

Eco Mark Product CategoryNo.167 Certification Criteria Cleaning Products Version1.1

Category B. Cleaning implements

Established: January 1, 2025 Last revised:April 1, 2025 Expiration date:December 31, 2031

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.



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Eco Mark Product Category No.167 Certification Criteria Cleaning Products Version1.1 Category B. Cleaning implements

1. Purpose of Establishing Certification Criteria

Omitted.

2. Applicable Scope

This product category covers the products shown in Appended Table 1, which are among cleaning implements used by persons working in businesses defined by the "Act on Maintenance of Sanitation in Buildings" as "construction material cleaning businesses" and "construction material sanitation management businesses".

However, the following are out of scope

 $\cdot \mbox{Cleaning}$ implements sold primarily for household use.

•Cleaning implements made solely of metal, except for replacement parts or consumable parts

•Electrically powered mechanical cleaning implements

3. Terminology

Omitted.

4. Certification Criteria and Certification Procedure

The required items shall be described in the attached certificate to show compliance with each criteria item, and documentation shall be submitted to verify meeting each criteria item.

4-1.Environmental Criteria and Certification Procedure

4-1-1.Common Criteria and Certification Procedure

(1)For products consisting of 50% or more by mass of metal, consideration shall be given to factors such as longer usage lifetime compared to conventional products, ease of recycling, and surface processing. Specifically, metallic materials shall conform to at least five of the required items shown in Appended Table 2.

[Certification Procedure]

A certificate showing the product composition ratio shall be submitted along with the checklist for environmentally conscious design of metallic materials.

(2) The mass ratio of a recycled material, etc. in the main constituent material in the product (<u>the main non-metallic constituent if the product consists of 50% or more by mass of metal</u>) shall meet the standard content ratio for categories [1] to [13] of <u>Appended Table</u> <u>3(a)</u> and conform with <u>Appended Sheet 1</u>. Replacement parts and consumable parts are not included as part of the main material. However, rags, non-woven cloth, and woven sheets for floor cleaning shall meet the requirements in <u>Appended Table 3(b)</u>. Mops shall meet the requirements in

Appended Table 3(b) or criteria item (12).

[Certification Procedure] A certificate conforming with <u>Appended Sheet 1</u> "Verification of standard content ratio of main materials" shall be submitted for the main used material (<u>Appended Table 3(a)</u> categories [1] to [13], or <u>Appended Table 3(b)</u>).

(3)Replacement parts and consumable parts for the products required to comply with this item as stated in Appended Table 1 shall be submitted. In addition, a system for outsourcing the replacement of parts shall be established so that parts can be replaced or maintained according to product users' requests.

[Certification Procedure]

Documentation showing the positions where parts can be replaced shall be submitted. Documentation such as manuals, pamphlets, and product labels that provide information about replacement parts and consumable parts shall be submitted. Documentation giving an overview of the entire system for parts replacement (including collection, repair, return) shall be submitted.

(4)The product shall not use plastics and fibers containing halogen in the polymer backbone. (This item covers plastic parts, coating resins, fibers and dose not applied to coloring materials, additive agents and fluorine system processing agents).

[Certification Procedure]

Conformance to this item or not shall be indicated in the attached certificate.

(5)The product package shall have been designed with consideration to the volume reduction and ease of recycling. A plastic container or packaging, if used, shall not use plastics containing halogen in the polymer backbone.

[Certification Procedure]

Conformance to this item and design consideration shall be stated in the attached certificate. A picture or design plan of the packaging or container may be used for explanation.

For a plastic container or packaging whether plastics containing halogen elements in the polymer backbone are used or not shall be stated in the attached certificate.

(6)In the case of using antibacterial agents, the product shall be certified by such as the SIAA Mark of the Society of International sustaining growth for Antimicrobial Articles or the SEK Mark of Japan Textile Evaluation Technology Council, etc.

[Certification Procedure]

The applicant shall state the use or not of an antibacterial agent in the Attached Certificate. If an antibacterial agent is used, the applicant shall submit a proof document of SIAA mark or SEK mark is certified.

(7)In manufacturing the applying 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 manufacturer of the applying 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).

