



# Eco Mark News

Eco Mark News No. 26

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The “Eco Mark News” has been published since June 14, 1996 by Eco Mark Office in response to a revision of the “General Procedures for the Eco Mark Program”. In this “Eco Mark News”, the information related to Eco Mark Program such as newly selected Eco Mark product category and proposals for certification criteria is provided on the basis of the “General Procedures for the Eco Mark Program”.

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This brochure is using Eco Mark certified printing paper.

## **Meeting and Decision of the 10th Eco Mark Committee for Establishing Category and Criteria**

The 10th Eco Mark Committee for Establishing Category and Criteria (Chairman: Prof. Takashi Gunjima, Doshisha University) was held on April 12, 2001 at the Japan Environment Association. After the discussion, the following decisions were made.

<Decisions>

- A preliminary review was conducted for new product category proposals (17 cases) presented at the 9th Eco Mark Committee for Establishing Category and Criteria.
- A preliminary review was conducted for new product category proposals (17 cases) presented at the 10th Eco Mark Committee for Establishing Category and Criteria.
- Decision was made to enforce publicly announced revisions of six Eco Mark Product Categories for which opinions had been accepted for 60 days.
- Decision was made to announce a new proposal of Eco Mark Product Category Certification Criteria “Paper Printed Matters”.
- Decision was made to partially revise the criteria of product categories No.115 “Wooden Products Using Waste Wood, Thinned-out Wood, Small-diameter Logs, etc.” and No.119 “Personal Computers” that were presented by the Eco Mark Committee for Product Certificate.

### **Results of the Review of New Product Category Proposals**

- A preliminary review was conducted for new product category proposals (17 cases) presented at the 9th Eco Mark Committee for Establishing Category and Criteria, and the proposal for “Ceramic Tableware Using Recycled Materials” was carried over to a further discussion.
- A preliminary review was conducted for new product category proposals (17 cases) presented at the 10th Eco Mark Committee for Establishing Category and Criteria, but there was no proposal that was passed on to the second phase review. Now, the proposed name of product category, outline of the proposal contents, and results of the review will be made public through the Eco Mark News and the home page. (These are abbreviated in English version.)

### **Revision of Eco Mark Product Certification Criteria No. 106 “Paper for Communication”, No.107 “Printing Paper”, No.111 “Board Made of Wood or the Like”, No.112 “Paper Stationery”, No.117 “Copier”, and No.119 “Personal Computers”**

The publicly proposed revisions for six Eco Mark Product Categories, for which opinions were accepted for 60 days, were discussed with opinions taken into consideration that were accepted after announcement. Decisions were made to revise No. 106 “Paper for Communication”, No. 107 “Printing Paper”, No.111 “Board Made of Wood or the Like”, and No. 119 “Personal Computers” as proposed, and No. 117 “Copier” with partial amendment. Those revisions will be enforced from May 1 of this year in the form described in Annex 1.

## **Announcement of Certification Criteria Proposal for Eco Mark Product Category “Paper Printed Matter” and Discontinuance Notice for Existing Category No.7 “Magazines and Books on Environmental Problems”**

The announcement of proposed new Eco Mark Product Category Certification Criteria “Paper Printed Matter” was approved at the Committee as described in Annex 2. At the same time, the existing Product Category No.7 “Magazines and Books on Environmental Problems” will be discontinued when the former criteria are established. With this announcement and discontinuance notice, opinions on this action will be accepted until Saturday June 30, 2001. For further information about submitting opinions, please refer to “Acceptance of Opinions on the Proposed New Product Category and Discontinuance of Existing Category” below.

### **“Acceptance of Opinions on the Proposed New Product Category and Discontinuance of Existing Category”**

#### (1) Acceptance by mail and FAX

- Address, Name, Sex, Occupation, Contact Address, Telephone number, FAX number
- Name of the proposal Eco Mark Product Prototype criterion to give opinion
- Opinions on the above proposal criterion

A summary of the above matters should be sent in writing (on A4 size paper) to Eco Mark Office, Japan Environment Association at the address below by Saturday, June 30, 2001 by mail (postmark effective) or FAX.

