Eco Mark Product Category No.103

“Clothes Version3.9”
Certification Criteria

—Applicable Scope—

A. Uniforms, office uniforms, fatigues, sanitary suits, sportswear, and outerwear
B. Underwear
C. Nightwear
D. Kimono
E. Socks, Stockings, Opaque Tights, Tabi (Japanese Socks)
F. Hats and Gloves
G. Other Clothing

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Japan Environment Association
Eco Mark Office

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

Eco Mark Product Category No.103 “Clothes Version3.9” Certification Criteria

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1. Purpose of Establishing Certification Criteria

Since the establishment of Product Categories No.103 "Clothing Version2", No.104 "Household Textile Products Version2", and No.105 "Textile Products for Industrial Use" in 2003, many products have been certified centered on recycled fiber. However, the discharge amount of fiber product waste and the improvement of recycled ratios were not advanced socially. While the total discharge amount of fiber products in 2009 was 1,713,000 tons (of which the discharge amount of clothing was 942,000 tons), recycling of fiber remained low at 163,000 tons, which means less than a 10% recycle rate. Among Eco Mark certified products, while PET bottle recycled fiber has become popular, the certification of so called recovered fiber recycled product is relatively low, and an issue citing a weak contribution of fiber waste to recycling emerged. Consequently, a complete review was made for Version3 Certification Criteria by focusing on inducing the recycling of fiber products from recovered fibers. Simultaneously, wool, bio-based synthetic fibers, etc. are widely added as new categories in addition to cotton products, which were previously considered for certification. We also considered the consistency of the latest laws, industry standards, standards of overseas fiber products, etc.

2. Applicable Scope

Clothing items except “leather wear” and “fur products” of “Apparel” of the “Japan Standard Commodity Classification” issued by the Ministry of Public Management, Home Affairs, Posts and Telecommunications.

[Classification]

A. Uniforms, office uniforms, fatigues, sanitary suits, sportswear, and outerwear
(Includes aprons, neck ties and scarves if sold as a set)
B. Underwear
C. Nightwear
D. Kimono
E. Socks, Stockings, Opaque Tights, Tabi (Japanese Socks)
F. Hats and Gloves
G. Other Clothing

3. Terminology

Recycling	Material recycling and Chemical recycling. Energy recovery (thermal recycling) shall not be included.
Pre-consumer material	Materials or defective products generated from the disposal route in the product manufacturing

	process. However, this excludes those that are recycled in the same process
Post-consumer material:	Materials or products disposed after use.
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	The fuzz of cotton fibers that start to emerge 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 recycled materials of synthetic fibers without changing a polymer structure using recycled 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.
Biomass	Biomass is a term originally used in ecology to describe the amount (mass) of living organisms (bio). In this certification criteria, it refers to resources that are organic matter-derived from plants and animals, excluding fossil fuels.
Bio-based synthetic fiber	Synthetic fiber whose material is bio-based plastic
Bio-based plastic	Plastics made from bio-based synthetic polymer using renewable organic resources such as plants as raw materials and those that use plants as raw materials are also referred to as plant-based plastics. Those are Polyethylene (PE), polyethylene terephthalate (PET), polylactic acid (PLA), and polytrimethylene terephthalate (PTT), and others. * plastics whose bio-based carbon content is measured according to the 14C method defined in ISO 16620-2 or ASTM D6866-05
Bio-based synthetic polymer content	Content of bio-based material included in bio-based synthetic fibers that account for a product (or a designated section by certification criteria) Means bio-based synthetic polymer content defined by ISO 16620-1 3.1.5 (Original sentence: bio-based synthetic polymer content : amount of bio-based synthetic polymer present in the product)
Cellulosic chemical fiber	Fiber (regenerated fiber) returned to a previous structural polymer, as well as fiber generated after treating and dissolving by a chemical agent using natural polymer (cellulose) as a material or fiber (semisynthetic fiber) whose material was made by combining a chemical agent with a natural polymer. Cupra, rayon, polynosic, etc. are regenerated fibers, and acetate, triacetate, etc. are semisynthetic fibers.
Forest certification system	A system to evaluate and certify forest management standards of an operator who manages forests by a third party based on standards stipulated by an independent forest certification organization (cited from “Guideline for Verification on Legality and Sustainability of Wood and Wood Products” Forestry Agency,(February 15, 2006)).
Credit method	This means a method to deem Certified forest wood are equally used for individual products based on the amount of forest certification materials and other materials that were used for entire products produced in a certain period of time, whether blended or not, for individual products (cited from “Basic Policy on Promoting Green Purchasing” Ministry of Environment,(February, 2015)”

4. Certification Criteria and Certification Procedure

4-1. Environmental Criteria and Certification Procedure

4-1-1. Certification Criteria and Certification Procedure on main environmental requirements

Products applying for certification shall select and conform to either of criteria items from the following (1) to (5).