4-1-2. Material criteria and Certification Procedure

The main constituent material in the product (<u>the main non-metallic</u> <u>constituent if the product consists of 50% or more by mass of metal</u>), shall satisfy one of the items A-C shown below. However, the criteria items in this section (4-1-2. Material criteria and Certification Procedure) do not apply to materials other than the main constituent or to replacement parts or consumable parts.

<A.Wood>

(8) If toluene or xylene is added as a prescription constituent in adhesives and paints used, the emission speed measured by the JIS A 1901 "Determination of the emission of volatile organic compounds and formaldehydes for building products -- Small chamber method" shall be less than the minimum limit of determination value. However, this criteria item does not apply to products sold for outdoor use.

For products in B. Interior accessories (indoor materials), C. Living and cultural commodities using adhesives or additives, no emissions of toluene or xylene shall be detected at product shipment. "No emissions detected" means less than the minimum limit of determination value measured by the JIS A 1901 "Determination of the emission of volatile organic compounds and formaldehydes for building products -- Small chamber method"

[Certification Procedure]

Addition or not of toluene and xylene shall be indicated in the Attached Certificate. If added, test results prescribed in JIS A 1901 shall be submitted.

- (9)Products using an adhesive or paint shall conform to any one of the following a) to c) for emission of formaldehyde.
 - a) The product shall be equivalent to "F four-stars" of the JIS standard or JAS standard.
 - b) The formaldehyde emission is not more than 0.3 mg/l on average and not more than 0.4 mg/l at maximum, as measured pursuant to JIS A 1460 "Test method for formaldehyde emission of building boards—desiccator method."
 - c) The formaldehyde emission rate is no higher than 5mg/(m2·h), as measured pursuant to JIS A 1901 "Measuring methods for emission of volatile organic chemicals (VOC), formaldehyde and other carbonyl compounds - small chamber method."

[Certification Procedure]

Whether an adhesive or paint is used in a material or the product or not shall be stated in the Attached Certificate. Note that if the adhesive or paint is used, the conformance shall be demonstrated with any one of the methods listed in a) to c) below.

- a) a document or a copy thereof demonstrating that the indication of F four stars according to the JIS standard or JAS standard is approved shall be submitted.
- b), c) a test result carried out according to the method defined in JIS A 1460 or JIS A 1901 by a third-party organization or an own company shall be submitted. However, for any powder paint or paint that falls under JIS and is not covered by the announcement target of the Building Standards Act, certification thereof or a copy of the certification can be submitted, which then replaces test

results. If paint with F four-stars grade cannot be used, a document explaining that the applicant sets enough curing period after painting and confirms that the product is equal to "F four-stars" grade at the time of shipment shall be submitted.

<B.Plastic>

(10)A plastic component shall meet the content standard value of heavy metal defined in Appended Table 4.

[Certification Procedure]

Conformance shall be described in the attached certificate. In addition, for any plastic component in which recycled material is used, test results on heavy metals conducted by a third-party organization or own company shall be submitted. A testing method shall conform to the RoHS directive, ISO8124-3, MHL notification No. 370, etc.

<C.Fiber>

(11)Chemical materials used in fiber shall meet all the requirements of a) to c) below.

- 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 in <u>Appended Table 6</u> shall be met.
- b) The amount of free formaldehyde in a product shall conform to a standard value in <u>Appended Table 7</u>. However, this item shall not be applied to a product which is used outside the buildings.
- c) For a dye and pigment to be used, dyes and pigments and chromium defined in 1), 2), and 3) of <u>Appended Table 8</u> 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 is made or a subject chemical agent is used, a safety data sheet which confirms the non-use of the substance in Appended Table 6, 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 nonuse of dyes, pigment and chromium stipulated in 1), 2) and 3) of <u>Appended Table 8</u> 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.

- (12)Mop threads (rags) with a recovery system shall be duly recovered, and reused or recycled after use and shall meet the following a) to c).
 - a) The applicant shall have a mechanism for collecting and recycling unwanted used products. Products shall have been designed by more than 70% materials that can be recycled by the system. Portions of products that cannot be recycled shall be subject to energy recovery by an eco-friendly method. When collecting and reusing the products that were provided for lease or rental service, etc., the applicant shall take measures that recover the state of used products and have a mechanism for reusing such product multiple times. If products become unavailable for reuse after used so that the purpose of use for the product applying for certification cannot be met, such products shall be used for other purposes, such as cascade reuse, or their raw materials shall be recycled, and portions of the products that cannot be recycled shall be subject to energy recovery by an eco-friendly method.
 - b) The product body shall carry indication that it will be recovered and reused or recycled after use and contact information, if a user requests for recovery. If the information can be easily disseminated because a sale destination is specified, etc., the indication in a catalog or web page, etc., may replace this requirement.
 - c) (Voluntary requirement) The mass ratio of unused fibers and recycled fibers stipulated in <u>Appended Table 3(a)</u> shall be 10% or more, or the bio-based synthetic polymer content rate shall be 4% or more and the mass ratio of the bio-based synthetic fiber shall

be 10% or more.