Japan Environment Association, Eco Mark Office  
Takagi Building 7F, 1-7-2 Toranomom, Nishi-Shimbashi, Minato-ku, Tokyo 105-0003  
TEL: +81-3-3508-2653 FAX: +81-3-3508-2656

#### (2) Acceptance by e-mail

- Address, Name, Sex, Occupation, Contact Address, Telephone number, FAX number, e-mail address
- Name of the proposal Eco Mark Product Prototype criterion to give opinion
- Opinions on the above proposal criterion

A summary of the above matters should be sent to the address below by 17:00, Saturday, June 30, 2001 by e-mail. When you attach a file to e-mail, please use MS-WORD, Ichitaro, or Excel format.

e-mail: [ecomark@japan.email.ne.jp](mailto:ecomark@japan.email.ne.jp)

## **Planned Discontinuance of “Charge-free Use of Eco Mark on Freely Distributed Publication and Printed Matter”**

The privilege of charge-free use of Eco Mark on the freely distributed publication and printed matter, which was approved in the past as a special case for promoting usage of used paper, will be abolished when the new Eco Mark Product Category “Paper Printed Matter” is established. After the establishment of this category, the publication and printed matter should be certified with this new category. The usage of the Eco Mark for this purpose will require ordinary usage fees.

**Partial Revision of Eco Mark Product Certification Criteria No.115 “Wooden Products Using Waste Wood, Thinned-out Wood, Small-diameter Logs, etc.” and No.119 “Personal Computers ”**

**- Partial Revision of Eco Mark Product Certification Criteria No.115 “Wooden Products Using Waste Wood, Thinned-out Wood, Small-diameter Logs, etc.”**

<Reason for Revision>

The criteria will be revised as follows in order to improve accuracy of examination and clarify the quality standard of charcoal by use.

<Revisions>

Will be revised as underlined below.

[Before Revision]

4-2. Quality standard (2)

(2) The charcoal or briquette used shall be of calorific value of 6,800kcal/kg, ash content less than 4%, volatile substance content less than 25%, and fixed carbon content more than 71%.

[After Revision]

(2) The charcoal or briquette used shall be of calorific value of about 6,800kcal/kg, ash content less than 4%, volatile substance content less than 25%, and fixed carbon content more than 71%. However, for charcoals used for humidity control, water treatment, deodorization, maintaining freshness, and feed stuff, the requirement of calorific value above shall not be applied, but the requirement listed in Table 2 shall be applied instead.

Table 2. Quality of Charcoal

Charcoal for humidity control	Carbonized at a temperature of more than 400°C
Charcoal for water treatment	-
Charcoal for deodorization	Degree of refinement shall be more than level 8. (Charcoal carbonized at a temperature of more than 600°C and of water content less than 15%.)
Charcoal for maintaining freshness	Charcoal for maintaining the freshness of plants (including mushrooms) shall be of the degree of refinement less than level 2. Other charcoals shall be less than level 8. (Charcoal carbonized at a temperature of more than 800°C and of water content less than 10%.)
Charcoal for feed stuff	-

<Date of Revision>

May 1, 2001

**- Partial Revision of Eco Mark Product Certification Criteria No.119 “Personal Computers ”**

Slight revision was made in the Product Certification Criteria “Personal Computers” in Paragraph (35) of F. Operations Manual, (9) of A-2 Recovery/Recycle System in Proposed Revision described in Annex 1.

## **Notices**

### **Display in Eco-Life Fair 2001**

The Eco Mark Office will participate and exhibit products in the “Eco-Life Fair 2001 (Sponsor: Ministry of the Environment, Japan Environment Association, others) ” to be held in the Parkway of the Yoyogi Municipal Park on Saturday, June 2 and Sunday, June 3, 2001. The Fair is intended to promote and realize ecological lifestyles. The Eco Mark Office will display panels to explain the organization of Eco Mark including its certification criteria and system, and products that demonstrate the range of Eco Mark products. Please drop in on our display when you visit the fair. Admission is free.

