

Eco Mark Product Category No.106

“Paper for Communication Version3.1”  
Certification Criteria

—Applicable Scope—

PPC paper, business forms and coated paper for color printers (paper for ink jet printing)

Established: May 1, 2009  
Term of validity: April 30, 2016

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.106

### “Paper for Communication Version3.1” Certification Criteria

Japan Environment Association  
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#### 1. Purpose of Establishing Certification Criteria

Annual production of paper for communication in Japan in 2007 totaled some 1.69 million tons. Paper for plain paper copiers (PPC) accounted for 930,000 tons; business forms, 320,000 tons; base paper for duplication paper, 220,000 tons; and thermosensitive paper, NCR paper, and others, accounted for the balance.

The scam of falsely reporting the percentage of waste paper pulp (in the problem which started with New Year greeting postcards made from recycled paper, it was found that for office paper or communication paper, etc. included in Eco Mark Product Categories, the waste paper pulp was falsely mixed at the rate lower than the standard waste paper pulp percentage of the Eco Mark), which was revealed in January 2008, developed into the major social problem. It confused a number of people including suppliers of communication paper or consumers who had promoted separate collection of waste papers, etc. In order to regain trust in the Eco Mark as third party authentication, and cope with the scam of the percentage of waste paper pulp, the Japan Environment Association conducted site visits to paper manufacturing plants and sampling analysis, etc., and released results thereof. At the same time, on the basis of the review made by “the Exploratory Committee on Measures to Prevent Recurrence of Deception of Eco Mark Environment”, which was established to take actions to strengthen the Eco Mark System and its operation, the Association revised Certification Criteria Version2 in an attempt to build the inquiry and confirmation system of production sites by exercising complete control and specifying manufacturing plants/plant control managers, etc., thus enhancing the certification screening. In this review of the Certification Criteria Version3, it made a study to regain trust of consumers, etc. in the Eco Mark and recycled paper and not to discourage their efforts to recycle waste paper, clarified the definition of the percentage of waste paper pulp, etc., and newly drew up requirements for handling of waste sheets and the mixture rate, so that any similar problem can be prevented.

In order to address aggravating problems of decrease in and deterioration of forest resources, etc., for PPC paper, as a material to be recommended in addition to waste paper, this time the Association newly picked up certified forest material, thinned wood, and pulp procured based on raw material procurement aimed for sustainability, and drew up the criteria so that they will lead to appropriate use of forest resources.

#### 2. Applicable Scope

PPC paper, business forms and coated paper for color printers (paper for ink jet printing)

### 3. Terminology

Uncoated paper	Office paper with no white pigmentation applied to its surfaces.
Light-weight coated paper	Office paper with less than 12g of white pigmentation per square meter applied to both surfaces.
Coated paper	Office paper with 15g-40g of white pigmentation per square meter applied to both surfaces to enhance printability.
Waste paper	Collected post-consumer waste paper and pre-consumer waste paper.
Post-consumer waste paper	Used paper generated in shops, offices, or homes.
Pre-consumer waste paper	<p>Paper diverted from the waste stream during the processing stage at facilities which use paper for material such as paper processing factories, paper products factories, printing and bookbinding plants. Excluded is paper generated during processing (in the factories) and reused as a raw material during the same process (and factories).</p> <p>However, if waste paper resulting from the paper making process in a plant or works of a party (hereinafter referred to as “paper manufacturer”) that conducts business related to the paper manufacturing industry (hereinafter referred to as “plants, etc.”) or those resulting when processing, etc. is performed in the plants, etc. of the paper manufacturer (including the case in which the paper manufacturer has other contractor to conduct processing through commissioning of the product before its shipment) is not shipped as a product, and used as raw material for papers by the paper manufacturer, they shall not be treated as waste paper (from “Regarding operation of ministry ordinances, etc. defining matters that should be criteria for judgment on use of waste paper of those who conduct business related to the paper manufacturing industry” of the Ministry of International Trade and Industry dated December 24, Heisei 3 (1991).</p>
Percentage of waste paper pulp	<p>Weight percentage of waste paper pulp in the total pulp contained in the product. Indicated as <math>(\text{waste paper pulp}) / (\text{virgin pulp} + \text{waste paper pulp}) \times 100 (\%)</math>. Pulp containing 10% moisture is used to measure the weight. In addition, waste sheets shall not be included in the denominator and numerator, respectively, of the calculating formula of waste paper pulp combination rate.</p>
Waste sheet	<p>Waste paper resulting from the paper making process. Waste paper include waste paper that is wet due to a wet part of a paper machine and dry waste paper after a drying part and resulting from the finish process. This is normally used as defiberization (From JISP0001: Terms of Paper/Paper Board and Pulp).</p> <p>The wet waste paper may be referred to a wet broke, the dry wet paper as dry broke, the wet paper that is used as raw material in the system may be referred to as circumfluence</p>