[Certification Procedure]

A certificate should be submitted for mops with collection systems in line with Appended Sheet 1 "Verification of standard content ratio for main materials".

4-2. Quality Criteria and Certification Procedures

(13)Regarding product quality, quality management shall be made according to related JIS, industry standards, standards of an inspection organization, or standards of its own.

[Certification Procedure]

Quality test results shall be submitted as a compliance with the corresponding quality criteria

5. Considerations

In the process of manufacturing products, it is desirable to consider the following items, although they are not requirements for certification. The response to each item shall be indicated in the Attached Certificate

(1)Quantitative environmental information on greenhouse gas emissions throughout the life cycle of the applied product, from the procurement of the raw materials to the disposal and recycling, shall be disclosed, which is calculated by converting into carbon dioxide equivalents based on the global warming potential (when applying for multiple types at once, calculation by a representative type is acceptable). It shall be possible to explain that the quantitative environmental information has been calculated in accordance with the Carbon Footprint (ISO 14067), Life Cycle Assessment (ISO 14040 and ISO 14044), or "Carbon Footprint Guidelines" prepared by the Ministry of Economy, Trade and Industry and the Ministry of the Environmental information (URL of the calculation report, etc.) shall be disclosed as part of product information on the Eco Mark website.

6. Product Classification, Indication and Others

(1)Product classification (application unit) shall be made by a product shown in Appended Table 1 of 2. Applicable Scope and by each product name or a product series. Products with different combination of major materials Appended Table 3(a) and (b) shall be applied as a different product classification. Classification by size or color is not performed.

- (2)Regarding products which correspond to designated procurement items under the "Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities Authorities (Green Purchasing Law)", conformity status for evaluation criteria will be announced by a certification number on the website of the Eco Mark Office.
- (3)In principle, Eco Mark shown as below shall be indicated on the product. Regarding licensee of Eco Mark Utilization Contract who already own Eco Mark products, the indication of the logo and certification number that have been used is also acceptable.



(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. (<u>https://www.env.go.jp/policy/hozen/green/ecolabel/guideline/</u>)
- * The Guide to Eco Mark Usage shall be followed for any cases not listed above. (<u>https://www.ecomark.jp/office/guideline/guide/</u>)

[[]issuer] Eco Mark Office, Japan Environment Association https://www.ecomark.jp/nintei/167.html 🖂 sinsei@ecomark.jp

[revision history]January 1, 2025Established(Version1.0)April 1, 2025Revised (5. added, Version1.1)December 31, 2031Expiration date

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

Appended Table 1. List of target items

Target item	Overview and usage	Conformance to 4-1-1.(3)
Rag Cloth Synthetic fiber cloth Non-woven cloth	Wiping off dirt, dust, etc.	_
Transportation apparatus	Transporting dirt collectors, cleaning implements, linen, etc.	0
Implements for cleaning grease traps	Grease trap cleaning	_
Adjustable broom Fern broom Non-woven sheet for floor cleaning Floor pad Floor brush	Floor cleaning	0
Sweeper (manual type)	Collection of dust and dirt from floor surfaces	0
Sponge Scrubbing brush	Scrubbing	
Sponge mop (Water absorbent mop)	Cleaning of flooded floors (sewage collection)	0
Handle with replaceable tip	Handle for brooms, non-woven sheets for floor cleaning, floor pads, floor brushes, adjustable brooms, dusters, mops	
Accessories for cleaning equipment	Squeegees, brushes, pads, filters, and other accessories that can be fitted as replacement parts to cleaning equipment	_
Cleaning scraper	Removal of built-up dirt from objects	0
Cleaning panel	Warning signage	
Storage bag for cleaning supplies	Transporting cleaning implements	_
Hanger for cloths and towels	For drying cloths after use	_
Dustpan	Collection of swept up dust and dirt	0
Toilet brush	Toilet cleaning	
Adhesive roller	Dust removal from carpets	0
Bucket	Storing and transporting water	—
Duster	Dust removal, static dust removal,	—