(1) The mass ratio of unused fibers or recycled fibers in the total mass of the entire product (which shall be of the mass of the fiber portions, excluding small accessories such as buttons, zips, hooks and thread, Hereinafter called the mass of fiber portions) shall meet the Standard Content Rate shown in Table 1. However, products fall under Table 2 shall meet the standard content rate of Table 2. In addition, if using resin materials such as Eco Mark certified small accessories and plastic parts, etc., regenerated materials from these items may be added to calculate the Standard Content Rate.

Table 1. Standard Content Rate of Fiber to Total Mass of Entire Product

Type of Fiber	Standard Content Rate		
Unused fibers	10% or over		Unused material shall be 10% or over.
Recycled fibers	Reclaimed fibers	10% or over	
	Recycled polymer fibers	50% or over	Recycled polymer as resin content shall be 50% or over.
		25% or over	For fiber-based recycled fibers, the recovered fiber-based recycled polymer shall be 25% or over.
	Chemically recycled fibers	50% or over	Recycled monomer as monomer content shall be 50% or over.
		25% or over	For fiber-based recycled fibers, the recovered fiber-based recycled polymer shall be 25% or over.
	Other recycled fiber	50% or over	

Table 2 Standard Content Rate by product

Applicable product	Standard Content Rate
Cold protection clothing	The mass ratio of unused or recycled fibers in the total mass of the entire product (the mass of the fiber portions) shall meet the Standard Content Rate shown in Table 1. Otherwise, the mass ratio of unused or recycled fibers in the total mass of the surface texture (the mass of the fiber portions) shall meet the content rate which multiplies the Standard Content Rate shown in Table 1 by 1.2. As a substitute for the above, regarding down jackets, note that reused feathers may be used 100% after used clothing and stuffing (feather) such as futons, etc. are properly processed the cleaning, sterilization, etc.
Work gloves	The mass ratio of unused fibers and reclaimed fiber in the total mass of the entire product (the mass of the fiber portions

	excluding any non-slip coating processed portions) shall be 70% or more, and also the mass ratio of unused fibers or that of post-consumer materials shall 50% or more. Or the mass ratio of recycled polymer fibers and chemically recycled fibers shall be 50% or more.

[Certification Procedure]
Compliance with this item shall be indicated in the Attached Certificate. In addition, the applicant or the manufacturer shall submit a certificate indicating the mass ratio of the total mass in the entire product. 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 spinning and weaving basic products and semi-manufactured products certified by Eco Mark No.104 "Household Textile Products Version3" are used, the indication of the "Product name (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.

(2) The content ratio of bio-based synthetic polymer in the total mass of the entire product (the mass of the fiber portions) shall be 10% or more. Also, the mass ratio of bio-based synthetic fiber in the total mass of the entire product (the mass of the fiber portions) shall be 25% or more. However, cold protection clothing shall meet requirements indicated in Table 3. In addition, if bio-based plastic is used for resin materials such as small accessories and plastic parts, etc., such bio-based plastic (material resin) portions may be added to the calculation of the bio-based synthetic polymer content ratio and bio-based synthetic fibers mass ratio as bio-based synthetic fibers.

Bio-based synthetic fiber and bio-based plastic (raw resin) shall satisfy the requirements of 1) and 2).

1) Sustainability of biomass used as a raw material shall meet the requirements of Appendix 1(a) “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 Appendix 1(a).

2) It shall be confirmed through life cycle assessment (LCA) that the bio-based plastic (raw resin) does not cause an increase of GHG emissions (in terms of CO_2) throughout the product life cycle in comparison with a resin to replace with.