	waste sheets, and those once stored in the plant and then used as raw material may be referred to as loaded waste sheets.
Controlled standard value	Value which refers to a value specified in a written technical standard (quality standard), etc. and controlled in a manufacturing plant.
Brightness	Degree of whiteness of pulp or paper according to ISO whiteness degree (diffuse blue reflectance) defined in JIS P8148.
Fluorescent whitening agent	An agent that fluoresces under UV light and visually enhances the whiteness of paper.
Prescription constituents	Components intentionally added with the purpose of providing specific characteristics to the product. Impurities that inevitably enter during the manufacturing process are excluded.
Prohibited materials	Those materials defined as prohibited materials in the “Waste paper Quality Standard” established by the Paper Recycling Promotion Center (Incorporated Foundation)
Basis weight	The value described as grams per square meter of a single sheet of paper and board (JISP0001:Paper, board and pulp – Vocabulary)
Pulp procured based on raw material procurement aimed for sustainability	This refers to any of the following: a. Pulp procured based on procurement of timbers produced from forests that respect environmental advantage and social advantage, from the standpoint of cyclical/sustainable use of forest resources, such as efforts to maintain various functions that forests possess, protect forests against deterioration, and prevent reduction of forest area b. Pulp procured based on procurement of reused/unused timbers, which leads to effective utilization of resources
Procurement Policy	A company’s procurement policy or what conforms thereto, which is released to the external on a home page, etc. However, in the case of an OEM (Original Equipment Manufacturing: manufacturing of a brand product of other company) product, if raw materials of the product are separately managed, a procurement policy for the raw materials of the product may be applied.
Reused/ Unused wood	Indicates the followings: thinned wood, waste wood, construction waste wood, and less useful wood and waste plant fiber
Waste wood	Used wood (used packaging material, etc.), remainder material generated in wood processing plants (shavings generated in plywood and lumber plants, etc.), and wood and wooden materials such as thinned branches, bark, etc.
Construction waste wood	Wood and wooden materials disposed as waste in construction work such as dismantling of buildings, construction of new buildings, building extensions, renovation, and construction related to other work.
Thinned wood	Wood cut in the operation to cut down forests depending on density of trees to promote growth of remaining trees, in forests in the process of cultivation, by following the business operation and management rule established appropriately based on the laws or ordinances on forests. (From “Guideline for Checking Thinned Wood Chip” of Forest Agency (February 2009))

Less useful wood	Abandoned lumber in the forest, shrubs, tree roots, wood obtained from lumber damaged by disease, pests, disasters, bent or small diameter logs, etc. In addition, this does not include low quality wood (those usually used as raw materials for paper making although they cannot be used for lumber or chipwood) from native forests or plantation forests, in raw materials for paper making, excluding the above.
Waste plant fiber	Fiber made from agricultural residue generated in harvesting and manufacturing process of crop
Forest Certification System	Mechanism for a third party organization to evaluate/certify a forest management level of a forest operator based on the standard defined by an independent forest certification organization. (From “Guideline for Verification on Legality and Sustainability of Wood and Products” of Forest Agency (February 15, 2006)
Credit System	System that assumes certified forest wood/thinned wood are equally used in individual products, based on used amounts of certified forest wood/thinned wood and other raw materials that were used in entire products manufactured for a certain period of time, irrespective of whether they are actually mixed in the individual products (From “Basic Policy for the Promotion of Procurement of Eco-Friendly Goods and Services”, February 2009).