Target item	Overview and usage	Conformance to 4-1-1.(3)
	feather dusting, etc.	
Mops	Floor cleaning and polishing	
Mop squeezer	For squeezing water out of mops	_
Mop hanger	For storing mops	_
Plunger (for	For unblocking drainpipes in	
unblocking)	toilets, etc.	
Squeegee for floors and windows (to remove water)	Removal of water from the surfaces of floors and windows	0
Other cleaning implements	Implements for cleaning purposes not listed above	_

Appended Table 2. Checklist for environmentally conscious design of metallic materials (At least 5 requirements must be met)

No	Durnage Dequirement Compliance		
No.	Purpose	Requirement	Compliance
1 Extended		Using or processing rust-resistant materials in expectation of contact with water or other substances	□Yes/No expectation of contact with water □No
2	usage lifetime	Considering the ease of repair and replacement of parts by having parts common to different models	□Yes □No
3		Considering reducing the number of types of raw materials used in parts	□Yes □No
4	4 Ease of recycling	Using metallic compositions as versatile ingredients in Japan in expectation of recycling into similar materials after use	□Yes □No
5		Avoiding the use of combinations of difficult to separate different alloys (e.g. SUS304 and SUS316)	□Yes □No
6	Considerations for surface processing	Avoiding the use of hexavalent chromium for metal plating processes *excluding usage on small metal attachments (small components such as screws that are essential for the functioning of products)	□Yes / No metal plating processes □No
7		Avoiding the use of volatile organic compounds (toluene, xylene) in paints	□ Yes / No use of paint □No

Appended Table 3(a). Overview of standard content rates of renewable materials and bio-based plastics/synthetic fibers for main raw materials

raw materials				
Main material	clas	ssification		standard content rate
A. Wood	①reused / unused wood		100%*1	Forestry certifications for low utilized small-diameter wood where terminology definitions a or b apply shall meet the supplementary requirements described on the appended sheet.
	② wood above(wood)	other than ① forest certified	70% or more	Mass ratio can also be certified by the credit method.
		③Pre-consumer material	50%以上	
		@Post-	25%	
	Recycled		or more	
B. Plastic	plastic	⑤Pre-consumer material + Pre- consumer material	50% or more	Post-consumer materials shall meet the standard formulated ratio shown on the left after the material mass has been multiplied by 2
©Bio-bas		ed plastics	25% or more	The content of biobased synthetic polymer shall be 25% or higher.
	🗇 unused fiber		10% or more	However, for products that use cupra fiber, the standard formulated ratio shall be 70% or higher.
		8 Reclaimed	10%	
		fiber	or more	
			50% or more	Recycled polymer as resin content shall be 50% or over.
C. Fiber	Recycled	<pre></pre>	25% or more	For fiber-based recycled fibers, the recovered fiber- based recycled polymer shall be 25% or over.
	fiber	<pre> </pre>	50%	Recycled monomer as monomer
			or more	content shall be 50% or over.
			25% or more	For fiber-based recycled fibers, the recovered fiber- based recycled polymer shall be 25% or over.
		①Other	50%	
		recycled	or more	

	fiber		
		25%	Additional to the note on the
12Bio-bas	ed synthetic	or more	left, the content of biobased
fiber			synthetic polymer shall be 10%
			or higher.
		70%	Certified forest materials or
③Cellulos	-	or more	raw materials consisting of
chemical	fiber		cotton linters (cellulose) shall
			be 70% or higher

* ¹: Mass ratio means the proportional mass of the product or each material in an air dried state*1 or at the point of constant weight*3 at a temperature of 20±2°C and humidity of 65±5%.