Table 3 Requirement by product

product	Bio-based synthetic polymer content ratio and mass ratio

Cold protection clothing	The content ratio of bio-based synthetic polymer in the total mass of the entire product (the mass of the fiber portions) shall be 10% or more, and the mass ratio of bio-based synthetic fiber shall be 25% or more. Or the content ratio of bio-based synthetic polymer in the total mass of the surface texture (the mass of the fiber portions) shall be 12% or more and the mass ratio of bio-based synthetic fiber shall be 30% or more.

[Certification Procedure]
Compliance with this item shall be indicated in the Attached Certificate. In addition, the applicant or the manufacturer shall submit a certificate indicating the bio-based synthetic polymer content ratio and the mass ratio of bio-based synthetic fibers in the entire product, as well as a certificate indicating bio-based synthetic polymer content ratio calculated by a fiber material supplier or a raw resin supplier. For the bio-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.

The following shall be submitted with regard to the requirements of 1) and 2) for the bio-based plastic (raw resin) to be used for bio-based synthetic fibers.

1) An applicant shall submit 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. 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 Appendix 1(b)).
2) An applicant shall submit the result of LCA conducted by a third-party. (An applicant shall provide the LCA result and the calculation conditions. 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.)

However, when spinning and weaving basic products and intermediate products certified by Eco Mark No.104 "Household Textile Products Version 3" or No.105

"Textile Products for Industrial Use Version 3" are used, 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 (measurement results of the bio-based synthetic polymer content, Sustainability checklist of bio-based plastics (raw resin), raw materials certificate (bio-based synthetic fibers), etc.).

(3) Products shall be duly collected, and reused or recycled after use and shall meet the following requirements 1) and 2). In addition, products shall voluntarily meet requirement 3).

1) 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., such products shall meet the requirement 3) and 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.

2) The product body shall carry indication that it will be collected 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.

3) (Voluntary requirement) The mass ratio of unused fibers and recycled fibers stipulated in Table 1 of 4-1-1.(1) shall be 10% or more., or the bio-based synthetic polymer content rate stipulated in (2) shall be 4% or more and the mass ratio of the bio-based synthetic fiber shall be 10% or more.

[Certification Procedure]
Compliance with this item shall be indicated in the Attached Certificate.
For 1), Copy of certificate, etc. of the extensive authorization system shall be submitted as an indication that a recycling system stipulated in the Appendix has been implemented (collection system, processing capacity, processing contents, product design that makes recycling easy, etc.). Details that indicate the 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.
For 2), 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.
For 3), a certificate shall be submitted in accordance with the certification

procedure in 4-1-1.(1) or (2).

(4) Regarding products whose main material is cotton, wool or cellulosic chemical fibers, for fibers that consist of the product, materials accounting for 70% or more of the total mass of the entire product (the mass of the fiber portions) shall satisfy 1) to 3). (If each of the included materials does not reach 70%, the combination of either cotton, wool or cellulosic chemical fibers accounts for 70% or more of the total mass of the entire product (the mass of the fiber portions) shall apply to this item.)

1) Cotton (Shall conform to either a. or b.)

a. Efforts to reduce energy use (CO_2 emissions) required for processing without increasing the amount of chemical substance used compared to existing processes (alkali scouring, chlorine-based bleaching or hydrogen peroxide (alkali) bleaching) during the desizing process, scouring and bleaching have been done (efforts in either process are acceptable if use is reduced in the entire process).

And shall be non-bleaching (non-scouring, oxygen scouring, etc. without a bleaching process) or oxygen based bleaching (hydrogen peroxide or ozone, etc.) during the bleaching process and a fluorescent whitening processing shall not be used.

-Chemical substances in Table 4 that are hazardous to the water environment shall not be used during desizing and scouring in the case of non-bleaching.

-Chemical substances in Table 4 that are hazardous to the water environment shall not be used in principle, excluding chemical bleaching agents during the process of desizing and scouring in the case of oxygen based bleaching. However, only if the amount of CO_2 emissions are reduced by 30% compared to the existing process (alkaline scouring, hydrogen peroxide (alkaline) scouring), chemical substances that are hazardous to the water environment, and were used in the existing process, may be used by reducing the amount used and by not leaving any residue of the corresponding elements in the fibers and discharged water.