#### 4. Certification Criteria and Certification Procedure

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

(1) For percentage of waste paper pulp, use percentage of forest certified wood, use percentage of thinned wood pulp, use percentage of pulp procured based on raw material procurement aimed for sustainability, brightness, and basis weight, the overall evaluation value of PPC paper totally evaluated by using the calculation formula in Table 1 shall be 80 or higher

For business forms and coated paper for color printers, the percentage of waste paper pulp shall be at least 70%.

Table1 Calculation Formula for PPC Paper

Item	Evaluation Range	Computational Expression of Evaluation Value	Range of Evaluation Values
Percentage of waste paper pulp	70~100%	Percentage of waste paper pulp - 20	50~80
Percentage of certified forest wood pulp Percentage of thinned	0~30%	(Percentage of certified forest wood pulp + Percentage of thinned wood pulp)	0~30

wood pulp			
Percentage of Pulp procured based on raw material procurement aimed for sustainability	0~30%	$0.5 \times$ Percentage of Pulp procured based on raw material procurement aimed for sustainability	0~15
Brightness	60~75%	75 – Brightness	0~15
Basis weight	62~68g/m <sup>2</sup>	$170 - 2.5 \times$ Basis weight	0~15
Total Evaluation Value		Total Value of Added Points Shown Above	80 or higher

\* Brightness does not apply to color papers

[Certification Procedure of waste paper pulp]

A paper quality certificate issued by a paper manufacturer who manufactures base paper, which indicates the percentage of waste paper pulp (a specific minimum numerical value to be guaranteed), and includes items 1) and 2) below, shall be submitted.

- 1) Thorough management at a manufacturing plant (by specifying the percentage of waste paper pulp of Eco Mark products in a written technical standard (quality standard), etc.)
- 2) Clear indication of names of those who are in charge of manufacturing or quality control of Eco Mark products at a manufacturing plant (hereinafter referred to as a person in charge of Eco Mark products)

In addition, “Checklist for Verification System of Percentage of Waste Paper Pulp” (April 2, 2008: Japan Paper Association) or a document, etc. in accordance therewith and related to result of an internal audit on the percentage of waste paper pulp of a paper manufacturer, and a sample (10 sheets of A-4 paper) shall be submitted.

In addition, the paper quality certificate and the document, etc. related to result of an internal audit on the percentage of waste paper pulp shall be submitted every year after a use contract is concluded.

[Certification Procedure of certified forest wood pulp and thinned wood pulp]

Use of certified forest wood pulp and thinned wood pulp shall conform to “Guideline for Operation of Credit System for Certified Forest Wood/Thinned Wood” in the basic policy on promotion of procurement of eco-friendly goods in February 2009, and they shall be operated under the credit system.

For certified forest wood pulp, a certificate that a plant has been certified, based on a management table of the procurement results (quantities, percentage) of certified forest wood to the procured amount of virgin pulp raw materials in the plant for about last one year and amount and percentage to be credited as wood pulp to be mixed in certified forest paper and Eco Mark products, and CoC (Chain of Custody) certification system, shall be submitted. However, if an Eco Mark product is certified forest paper, this does not apply.

For thinned wood pulp, a certificate according to “Guideline for Checking Thinned Wood Chip” prepared by Forest Agency (February 2009) and a management table of

the procurement result (quantities, percentage) of thinned wood to the procured amount of virgin pulp raw materials in the plant for about last one year, in particular, the amount and percentage of wood pulp to be credited as those mixed into Eco Mark products, shall be submitted.