- *²:Left in a well-ventilated room for at least seven days. This 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.
- *³:Refers a rate of change of 0.1% or less when the mass is measured every 24 hours

Appended Table 3(b).	standard content rate for products (main
	material: fiber)

	· · · · · · · · · · · · · · · · · · ·	
target product	standard content rate	
	Only sub-standard fabric rejected during	
Rag	inspections and recycled material cut from old	
	fabric and old clothes shall be used.	
	Shall me <u>et the standard fo</u> rmulated rate	
	shown in Appended Table 3(a).	
Non-woven cloth	However, for products that are not normally	
Non-woven sheet for	reused (products disposed of after a single	
floor cleaning	use), and which correspond to [7] to [11] in	
	Appended Table 3(a), the standard	
	formulated rate shall be 70% or higher.	
	The total weight ratio of unused fiber +	
Map threads	recycled fiber (Appended Table 3(a) [7] to	
Mop threads	[11]) + other recycled materials in the overall	
	product shall be 25% or higher.	

Appended sheet 1. Verification of standard content ratio for main materials

[Certification Procedure]

<A.Wood>

①:reused /unused wood

Certificates of a mass percentage of reused /unused wood and manufacturing process/management certificates indicating the name of manufacturers in each manufacturing process shall be submitted. If there are multiple material providers, a list of the providers and list of certification of the top 10 providers 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.

Supplement I. Fore	Supplement I. Porest 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.		

Supplement 1. Forest Certification defined in Terminology

	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.

②: Wood other than forest-certified wood

The certificate of the mass percentage of the forest-certified wood and the certificate that the product has been forest-certified by the third party shall be submitted.

<B.Plastic>

<u>3~5: Recycled plastic</u>

The certificate of mass percentage of recycled plastics and manufacturing process /management certificates indicating the name of manufacturers in each manufacturing process, and in addition, raw material certificates issued by the raw material manufacturer shall be submitted. <C.Fibers>

⑦~①: unused fibers, recycled fibers

The certificate of the mass percentage of the fiber materials and the raw material certificates issued by the fiber material manufacturer shall be submitted.

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 performance 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 raw material certificate.

①:Cellulose based chemical fiber

All requirements in the following a) and b) shall be met.

a) When using cellulose material with forestry certification, certificates showing the weight ratio shall be submitted (this should meet the actual formulated ratio for the product in question, not ratios calculated using the credit method) along with certificates for the product from 3rd party agencies. When the product under application has not received certification, a certificate for the post-yarn stage fiber product, the shipping status of that certified product (commercial transaction certificate, etc.), and certificates showing the usage ratio and management method of the certified product shall be submitted. When using a wood material without forestry certification for parts not described above, the original wood used as raw material should have met the forestry-related legal requirements of the producing country at the time it was cut down. Specifically, when using wood without forestry certification, the product shall have CoC (Chain of Custom) certification that the legality of such wood has been confirmed.

When using cotton linters as the cellulose raw material, refer to the verification method in [7].

 b) Chlorine gas shall not be used for bleaching pulp used for fiber production. Solvent (Rayon: carbon disulfide, Cupra: copper ammonium, etc.) to be used in fiber production shall be properly managed by preparing equipment to be reused for collection or closed use.

A certificate issued by a fiber manufacturer verifying the above shall be submitted.

<B.Plastic, C.Fiber>

6.12: biobased plastic, biobased synthetic fiber

All requirements in the following a) to c) shall be met.

a) Certificates indicating the calculated content of bio-based synthetic polymers in the product shall be submitted. For the biobased plastic (raw resin) thereof, measurement results of the biobased synthetic polymer content calculated with the method specified in ISO 16620-3, using measurement results of the biobased 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 biobased synthetic polymer after certification, any of the following certificates issued by a raw resin supplier (including a sales 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

•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) Sustainability of biomass mixed into plastic as raw materials shall meet the requirements of <u>Appended Table 5(a)</u> "Sustainability checklist of bio-based plastics (raw resin)" and the supply chains of the biomass shall be identified.

If the biomass material has underwent third-party audit or certification for sustainability (an international sustainability certification for plastics, etc.), the result of audit or certification may be submitted as evidence instead of <u>Appended Table 5(a)</u>. Concretely, documents on the source of biomass material (a cultivation area (country, state, city, etc.), a generation process of waste and residues, etc.), a manufacturing flowchart (of raw resin) (describe the name of manufacturers of fundamental chemicals (monomers), polymers, etc.), and checklists or an evidence of a third-party audit or certification shall be submitted.