Table 4 Chemical substances hazardous to inhabitants of the water environment

Chemical substances hazardous to the water environment shall be classified as follows:
-The classification according to "Globally Harmonized System of Classification and Labeling of Chemicals"

【GHS】 H400:Very toxic to aquatic life
H410:Very toxic to aquatic life with long lasting effects
H411:Toxic to aquatic life with long lasting effects
H413:May cause long lasting harmful effects to aquatic life(*)
*If classified as H413, items that meet the following (1)(2) can be used.
(1) Bioconcentration Factor (BCF) ≦500, or
log Kow(octanol/water partition coefficient)≦4
(2) Biodegradability≧70%

Regarding chemical agents that are unclear in the above classification, chemical agents which meet the following conditions, or ones permitted by the Global Organic Textile Standard (GOTS), may be used. Oral toxicity LD50>2000mg/kg, and either of the following: Aquatic toxicity LC50, EC50, IC50 >1mg/L or more, Aquatic toxicity when biodegradation is 70% or less LC50, EC50, IC50>100mg/L Aquatic toxicity when biodegradation is 70% or more LC50、EC50、IC50>10mg/L or Aquatic toxicity when biodegradation is 95% or more LC50、EC50、IC50>1mg/L LC50 Lethal concentration (50% mortality) EC50 Effect concentration (50%) IC50: Inhibition concentration (50% inhibition) Each term and examination requirements, etc. shall be in accordance with GOTS regulations.
Sample of Medicinal Substances That Can be Used Enzyme, citric acid, acetic acid, gluconic acid soda, calcined soda, negative and positive nonionic activators (natural fatty acid of palmitic acid Na, oleic acid Na, stearic acid Na, taurine acid NA, etc. or surfactants satisfying the above requirements)

b. Organic cotton certified by a third-party in the entire product's total mass (the mass of fiber portions) shall be 30% or more. Traceability of organic cottons shall be obtained, and certification for products, or for threads and cloths that are directly supplied to the manufacturer of the products applying for certification, shall be possible. The requirements to be organic shall be complied with the equivalent basic requirements of EC Regulations, USDA/NOP (U.S.Department of Agriculture National Organic Program) or IFOAM (International Federation of Organic Agriculture Movements) Certified Program, and shall include organic cottons during the transition stage.

2) Wools (Shall conform to all items of the following a. and b.)

a. Chromium system dyes are not to be used during the dyeing process. Or an effort to reduce the use of chromium system dyes shall be made. Products shall also meet the requirements of Table 5, and the emissions processing of chromium shall be performed properly during the dyeing process (shall be 0.5mg/L or less of chromate compounds or abide by legally stipulated values, whichever is more severe).

Table 5 Standard for elusion of heavy metal (chromium)

Name of Substance	Target product		Test method
	Infants (under 36 months old)	Adult (over 36 months old), etc.	
hexavalent chromium	0.5 mg/kg or less (Detection limit or less)	0.5 mg/kg or less (Detection limit or less)	EN ISO105-E04-2014 OekoTex
total chromium	1mg/kg or less	2mg/kg or less	EN ISO105-E04-2014 OekoTex

b. Concentration of pesticide used on animals producing raw wool (greasy wool), before washing shall not exceed the limit value. Or either of the following shall

apply.

・Farmers specified in relation to more than 75% of targeted wool, and pesticide used on animals in Table 6 that are not used on target farms and livestock, were confirmed based by a field examination.

・Wool washing operators using a closed loop type water usage system that does not incur discharged waste water and degrades residue from wool washing and pesticide used on animals in Table 6, is likely to remain as raw material in sludge from burning, manufactures recycled products using residue and sludge from wool washing sites. This also collects energy in the burning process.