### **Display in NACE Eco Fair**

NACE Eco Fair will be held on Friday June 22 and Saturday June 23, 2001 at the Wakasato Civic Culture Center in Wakasato, Nagano to raise people’s consciousness of environmental protection. The Association will join to sponsor and display at this event. In the Fair, the display of Eco goods and lectures as well as entertaining events such as a trial ride in an electric scooter and a toy hospital will be given. Nearby residents are cordially invited to attend. Admission is free.

## **Topics**

### **Announcement of Procurement Policy for Eco-friendly Goods and Services by Government Organizations**

From April 1, government organizations have one after another announced their policy for promoting the procurement of eco-friendly goods and services based on the provisions of the Law Concerning the Promotion of Procurement of Eco-friendly Goods and Services by the State and Other Entities (Law on Promoting Green Purchasing). Many organizations including the House of Representatives, the Supreme Court, the Ministry of Foreign Affairs, the Ministry of Environment, the Ministry of Finance, the Ministry of Justice, the National Police Agency, the Japan Environment Corporation, the Pollution-related Health Damage Compensation and Prevention Association, and the National Institute for Environmental Studies, have expressed, in relation to the promotional measures for the procurement of eco-friendly goods and services, that they will “make every effort to procure articles with less environmental impact by utilizing the existing information such as the Eco Mark, depending on the article to be procured”. They also state that, in the procurement of eco-friendly goods and services other than specialty procurement goods, they will “make an effort to procure Eco Mark certified products or their equivalents, as appropriate”.

The Eco Mark Office will, in keeping with these movements, further strengthen the effort of providing information on the Eco Mark to national and local governments, and also make continuous effort to urge others to give priority to purchasing Eco Mark certified products. For further details about their announcements, please refer to the home pages of the respective organizations.

Annex 1

	<b>Eco Mark Product Category No.106</b> <b>Paper for Communication</b>	Japan Environment Association Eco Mark Office
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(Extract of the Criteria)

## 2. Applicable Products

PPC paper, business forms, coated paper for color printers, and OCR paper, diazo type paper

## 3. Definitions

Roll paper: Paper for communication rolled up by required width and diameter.

## 4. Criteria for Eco Mark Certification

### 4-1. Environmental criteria

- (1) The percentage of the waste paper in the pulp mixture shall be at least 70%. It shall be 100% for PPC paper.
- (2) PPC paper, business forms and OCR paper shall be either uncoated or lightly coated (less than 12g of pigmentation per square meter for both sides and less than 8g for one side). Coated paper for color printers and diazo type paper shall have less than 20g of pigmentation per square meter for both sides and less than 12g for one side.
- (3) The brightness of PPC and business forms shall be about less than 70%.
- (4) The production process shall conform to relevant environmental regulations and agreements on preventing air pollution, water contamination, noise, odor and emission of hazardous materials.
- (5) The product shall be produced without excessive fluorescent whitening agents.
- (6) The product shall contain no prohibited materials.
- (7) The product packaging shall be designed to reduce resource consumption and facilitate recycling and shall impart a reduced environmental burden when incinerated.

### 4-2. Quality criterion

- (1) The quality and safety of the product shall conform to the provisions of the Japan Business Machine Standard JBMS-31 or JBMS-32. Excluded is the provision for brightness. Stains that may degrade the quality of printing shall also be considered. The basis weight and thickness of paper for color bubble jet printer is not applied to the provisions. The measurement of roll paper is not also applied to the provision. Diazo paper shall conform to the provisions of the Japan Industrial Standard JIS P 4505 .

Established: November 28, 1997

Revised: July 1, 1998 Article 5(1)

Revised: May 10, 2000 Article 4, 4-2

Revised: May 1, 2001 The percentage of the waste paper in the pulp mixture etc.

This product category shall remain in effect for five years at maximum from the above date of establishment, and is subject to review for change or abolishment if necessary.

Interpretation

**Product Certification Criteria for “Paper for Communication”**

Established on November 28, 1997

Revised on May 1, 2001

**2. Applicable Products**

PPC paper, form paper, coated paper for color printers, and OCR paper shall be treated as targets for these criteria. Thermosensitive paper, pressure sensitive paper, photocopying paper, non-carbon paper, and other such former targets for Eco Mark certified products, are designated as prohibited products under the “Waste Paper Quality Standard”, and these products are difficult to recycle under the current recovery methods.