In addition, the management table of the credited certified forest wood pulp and thinned wood pulp shall be submitted every year after a use contract is concluded.

[Certification Procedure of pulp procured based on raw material procurement aimed for sustainability]

For pulp procured based on raw material procurement aimed for sustainability, it shall be procured based on “Content (Guideline) to be Described in Procurement Policy” of Table 2 and based on “Reused/Unused Wood”, and a total amount of the procurement shall be 90% or higher of the entire procurement amount. In addition, for procurement of raw materials conforming to Table 2, the system for tracing back to a wood supplier by chaining of appropriate separate management, etc. or traceability shall have been established.

Table 2. Standpoints of Environmental and Social Advantage Related to Forests

Must (Items that Must be Implemented) and Should (Items Implementation of Which is Desirable)

Classification	Content to be described in a procurement policy (guideline)*	Purpose (Standard of Montreal Process)	Category
1. Environmental Advantage Related to Forests	A Prohibition of procurement from forests with high protection value	Conservation of biodiversity	Must
	B Prohibition of procurement of wood from native forests cut down on a large scale to convert them to plantation or other land utilization.		Must
	C Prohibition of procurement of genetically engineered wood safety of which has not yet been ensured	Maintenance of Health and Energy of forestry ecosystem	Must
	D Consideration to water and soil protection in forest districts	Protection and maintenance of soil and water resources	Should
2. Social Advantage Related to Forests	E Respect to rights of land owners/users	Maintenance and promotion of social/economic benefits	Must
	F Consideration to workers' health and safety		Must
	G Prohibition of procurement from a region where a serious social dispute exists	Legal, institutional, and economic framework	Must
	H Consideration to local residents		Should

\* “Content (Guideline) to be Described in Procurement Policy” shall be included in the actual procurement policy, in accordance with the intent of this description. In addition, the texts in the supplementary description in explanation shall be referred.

For the pulp procured based on raw material procurement aimed for sustainability, the percentage confirmed with any of 1) to 4) described below shall be submitted to certify conformance to “Content (Guideline) to be Described in Procurement Policy” of

Table 2, and the confirmed percentage shall be reported every year after a use contract of Eco Mark is concluded.

Note, however, that conformance to “Content (Guideline) to be Described in Procurement Policy” of Table 2 can also be certified if a total amount of procurement based on two or more items of A to D in Classification 1 of Table 1 and one or more item of E to H in Classification 2, and procurement related to “Reused/Unused Wood” shall be 90% or higher of the amount of entire procurement in a plant. In this case, a document explaining the progress in formulation of the procurement policy, etc. shall be separately submitted every two years after a use contract of Eco Mark is concluded. Whether the contract can be renewed shall be determined on the basis of evaluation of the progress.

To confirm Table 2, accumulated data (breakdown of the confirmation method) shall be submitted. In addition, any explanatory material on the traceability system (material explaining the mechanism for tracing a country of origin, forest administrative area, kind of tree, etc. of cut wood) shall be submitted.

- 1) Wood is the forest certified wood whose conformance to Appendix is obvious from CoC (Chain of Custody) Certification System (submission of a list carrying the certification number, etc.);
- 2) A copy of certificate issued by a local official organization has been obtained;
- 3) A certificate of conformance (or a sales contract according thereto, etc.) has been obtained from a tree butcher or forest administrator;
- 4) Conformance is confirmed with a survey sheet from a chip supplier.

In order to complement 2) to 4) and ensure the effect, it is desirable to check the field by own employee or employee of overseas affiliated company, to conduct an audit by a third party, or to acquire certification from the industry recognition system.