Table 6 Total limit value of the concentration of pesticide used on animals

Types of pesticide used on animals	Total limit value
γ -hexachlorocyclohexane (lindane), α -hexachlorocyclohexane, β -hexachlorocyclohexane, δ -hexachlorocyclohexane, aldrin, dieldrin, endrin, p,p'-DDT, p,p'-DDD	0.5 ppm
Cypermethrin, deltamethrin, fenvalerate, cyhalothrin, flumethrin	0.5 ppm
Diazinon, propetamphos, chlorfenvinphos, dichlofenthion, chlorpyriphos, fenchlorphos	2 ppm
Diflubenzuron, triflumuron, dicyclanil	2 ppm

3) Cellulosic chemical fibers (Shall conform to all items of the following: a. and b.)

a. Regarding raw materials (cellulose) used for cellulosic chemical fibers, 70% or more of raw materials (cellulose) which is comprised of certified forest wood (when recycled materials are considered items, such recycled materials are included) certified by a third-party, or comprised of cotton linters, shall be used (shall meet this condition not as a calculated ratio by credit method, but by the actual content rate of the products applying for certification). When non-certified wood is used, raw wood shall be legally valid in view of forestry laws in the country where it was harvested

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.

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate. A certificate indicating the mass ratio of the total mass of the entire product regarding the mix ratio for the entire product shall be submitted.
1) Cotton: Regarding a, efforts to reduce energy consumption during desizing, scouring and whitening, and the types and amounts of chemical agents used by the operator shall be submitted. If a chemical agent not found in a usable chemical agent is used, materials (safety data sheet (SDS), etc.), which indicates that it does not correspond to hazardous properties shown on Table 4 shall also be submitted. If the case corresponds to a reduction of CO_2 emissions by 30% or more, a description of the comparative results of CO_2 emissions, as well as the processing of chemical substances hazardous to inhabitants of the water environment shall be submitted. Regarding b. organic cotton, the certificate, as well as those certified by

a third-party, for the mass ratio of organic cotton shall be submitted. If the product applying for certification has not yet been certified, the certified document for fiber materials after the cloth phase and the certificate which describes the shipment status (transaction certificate, etc.) of the certified materials and their usage ratio and management method shall be submitted.
2) Wool: Regarding a, non-usage certificate of chromium system dyes or test results of each color as well as materials describing drainage water management of the dye plant (water quality analysis result, etc.) issued by the plant shall be submitted. Regarding b., test results (samples by country of origin or residues in relation to all sale lots) according to the IWTO Test Method Draft59 shall be submitted. Or a certificate of non-use of the related substance by the agricultural producer, or the composition from the wool washing plant and an inspection report that shows the degradation of pesticide used on animals shall be submitted.
3) Cellulosic chemical fibers: Regarding a, a certificate of mass ratio, as well as one certifying the product by a third-party, shall be submitted (when wood other than certified forest wood is used, wood to be used in the contents shall be confirmed as legally valid and shall be a product covered by CoC certification.) If the product applying for certification has not yet been certified, the certified document of fiber contents after the thread phase and the certificate describing the shipment status (transaction certificate, etc.) of the certified contents use ratio and management method shall be submitted. Regarding cotton linters, see certificate procedures of 4-1-1. (1). Regarding b., a certificate by the fiber manufacturer shall be submitted.

(5) If the composition of a fiber to be used in a product does not conform to the requirements of 4-1-1. (1), (2) and (4), the following 1) and 2) shall be satisfied. (A product can apply for certification if its cotton, wool and cellulosic chemical fibers are less than 70% and it does not satisfy the basic content ratio of recycled fibers for the entire product of 4-1-1.(1), or bio-based synthetic polymer content ratio, or the mass ratio of bio-based synthetic fibers of 4-1-1. (2).)

1) The fiber portion of cotton, wool and cellulosic chemical fibers (excluding small accessories) shall satisfy requirements of 4-1-1.(4),1) to 3)

2) The fiber portion excluding the above 1) (excluding small accessories) shall satisfy the requirements of recycled polymer fiber or chemical recycle fiber of 4-1-1 (1), or the requirements of bio-based synthetic fiber of 4-1-1 (2) shall be satisfied. In this case, regarding the denominator in (1), the basic content ratio of recycled fibers, and (2) the bio-based synthetic polymer content ratio or the mass ratio of bio-based synthetic fibers, "the total mass of the entire product (the mass of the fiber portions)" shall be understood and calculated as "the mass of the fiber portions excluding 1)."

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate. A certificate indicating the mass ratio of the total mass of the entire product regarding the mixture ratio for the entire product shall be submitted. Regarding certificates for each fiber, see certificate procedures for 4-1-1. (1), (2) and (4).

4-1-2. Certification criteria and certification procedure on hazardous substances

Products applying for certification (excluding small accessories) shall conform to all criteria items of the following: (6) to (9).