To the application for Eco Mark certification of products containing bio-based plastics or biomass materials that have never been certified for use, Eco Mark Office may request the applicant (or the plastic supplier) to provide information on the chemical composition of the products (see <u>Appended Table 5(b)</u>).

c) The result of LCA conducted by a third-party shall be submitted showing that the bio-based plastic (raw resin) does not cause an increase of GHG emissions (in terms of CO₂) from the

manufacturing through disposal/recycling of the product in comparison with a resin to replace with (The LCA result and the calculation conditions shall be provided. If the applicant has underwent LCA under an international sustainability certification scheme for plastics, it may submit the data instead. The applicant may submit an academic paper published on a journal as an evidence as long as the same materials and/or manufacturing processes (sites) are mentioned in the paper as those used for the product applied for certification.).

*[®]For only bio-based synthetic fiber

However, when Eco Mark-certified products are used as an intermediate product, the indication of the "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 suppliers (including distributors) or textile material suppliers (e.g. a raw material certificate, measurement results of the bio-based synthetic polymer content, a certificate for a proper maintenance of bio-based synthetic polymer content rate after certification, Sustainability checklist of bio-based plastics (raw resin), LCA evaluation results).

<mop threads (rag) with a recovery system>

All requirements in the following a) to c) shall be met.

- a) Copy of certificate, etc. of the extensive authorization system shall be submitted as an indication that a recycling system stipulated in the <u>Supplement 2</u> has been implemented (collection system, processing capacity, processing contents, product design that makes recycling easy, etc.). Details that indicate the performance results of collection and recycling shall also be submitted. In addition, a certificate indicating of the material constitution and the ratio of recyclable materials by each product applying for certification, shall be submitted.
- b) An indication for publicizing collection shall be submitted (indication of environment information in the lower part of the eco mark, name of a contractor who uses the eco mark, indication of a certification number, etc.). Regarding the replacement of an indication, the reason shall be explained if the information can be easily disseminated.
- c) A certificate shall be submitted in accordance with the certification procedure in (7)-(12) of Appended Sheet 1.

Supplement 2. Certificates on Recovery and Recycling (including reusing)

For cases designated as the extensive authorization system for recycling and reuse of industrial wastes, requirements (3) to (6) must be met.

To commission industrial waste transportation and disposal, certificates (3) to (6) below are required. (1) Name of recovery and recycling system (2) Recovery and recycling categories (Reusing (cascade recycling) /Material recycling/Chemical recycling) (3) Outline of recovery and recycling systems (Based on actual operation of recovery and recycling systems) 1) Finance 2) Recovery assurance Example: Recovery agreement with user, sewing of cloth label to product, etc. 3) Present operation of recovery and recycling systems Example: Products/materials applicable for recovery and recycling (Natural fiber 100%, synthetic fiber mixture rate, etc.), Applicable regions of recovery and recycling systems, Recovery rate (No. products recovered/No. products sold), Recycling rate (No. products recycled/No. products recovered), Recycling rate per product(Weight of parts recycled /product weight), recovery ability, recyclability (No. tons/year), Re-production purposes, etc. 4) Overview of recovery and recycling systems and relation with concerned entities Example: Models of apparel subject to extensive authorization system for recycling and reuse → Retailer A User 1 Sales route Raw Apparel Retailer B User 2 Company Material User 3 (Subcontracted material) Intermediate Recovery Recycling Recovery processing bases traders route traders Reuse vendors Traders licensed by the extensive Traders licensed for industrialwaste disposal business recycling and reuse designation system

(4) Name of recycling vendors and waste disposal certification Certificates indicating operator's name and waste treatment business permission, etc. (if permission is not necessary, detail the reason and indicate legal compliance under related jurisdictional authority has been followed, etc.) by concerned entity such as: 1) Waste disposal within own plant (Applicant)

2) Intermediate disposal vendor

- 3) Final disposal vendor
- (5) Handing Over of Wastes to Recycling Venders

Description should be given as to how products under application are discharged (industrial wastes, general wastes, valuable resources, etc.) and methods of handing over such products from waste disposer to recycling vendor should be explained.