The procurement policy that defined items on the procurement of “Content (Guideline) to be Described in Procurement Policy” and “Reused/Unused Wood” of Table 2 shall be published and the procurement policy shall be submitted. In addition, the procurement policy and status on conformance to the criteria shall be disclosed on a home page of Eco Mark Office. In the case of an OEM product, if raw materials of the product are separately managed, a certificate of conformance by a paper manufacturer shall be submitted.

[Certification Procedure of brightness and basis weight]  
Certification Criteria 4-1.(5) and 4-2.(13) shall be conformed.

- (2) In order to control energy consumption during manufacturing, efforts shall be made to reduce waste sheets and prevent overuse of waste sheets.

[Certification Procedure]  
A report on the percentage of usage of waste sheet in an Eco Mark product (mean per one representative lot) to be issued by a paper manufacturer who manufacture base paper shall be submitted.

In addition, the report on the percentage of usage of waste sheet shall be submitted every year after a use contract is concluded.

- (3) When virgin pulp (excluding virgin pulp manufactured from thinned wood, and those manufactured from recycled resources such as lower grade timber and mill ends, etc. generated from plywood and sawmills) is used, the timber used for material wood must be harvested in legal manner consistent with procedures in the forest laws of timber producing countries.

[Certification Procedure]

A certificate shall be submitted to prove that the timber whose legality has been verified\* in accordance with “Guideline for Verification on Legality and Sustainability of Wood and Wood Products” of Forestry Agency has been in custody to be separated by the applicant or the paper manufacturer and is supplied to the applied products. At the same time, the applicant or the paper manufacturer who issues the above certificate shall submit any of the following certificates:

- 1) Certificate that the applicant or the paper manufacturer has been assessed and authenticated by the CoC (Chain of Custody) Certification System;
- 2) Certificate of the authorized company (that guarantees the association member’s adequate way of supplying wood and wood products verified with legality, etc.); and
- 3) Code of management practice which stipulates the way of custody to manage wood and wood products verified with legality (the method in the case that the timber verified with legality only is handled. The same applies to hereunder), retention of certificates for a predetermined period, etc.

In the event that Item 2) or 3) above is chosen and the certificate is submitted, the applicant or the paper manufacturer who issues the above-mentioned certificates shall publicly announce through its Web site the code of management practice prescribed by the association concerned in the case of Item 2) and shall prescribe and publicly announce through its Web site the code of management practice concerning the scheme to assess and guarantee the system for separative management, document management for retention of certificates for a predetermined period, etc. in the case of Item 3).

\*Confirm the certificate issued by the related company closest in commercial process, which at least verifies that wood and wood products they supply are with legality and under separative custody management

- (4) Business forms shall be either uncoated or lightly coated (less than 12g of coating amount per square meter for both sides) and less than 8g/m<sup>2</sup> for one side. Coated paper for color printers shall have less than 20g/m<sup>2</sup> of coating amount for both sides and less than 12g/m<sup>2</sup> for one side.

[Certification Procedure]

Certificates on the volume of coating issued by paper manufacturers shall be submitted. The certificates shall include a controlled standard value of coating for single- and dual-sided specifications.

- (5) Business forms, a controlled standard value of brightness shall be 70% or lower.

However, an allowable error of  $\pm 3\%$  in control of manufacturing processes shall be permitted.

[Certification Procedure]

A controlled standard value according to ISO whiteness degree (diffuse blue reflectance) defined in JIS P8148 issued by a paper manufacturer shall be indicated.

- (6) Addition of fluorescent whitening agents as prescription constituents shall be minimized.

[Certification Procedure]

Certificates issued by the paper manufacturer indicating whether fluorescent whitening agents are used shall be submitted. If used, the amount of the agent used shall be included in the certificate

- (7) Azo colorants (dyes and pigments) which may generate one or more amines of Table 3 in the decomposition of one or more azo radicals by reduction shall not be used. If used, one or more amines listed in Table 3 shall not be detected in 30 mg per kg or more of the product.