(6) Adequate consideration shall be given so that various processing of products (mildew proofing, fluorescent whitening, flame retarding, softening, sanitation, antimicrobial finishing, product bleaching) is limited to a 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 Table 7 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.

In the case of using antibacterial agents, the product shall be certified by such as the SEK Mark of Japan Textile Evaluation Technology Council, etc.

Table 7. Standard 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 PFOSF PFOA PFHxS	Shall not be used		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

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate. In addition, 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. In the case of using antimicrobial agents, documents certifying SEK of Japan Textile Evaluation Technology Council, etc. shall be submitted.

(7) The amount of free formaldehyde in a product shall conform to a standard value by target product in Table 8.

Table 8 Standard of formaldehyde amount

Name of Substance	Target Product			Test Method
	Clothes for infants (under 24 months old)	Inner clothes (underwear, nightwear, gloves, socks, Tabi (Japanese socks), vest, blouse, shirt, T-shirt, polo shirt, etc. for those other than infants)	Outer clothes (business suit, sweater, cardigan, one-piece suit, skirt, overcoat, jacket, upper wear, pants, etc.)	
Formaldehyde	Not detected (16ppm or less)	75ppm or less	300ppm or less	Ordinance No. 34 of the Ministry of Health and Welfare

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate. For amount of free formaldehyde in a product (or all fiber materials excluding small accessories) test result by a third-party testing organization or an applying company itself shall be submitted.

(8) For a dye and pigment to be used in the product, dyes and pigments and chrome defined in 1), 2), and 3) of Table 9 shall not be added as a prescription constituent. However, for chromium system dyes, if chromium requirements stipulated in 4-1.(4).2).a are satisfied, it is acceptable.

Table 9 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 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
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 RN	C.I.	C.I. Number
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

CAS RN	C.I.	C.I. Number
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	

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate. A certificate of non-use 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. In addition, if chromium is used for wool, refer to certification procedure of 4-1-1. (4),2).

(9) 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.) However, this item shall not apply to required products for securing fire retardant capability in accordance with the law or public standards (fire retardant items or fire retardant products, etc.), products collected after use in 4-1-1.(3) and ones

whose average life span is 20 years or more.

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate.

4-1-3. Certification criteria and certification procedures on others

Products applying for certification shall conform to all criteria items of the following: (10) to (13).

(10) In manufacturing the final phase of 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).

(11) Packaging shall not use plastics containing halogen in the polymer backbone. In addition, packaging shall give consideration to resource saving (simple, lightweight), repeatedly reusable, ease of recycling, ease of separating different materials, and material labeling

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate.

(12) Products shall not be disposable

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate.

(13) Regarding products related to classification A, "Uniforms, office uniforms, fatigues, sanitary suits, sportswear and outerwear", if accessories, such as buttons, are easily destroyed or lost, supplying such accessories (including delivery in the shipment) or repairing (regardless whether paid or free) shall be conducted

[Certification Procedure]
Compliance with this item shall be indicated in the attached certificate.

4-2. Quality Criteria and Certification Procedure

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

In case a product reuses stuffing such as clothing or futon, etc., cleaning and sterilization of the stuffing shall be made with the same level of quality control (cleanliness) as new products.

[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.

(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 Environment. The medium for disclosing the quantitative environmental information (URL of the calculation report, etc.) shall be disclosed as part of product information on the Eco Mark website..

(2) Design shall consider recycling after use. In addition, collection efforts and product recycling after use shall be continually implemented, or periodic participation in

and cooperation with similar efforts made by municipalities, organizations, retail outlets, etc. shall be followed.

(3) For cotton materials used in 4-1-1.(4) 1) Cotton-a, it is desirable to use organic cotton or unused materials, if possible.

6. Product Classification, Indication and Others

(1) Product classification (application unit) shall be made by each classification of the application range, by each product name and by standard items selected from 4-1-1. (1) to (5). In addition, it shall satisfy the following corresponding requirements.