(6) Submission of agreements

1) A copy of industrial waste disposal and collection and transportation contract

2) A copy of vendor contract (Contract between applicants and recovery and recycling system providers)

Chemical substance	Content [wt%]
Lead and its compounds	≦0.1
Mercury and its compound	≦0.1
Cadmium and its compound	≦0.01
Hexavalent chromium and its	≦0.1
compound	

Appended Table 4. Standard content rate

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 valuable land in biodiversity or land with high carbon storage (forests, peatland, etc.) since 2008?	Farm land	 □Not converted □Converted □Not applicable (No Use of Plant) □Not applicable due to residues or waste 	 Confirmed the laws and regulations concerning land conversion for the site. Gained the understanding of the actual condition the site through on-site investigation or hearings. Defined and released the guideline for procurement plants. Alternatively, conforming to the guideline of independent third party. Name of the guideline: Location of release: Also using the certification system of an independent third party, regarding the procurement of plants. Name of certification system: Others (Describe specifically.): 	
2	Conservation of the ecosystem	If the Applicant uses the genetically modified crop or Microalgae and other microorganisms as a raw material, has the Applicant assessed ensuring of safety?	Farm land Incubation pool	□Yes/ □No/ □Not applicable (No Use of GM crops, Microalgae) □Not applicable due to residues or waste	 Confirmed the laws and regulations concerning genetically engineered crop on the site. Gained the understanding of the actual condition of the site through on-site investigation or hearings. 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: Also using the certification system of an independent third party, regarding the procurement of plants. 	

Appended Table 5.(a) Sustainability checklist for bio-based plastic (raw resin)

No	Purpose	Request (Item that must be realized)	Subject Realized		Implementation Method (Check off all relevant items.)	
					□Others (Describe specifically.):	
3	Prevention of land acidification/n utrient 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	□Yes/ □No □Not applicable (No Use of Plant) □Not applicable due to residues or waste	 Confirmed the laws and regulations concerning fertilizers/agricultural chemicals on the site Gained the understanding of the actual condition of the site through on-site investigation or hearings. 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: Also using the certification system of an independent third party, regarding the procurement of plants. Name of certification system: 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? Did the Applicant identify the usage of water in major	Farm land Incubation pool	□Yes/ □No □Not applicable due to residues or waste	 Confirmed the laws and regulations concerning usage of water (limits on the amount of water) on the site. Gained the understanding of the actual condition of the site through on-site investigation or hearings. 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: Also using the certification system of an independent 	

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
		production and cultivation pools for biomass (the use of water causes no contamination or has no adverse effect on drinking water and other surroundings)?			third party, regarding the procurement of plants. -Name of certification system: □Others (Describe specifically.)
5	Use of recycled resources, avoidance of competition for food	If recycled resources are available as a part of materials on the site, did the Applicant preferentially use them?	Raw resin	□Yes/ □No/ □Not applicable (Recycled resources are not available)	Name of recycled resource in use [] Generated amount/percentage of recycled resources []
6	Prevention of global warming	Has the Applicant gained the understanding of the processing status of methane having a high global warming potential if it is generated by fermentation in the biomass feedstock processing plant?	Biomass feedstock processing plant**	□Yes/ □No □Not applicable (No methane released)	□Gained the understanding of the actual condition of the site through on-site investigation or hearings. □Others (Describe specifically.) []
7	Utilization of	In the course of	Biomass	□Yes/	Energy name and method of utilization

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
	non-fossil energy sources and renewable energy sources	cultivation to raw resin manufacturing, did the Applicant utilize as many non-fossil energy sources (for example, bagasse, biogas, off gas, etc.) or renewable energy sources as possible?	feedstock processing plant**	□No	[]
8	Elimination of child and forced labors	Has the Applicant checked there is no child and forced labors?	Farm land Biomass feedstock processing plant**	□Yes/ □No	 □Gained the understanding of the actual condition of the site through on-site investigation or hearings. □Received an accreditation under a third-party accreditation system for assessment of sustainability (including the ban of child and forced labors). □Others (Describe specifically.) []
9	Legal compliance	Does the biomass feedstock supplier comply with the law involved in the business?	Biomass material supplier*	□Yes/ □No	Name of biomass material supplier []

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* Residues or Waste defined in Renewable Energy Directive (RED) of EU

Appended Table 5.(b) Information Providing Sheet for Application of Products Containing New types of Bio-based Plastics or Biomass Materials

Date:

Submit to: Eco Mark Office, Japan Environment Association

Company name:	
Department:	
Name:	
E-mail:	

