content rate is required to be above the standard content rate calculated in the above equation.

Note 4) For products using glass cullets in the raw material category in Table 3, the mass ratio of glass materials making up the product mass shall be 15% or more, and the rate of using glass cullets shall be 70% or more.

[Certification Procedure]

The standard content rate and total mass ratio of the recycled materials shall be indicated in the Attached Certificate for each raw material category in Table 3. Raw material certificates issued by raw material suppliers shall be attached.

(31) The Product shall conform to the standards concerning elusion of hazardous substances that are set forth in Attached Table 3 of the enforcement regulation of the Soil Contamination Countermeasures Law (2002 Ministerial Order No. 29 of the Ministry of the Environment) with respect to cadmium, lead, hexavalent chromium, arsenic, mercury, selenium, boron and fluorine among the specified hazardous substances listed therein..

[Certification Procedure]

The results of tests conducted by a third party testing organization or a public organization shall be submitted. .

#### 4-1-3. Criteria on individual products and Certification Procedures

(32) Information on appropriate handling of products such as precautions on handling and storage, etc. shall be provided in instruction manuals, on product labels, and in pamphlets.

[Certification Procedure]

Copies of instruction manuals, product labels, pamphlets, etc. providing information on handling and storage precautions shall be submitted.

(33) The product shall meet the following criteria.

a. These are machines with functions to automatically sort, compress and store cans placed inside, or functions to manually compress and sort to facilitate collection of can.

b. Automatic collectors shall be equipped with devices that automatically sort aluminum cans from steel ones, compress and store cans.

c. Automatic collectors shall have after-service systems to ensure repair and inspection services can be provided smoothly.

[Certification Procedure]

Description of functions on sorting, compression, and storage shall be indicated in the Attached Certificate. Documents such as descriptions indicating that information on the after-service system such as range of repair services, required time, expenses, and where to contact is provided shall be submitted.

#### 4-2. Quality criteria and Certification Procedures

- (34) Products shall have robust structures, minimal malfunctions, and be safe in use.

[Certification Procedure]

Certificates and declaration documents issued by the manager of the plant manufacturing the product indicating the toughness of the structure, malfunctions, and safety in use shall be submitted.

## 5. Considerations

In manufacturing products, it is desirable to consider the following, although they are not requirements for certification. The conformance to the individual criteria item shall be indicated in Attached Certificates.

- (1) Products shipped in simple packaging shall meet the following criteria for packaging material.
- a. Percentage of waste paper in the pulp mixture shall be 70% or more.
  - b. Mass ratio of recycled polymers in the total raw material polymers used in plastic sheets shall be 60% or more.

## 6. Product Classification, Indication and Others

- (1) Products shall be classified by brand or series name. Also, products shall be classified into other product classification when materials used or the combination of materials used differ. (Each material classifications of A-G in 4-1-2., recycled plastic, plant-based plastic, unused fiber, recycled fiber and biobased synthetic fiber are considered as a different material.) Products shall not be classified by size or color.
- (2) In principle, Eco-Mark shall be indicated on the product main body, etc. B type or C type display shall be conducted in accordance with the "Guide to Eco Mark Usage" (<https://www.ecomark.jp/office/guideline/guide/>). An Eco Mark licensee who owns the Eco Mark product may also indicate the type A.
- For Eco Mark products certified under Eco Mark Product Category No.36 'Waste Can Collectors and those which conclude Eco Mark contract under this product category after April 1, 2005, the display of environmental information below mark which is used in the former product category may be indicated the same as before. The location and details of the Eco Mark to be indicated shall be submitted when applying for Eco Mark product certification and use.

Layout sample: omitted.