When selecting 4-1-1. (1):

In principle, the product classification shall be the same type of fiber as in Table 1 and Table 2, and the calculation method of content ratio shall be within the same range. (Regarding Table 1, a unit for application for certification shall be by each unused fibers or and recycled fibers, and by the total mass ratio of the entire product and the total mass ratio in the surface cloth of cold protection clothing, and by a separate unit for each application for certification for recycled feathers)

In addition, if a product satisfies different types of fiber and basic content ratios simultaneously, either or both may be selected to register. This shall be treated as the same product classification as long as it is within the same range (same type of fiber and basic content ratio). (For instance, if a product satisfies 10% unused fiber and 50% recycled polymer fiber simultaneously, registration can be selected in two ways: 1) only unused fiber conforms or recycled polymer fiber conforms or 2) both unused fiber and polymer fiber conform.)

When selecting 4-1-1. (2):

No special note.

When selecting 4-1-1. (3):

The same recycled collection system shall be the product classification. (In case of a different recycled collection system (Parties who is licensed under received the extensive authorization system vary), they cannot be of the same application for certification.

When selecting 4-1-1. (4):

Fiber types which account for product configurations of 70% shall be product classifications. (Though the mixture ratio difference is irrelevant, if the configuration of fiber types corresponding to the product differs, such as when the corresponding fiber type is only cotton or cotton and wool or wool and rayon, etc., it cannot be under the same application for certification.

When selecting 4-1-1. (5):

Shall correspond to the classification stipulated in 4-1-1.(1), (2), and (4).

In the case of clothes sold in a set: The application range of A to G shall not be used. Rather, product classification shall be by product name (product brand name) and shall be by a selected item of 4-1-1.(1), (2), (3), (4) and (5), as well as a unit which satisfies the requirements of each selected item. Only aprons, neck ties

and scarves that are sold and used as a set may be included in a set of clothing.
In the case of work gloves: Only for the same product in relation to all standard items, it can be treated as the same product even if the product brand names differ.

(2) If 4-1-1. (1)-(3) is selected, 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, the Eco Mark shall be indicated on the product, the catalog, etc. The licensees of Eco Mark Utilization Contract who own the Eco Mark products shall also be allowed to use the indication and the certification number as before.

(Note for the indication)

*For indicating the logo, Eco Mark certification number (eight-digit number) or the name of the licensee using the logo shall be appeared.

* Such expression as “Eco Mark product” can be used following the 2.(2) of the Guide to Eco Mark Usage.
“Eco Mark product”, “#Eco Mark”, “www.ecomark.jp”, “Eco Mark Certificate”

* In accordance with “Environmental Labeling Guidelines” of the Ministry of the Environment of Japan, etc., the environmental claims of certified products may be indicated in association with Eco Mark.
(https://www.env.go.jp/policy/hozen/green/ecolabel/guideline/)

* The Guide to Eco Mark Usage shall be followed for any cases not listed above.
(https://www.ecomark.jp/office/guideline/guide/)

August 1, 2015:	Established
November 1, 2015	Revised 6 (Version3.1)
April 1, 2016	Revised 3, 4-1-1(3) (Version3.2)
February 1, 2017	Revised 4-1-1.(2) (Version3.3)
September 1, 2017	Revised 4-1-1.(6) (Version3.4)
March 1, 2018	Revised Table 2 of 4-1-1.(1) (Version3.5)
April 1, 2019	Revised (Mark indication)
March 1, 2021	Extension of Expiration date
December 15, 2022	Revised (4-1-1.(1), etc. ,Version3.6)
August 1, 2024	Revised (Version3.7)
March 1, 2025	Revised (Version3.8)
April 1, 2025	Revised (Version3.9)
July 31, 2027	Expiration date

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

Appendix

Certificates on Recovery and Recycling (including reusing)