Table3 Amines that shall not be generated as a result of the decomposition of azo radicals

	Chemical substance	CAS No.
1	4-aminodiphenyl	92-67-1
2	benzidine	92-87-5
3	4-chloro-0-toluidine	95-69-2
4	2-naphthylamine	91-59-8
5	0-aminoazotoluene	97-56-3
6	2-amino-4-nitrotoluene	99-55-8
7	p-chloroaniline	106-47-8
8	2,4-diaminoanisole	615-05-4
9	4,4'diaminophenylmethane	101-77-9
10	3,3'dichlorobenzidine	91-94-1
11	3,3'dimethoxybenzidine	119-90-4
12	3,3'dimethylbenzidine	119-93-7
13	3,3'dimethyl-4,4'diaminodiphenylmethane	838-88-0
14	p-cresidine	120-71-8
15	4,4'methylene-bis-(2-chloroaniline)	101-14-4
16	4,4'oxydianiline	101-80-4
17	4,4'thiodianiline	139-65-1
18	0-toluidine	95-53-4
19	2,4-toluilenediamine	95-80-7
20	2,4,5-trimethylaniline	137-17-7
21	0-anisidine	90-04-0
22	4-amino- azobenzen	60-90-3

[Certification Procedure]

Certificates issued by the paper manufacturer indicating whether the concerned substances are used shall be submitted. If used, one of the three certificates 1) to 3) below issued by the paper manufacturer to certify that no amines in Table 3

have been detected exceeding 30 mg per kg of the product shall be submitted.

- 1) Certificates specifying that no colorants exceeding 30 mg per kg of the product are contained.
- 2) Certificates specifying that no amines in Table 2 have been detected exceeding 30 mg per kg of the product after considering every such risk in theory.
- 3) Certificates specifying that no amines in Table 2 exceeding 30 mg per kg of the product have been detected by an analysis method prescribed in the list of public testing methods based on Article 35 of the German law on foods and daily supplies.

- (8) Chlorine gas bleaching shall not be conducted for virgin pulp used in the applied product.

[Certification Procedure]

Certificates issued by the paper manufacturer shall be submitted.

- (9) In manufacturing the applied product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the "Environmental Laws, etc.") must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous substances in the area where the plant performing the final manufacturing process is located.

In addition, the state of compliance with the Environmental Laws, etc. for the past five years from the date of application (whether there is any violation) must be reported. If there is any violation, proper remedies and preventive measures shall have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.

[Certification Procedure]

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

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

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

inspection).

In addition, if the PRTR law is applicable to a plant manufacturing products and substances covered thereby (Class 1 designated chemical substance) are used more than the prescribed amount the reporting responsibility of which is defined by the law, a certificate stating the amount of emission and transfer of each substance to be issued by Manager of the plant manufacturing the product shall be submitted.

(10) The product shall contain no prohibited materials.

[Certification Procedure]

Details shall be indicated in the Attached Certificate

(11) The product packaging shall be designed to facilitate recycling and shall impart a reduced environmental burden when incinerated.

[Certification Procedure]

Details shall be indicated in the Attached Certificate

(12) Eco Mark or the percentage of waste paper pulp (a minimum numerical value to be guaranteed) shall be indicated on a product package.

[Certification Procedure]

A display plan draft showing Eco Mark indication or the percentage of waste paper pulp on the package shall be submitted.

#### 4-2. Quality Criteria and Certification Procedure

(13) For quality and safety, appropriate quality criteria shall be met or quality control shall be adequate in the manufacturing process. For items prescribed with measuring methods by the Japanese Industrial Standards, etc., the measurements obtained according to these procedures shall be submitted. In addition, the basis weight shall be controlled within  $\pm 5\%$  of a controlled standard value of each product lot during production.

[Certification Procedure]

Certification stating that the product complies with appropriate quality criteria shall be submitted. Otherwise, certificates specifying that the quality control was adequately implemented in the manufacturing stage and that no laws and regulations have been violated shall be submitted. In addition, a controlled standard value of basis weight shall be submitted.

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