Established: July 1, 2004 (Version 1.0)

Revised: Oct 14, 2004, Applicable Products, etc (Version1.1)

Revised: May 13, 2005, 4-6(1) and Attachment 1 (Version1.2)

Revised: Sept. 8, 2005, 4-1-2.(15) (Version1.3)

Revised: October 19, 2006, 4.(23)-(26), 4.(51)-(54), 6(2) (Version1.4)

Revised: April 13, 2007, 4-1-2.(15) (Version1.5)  
Revised: August 2, 2007, 4-1-3.(42) (Version1.6)  
Extension of Expiration date: Oct. 5, 2007  
Revised: Feb. 14, 2008, (Version1.7)  
Revised: August 21, 2008, (Version1.8)  
Revised: May 1, 2009, (Version1.9)  
Revised: November 4, 2009, (Version1.10)  
Revised: December 13, 2010, (Version1.11)  
Revised: March 1, 2011, (Version1.12)  
Revised: August 1, 2011, (Version1.13)  
Revised: November 1, 2011, (Version1.14)  
Revised: February 1, 2012, (Version1.15)  
Revised: July 5, 2012 (Version1.16)  
Extension of Expiration date: February 1, 2014  
Revised: June 1, 2015 (Version1.17)  
Revised: June 1, 2016 (Version1.18)  
Revised: February 1, 2017, (Version1.19)  
Revised: September 1, 2017, (Version1.20)  
Extension of Expiration date: January 7, 2019  
Revised: March 1, 2019, (category A, Version1.21)  
Expiration date: June 30, 2021

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

## Attachment 1 Forest Certification defined in Terminology

Certification criteria	Certification shall keep balance between ecological and social benefits, agree to Agenda 21 and the Declaration of Forest Principle, and observe related international agreements and treaties.
	Certification shall contain definite requirements and shall promote and be oriented to sustainable forest.
	Certification shall be nationally or internationally recognized and shall be recommended as part of an open process to which ecological, economic, and social interested parties can participate.
Certification system	The certification system shall provide high transparency, maintain extensive national or international reliability, and enable the verification of requirements.
Certification organization and association	Certification organization and association shall be highly impartial and reliable, allow them to be verified as to whether or not they satisfy requirements, report the verification results, and be able to effectively implement requirements.

## Attachment 2 Checklist of Traceability of Plant-based Plastic (Raw Resin)

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
1	Prevention of global warming, conservation of the natural ecosystem	Hasn't the farm land where plants are cultivated been converted from forests in the recent ten years?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning the land conversion for the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):
2	Conservation of the ecosystem	If the Applicant uses the genetically engineered crop as a raw material, has the Applicant assessed ensuring of safety?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No/ <input type="checkbox"/> Not applicable (Not used)	<input type="checkbox"/> Confirmed the laws and regulations concerning genetically engineered crop on the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
3	Prevention of land acidification/nutrient enrichment/water contamination	Has the Applicant gained the understanding of usage conditions of fertilizers/agricultural chemicals in the main cultivation area of plants? Isn't any agricultural chemical regulated under the "Stockholm Convention on Persistent Organic Pollutants" (POPs Treaty) used?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning fertilizers/agricultural chemicals on the site <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):
4	Appropriate water usage	Has the Applicant gained the understanding of usage conditions of water in the main cultivation area of plants?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning usage of water (limits on the amount of water) on the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):



Attachment 3-1. Standard value for processing agents of fiber material

Name	Criteria	Test Method	Concerned Products
Organic mercury compound Triphenyltin compound Tributyltin compound	Shall not be detected	MHW Ordinance No. 34	Products using fungicide
Dieldrin DTTB	30 ppm or less	MHW Ordinance No. 34 OekoTex	Products using wool products or mothproofing agents
APO TDBPP Bis (2,3-dibromopropyl) phosphate compound	Shall not be detected	MHW Ordinance No. 34	Products using fire retardant agents
PFOS PFOA	1 $\mu$ g/m <sup>2</sup> or less 1 $\mu$ g/m <sup>2</sup> or less	CEN/TS15968:2010 ISO25101 OekoTex	Products using fluorine system water repellent agents, oil repellent agents or soil-release finishing agents
DEHP/ DBP/ BBP/ DNOP/ DINP/ DIDP	0.1wt% or less	EN15777:2009 MHL notification No. 370 OekoTex	Printed products for small babies