1. Information on bio-based plastic used in a product applied for Eco Mark certification

Item	Description
Type of plastic (PE, etc.)	
Chemical structural formula	
Major use (molded product, fiber)	
Launch onto the market and production volume of bio-based plastic	□Already put on the market (□Japan/□Overseas) □Not yet (the scheduled time of launch Month/Year)
	Production volume (actual, planned or estimated) tons (Year)
Manufacturer of bio- based plastic (and the URL of website) (Describe the name of manufacturer of bio-based plastic proposed in the form in addition to the applicant)	
Fossil-based plastic to be replaced with the bio- based plastic	
Manufacturing process chart from raw material to production of plastic (Description of processes from acceptance of raw material to production of monomer and plastic, with or without of fermentation process, etc.)	May be described in an attached sheet
100-percent bio-based/ Partially bio-based	 □100-percent bio-based (the bio-based synthetic polymer content is 100 percent) □Partially bio-based -> The maximum bio-based synthetic polymer content that can be mixed into the bio-based plastic [%]

Management under the mass balance (MB) approach	□Plastic directly mixed with biomass / □MB approach *Bio-based plastics managed under the MB approach are not covered by the guidelines.
Biodegradability	□Yes / □No
Disposal after use Issues in disposal and recycling in comparison with fossil-based plastics to replace with (possible disposal method, etc.)	

2. Information on biomass material

Item	Description
Type of biomass material (name of plant, etc.)	
Cultivation area (country,	
state, city, etc.) or the	
generation process of	
waste and residues, etc.	
Production or generation	
volume of biomass	
material	
Main use of biomass	
material (principal product	
or by-product)	
State of cultivation land	
(for plants, describe type of	
land such as peatland) Possible influences on	
biomass material if	
production of bio-based	
plastic increases in the	
future (Influences on other	
uses of the biomass,	
influences caused by rapid	
expansion of production of	
the biomass, etc.)	
Competing demand	
against foods	
Use of recycled material	
in production of bio-	
based plastic	
(If recycled material can be	
used, describe the source,	
collection methods, management under EU RED,	
etc.)	

3. Information on sustainability of biomass material

Item	Description
Sustainability certificates and initiatives of biomass material (RSPO, ISCC, etc.) and acquisition (If acquired, describe the name and detailed criteria)	
Any sustainability issues pointed out by NGOs or researchers regarding the cultivation of biomass material (If any, describe the details and the URL of website of NGOs or researchers)	
Any other concerns about the biomass material	

4. Others

Item	Description
Other bio-based plastics produced from the same biomass material (if any, describe the name of bio- based plastics)	
Others	

* Attach relevant documents such as company profile of manufacturer.

The information provided in this form will be used as reference for examination of Eco Mark certification by Eco Mark Office and relevant committees only. The Certification Committee will assess the sustainability of bio-based plastic based on the information provided in the form. The Certification Committee may conduct additional study or consult with the Evaluation Panel established under the Committee as necessary. In this case, a longer assessment period will be taken than usual.

Appended Table o. Standard for processing agents of fiber material				
Name of substance	Criteria	Test Method	Target Products	
Organic mercury compound Triphenyltin compound	Shall not be detected	MHW Ordinance No. 34	Products using fungicide	
Tributyltin compound 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 PFOSF PFOA PFHxS	Shall not be used	_	Products using fluorine system water repellent agents, oil repellent agents or soil-release finishing agents	

Appended Table 6. Standard for processing agents of fiber material

Appended Table 7. Standard of free formaldehyde amount of fiber

Name of substance	For infants (under 24 months old)	Products likely to touch the skin	Other products	Test Method
Formaldehyde	Not detected (16ppm or less)	75ppm or less	300ppm or less	MHW Ordinance No. 34

Appended Table 8. List of prohibited dyes and pigments (fibers)

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 RN	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	2,4-Diaminoanisole		
101-77-9	4,4'-Diaminodiphenylmethane			
91-94-1	3,3-Dichlorbenzidine			
119-90-4	o-Dianisidine; 3,3'-Dimethoxy	ybenzidine		
119-93-7	o-Tolidine; 3,3'-Dimethylben;	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'-Diaminodiphenylether			
139-65-1	4,4'-Diaminodiphenylsulfide			
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 RN	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			
3Skin Sensitizing Dyes				
CAS RN	C.I.			
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	CI 11132		
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	CI 11132		
2872-48-2	C.I. DISPERSE RED 11	CI 62015		

CAS RN	C.I.	
	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	