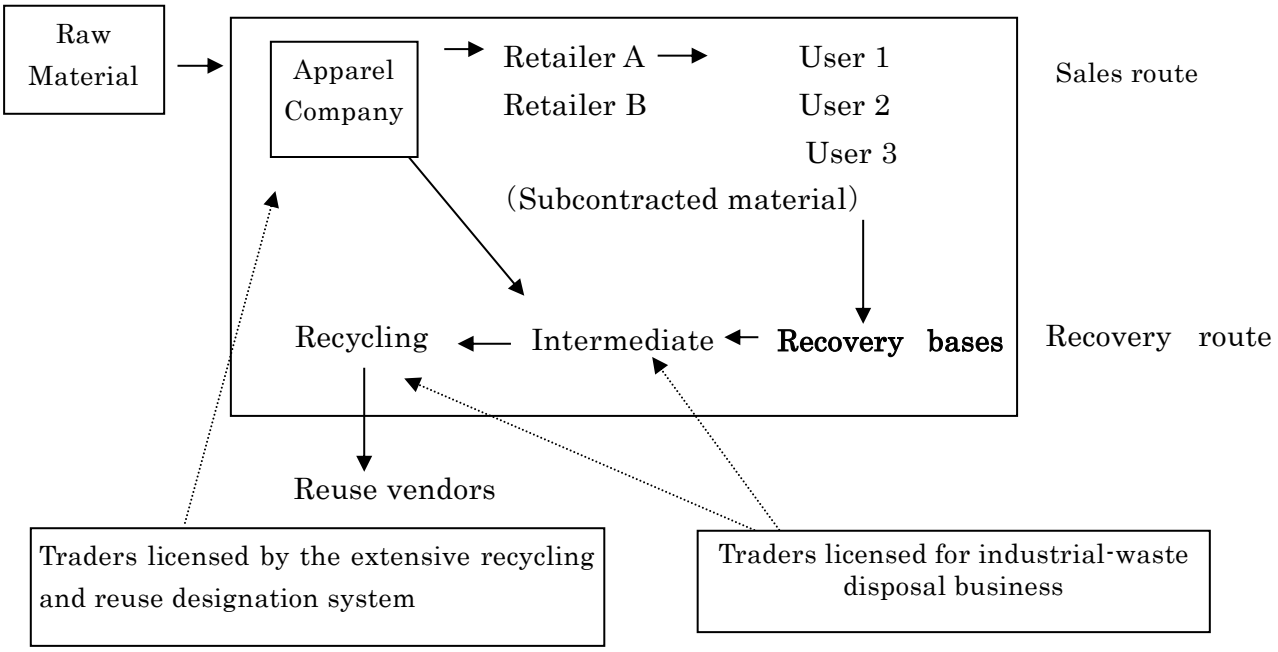
For cases designated as the extensive authorization system for recycling and reuse of industrial wastes, requirements (3) to (6) must be met.
To commission industrial waste transportation and disposal, certificates (3) to (6) below are required.

(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



(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)

Appendix1(a) Sustainability checklist of Bio-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 valuable land in biodiversity or land with high carbon storage (forests, peatland, etc.) since 2008?	Farm land	□Not converted □Converted □Not applicable due to residues or waste	□Confirmed the laws and regulations concerning the land conversion for 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.):
2	Conservation of the ecosystem	If the Applicant uses the genetically modified crop as a raw material, has the Applicant assessed ensuring of safety?	Farm land	□Yes/ □No/ □Not applicable (GM crops Not used) □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. -Name of certification system: □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	□Yes/ □No □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?	Farm land	□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 third party, regarding the procurement of plants. -Name of certification system: □Others (Describe specifically.)
5	Use of recycled resources,	If recycled resources are available as a part of crude raw materials of bio-based plastic (raw resin) on the site,	Raw resin	□Yes/ □No/ □Not	Name of recycled resource in use [ ] Generated amount/percentage of recycled resources

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
	avoidance of competition for food	did the Applicant preferentially use them?		applicable (Not available)	[ ]
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 main manufacturing plant for the crude raw material?	Crude raw material manufacturing plant	□Yes/ □No □Not applicable	□Gained the understanding of the actual condition of the site through on-site investigation or hearings. □Others (Describe specifically.) [ ]
7	Utilization of non-fossil energy sources and renewable energy sources	In the course of 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?	Manufacturing plant	□Yes/ □No	Energy name and method of utilization [ ]
8	Legal compliance	In manufacturing the bio-based plastic (raw resin), does the applicant follow related environmental laws and regulations and pollution control agreement with respect to air pollution, water contamination, noise, vibration, offensive odor, and emission of hazardous materials?	Resin manufacturing plant	□Yes/ □No	Monomer manufacturer / plant name [ ] Resin manufacturer / plant name [ ]

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

Appendix 1 (b) Sheet for Providing Information for Application of Products Containing New types of Bio-based Plastics or Biomass Materials

Month/Day/Year

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.