Attachment 3-2 Standard of formaldehyde amount

Name of Substance	Target Product			Test Method
	Clothes for infants (under 24 months old)	Products likely to touch the skin (beddings, towels, and fabricated basic textiles for inner wear and underwear)	Other products (curtains, carpets, aprons, etc.)	
Formaldehyde	Not detected (16ppm or less)	75ppm or less	300ppm or less	Ordinance No. 34 of the Ministry of Health and Welfare



## Attachment 3-3 List of prohibited dyes and pigments

- 1) Azo Dyes which may generate the following carcinogenic amines in degradation (Dyes whose detection value of the following aromatic amine exceed 30mg/kg according to JIS L 1940-1 and JIS L 1940-3 (ISO24362-1, ISO24362-3, or EN 14362-1, EN14362-2))

CAS No	Name
92-67-1	4-Aminobiphenyl
92-87-5	Benzidine
95-69-2	4-Chloro-o-toluidine
91-59-8	2-Naphthylamine
97-56-3	o-Aminoazotoluene
99-55-8	2-Amino-4-nitrotoluene
106-47-8	4-Chloroaniline
615-05-4	2,4-Diaminoanisole
101-77-9	4,4'-Diaminodiphenylmethane
91-94-1	3,3-Dichlorbenzidine
119-90-4	o-Dianisidine; 3,3'-Dimethoxybenzidine
119-93-7	o-Tolidine; 3,3'-Dimethylbenzidine
838-88-0	4,4'-Diamino-3,3'-dimethyldiphenylmethane
120-71-8	p-Cresidine
101-14-4	4,4'-Diamino-3,3'-dichlorodiphenylmethane
101-80-4	4,4'-Diaminodiphenyl ether
139-65-1	4,4'-Diaminodiphenyl sulfide
95-53-4	o-Toluidine
95-80-7	2,4-Diaminotoluene
137-17-7	2,4,5-Trimethylaniline
90-04-0	o-Anisidine
95-68-1	2,4-Xylidine
87-62-7	2,6-Xylidine
60-09-3	4-Aminoazobenzene

- 2) Carcinogenic Dyes

CAS No	C.I.	
569-61-9	C.I. BASIC RED 9	CI 42500
2475-45-8	C.I. DISPERSE BLUE 1	CI 64500
3761-53-3	C.I. ACID RED 26	CI 16150
2602-46-2	C.I. DIRECT BLUE 6	CI 22610
1937-37-7	C.I. DIRECT BLACK 38	CI 30235
573-58-0	C.I. DIRECT RED 28	CI 22120
2832-40-8	C.I. DISPERSE YELLOW 3	CI 11855
632-99-5	C.I. BASIC VIOLET14	
82-28-0	C.I. DISPERSE ORANGE11	

- 3) Skin Sensitizing Dyes

2475-46-9	C.I. DISPERSE BLUE 3	CI 61505
12222-75-2	C.I. DISPERSE BLUE 35	
	C.I. DISPERSE BLUE 106	
	C.I. DISPERSE BLUE 124	
2832-40-8	C.I. DISPERSE YELLOW 3	CI 11855
730-40-5	C.I. DISPERSE ORANGE 3	CI 11005
	C.I. DISPERSE ORANGE 37	
2872-52-8	C.I. DISPERSE RED 1	CI 11110
2475-45-8	C.I. DISPERSE BLUE 1	CI 64500
3179-90-6	C.I. DISPERSE BLUE 7	CI 62500
3860-63-7	C.I. DISPERSE BLUE 26	CI 63305
	C.I. DISPERSE BLUE 102	
	C.I. DISPERSE ORANGE 1	CI 11080
	C.I. DISPERSE ORANGE 76	
2872-48-2	C.I. DISPERSE RED 11	CI 62015

	C.I. DISPERSE RED 17	CI 11210
119-15-3	C.I. DISPERSE YELLOW 1	CI 10345
	C.I. DISPERSE YELLOW 9	CI 10375
	C.I. DISPERSE YELLOW 39	
	C.I. DISPERSE YELLOW 49	
	C.I. DISPERSE BROWN1	

Omitted below

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