Accordingly, as will be explained later in the section on recyclability, it has been decided, due to this revision, to place items such as thermosensitive paper, pressure sensitive paper, photocopying paper and non carbon paper outside the targets for Eco Mark certification.

Diazo type paper was decided to treat as target for these criteria because of not being designated as a prohibited product as the result of consideration of amount of production, application and handling after use by the concerned, the Eco Mark Committee for Establishing Category and Criteria and Working Group.

**4. Certification Criteria**

A. Resource Extraction Stage

A-1 Consumption of Resources

For this item, the following subject was investigated.

- (1) That the composition rate for waste paper, as a raw material, be 70% or over.
- (2) That the waste paper generated in Japan be utilized.
- (3) Sustainable forest management in lumbering and wood chip manufacturing.
- (4) Non-wood pulp.
- (5) The control of paper resources (control of consumption, decreasing paper weight, usage of both sides of paper)

In considering point (1) above from the standpoint of promoting the use of waste paper, it is desirable to use waste paper as 100% of the raw materials for the manufactured product in order to preserve the forests and reduce paper waste.

However, since the quality of the manufactured product depends greatly upon the quality of the waste paper used as a raw material, in considering the Eco Mark certified paper for communication, its composition rate of 70% or over is desirable at the present time, and it has been recognized to have reached a level where one can promote the use of lower grade waste paper. Furthermore, it has been 7 years since “office paper” has been established as an Eco Mark certified product type, then the situation with paper for communication has changed, and adding to the fact that the use of waste paper has progressed, it has been decided to raise the composition criterion item of over 50% or over to a composition criterion of 70% or over. After that, the percentage of the waste paper was reconsidered in January, 2001 and as for the PPC paper, it has been decided to raise to 100 %. But the numerical value of this percentage was decided to examine again with setting up Working Group to revise criteria and enforcing the market analysis of the PPC paper and so on in the next time.

Regarding point (2) above, since it may arise that limiting the import-export trade of waste paper as part of the Eco Mark program would create a trade issue, but this has not been selected as an item for these criteria at present.

#### B-1 Consumption of resources

This item, which is expected to be effective in reducing the environmental load by helping with such things as reducing the wastes and curtailing the use of chemicals in surface coating which is thought to be of superior quality as the Eco Mark, has been selected for these criteria. But the paper which contains white pigment shall be handled as the uncoated paper.



## Eco Mark Product Category No.107 Printing Paper

Japan Environment Association  
Eco Mark Office

(Extract of the Criteria)

### 4. Criteria for Eco Mark Certification

#### 4-1. Environmental criteria

- (1) The percentage of the waste paper in the pulp mixture shall be at least 70%.
- (2) White pigmentation on the coated printing paper shall be less than 30g of pigment per square meter for both sides and less than 17g for one side.
- (3) The brightness of uncoated printing paper shall be about less than 70%.
- (4) The production process shall conform to relevant environmental regulations and agreements on preventing air pollution, water contamination, noise, odor and emission of hazardous materials.
- (5) The product shall be produced without excessive fluorescent whitening agents.
- (6) The product shall contain no prohibited materials.
- (7) The product packaging shall be designed to reduce resource consumption and facilitate recycling and shall impart a reduced environmental burden when incinerated.

#### 4-2. Quality criterion

The quality and safety of uncoated printing paper shall conform to the provisions of JIS P 3101. The quality and safety of lightly coated and coated printing paper shall conform to the applicable quality standards, or the manufacturing process shall include adequate quality control procedures. As for those items to which a JIS-designated measuring method applies, the data obtained by such a method shall also be reported.

### 5. Certifying Conformity to Criteria

- (1) Relevant data certifying conformity of the product to each of the prescribed criteria shall be submitted with the application form.
- (2) Regarding environmental criteria 4-1.(1) and (2), data certifying the percentage of waste paper in the pulp mixture and volume of coating issued by the paper producer shall be submitted.
- (3) Regarding environmental criterion 4-1.(3), a report on the brightness experiment conducted with the JIS-designated Hunter or testing method for diffuse blue reflectance factor shall be submitted.

- (4) Regarding environmental criterion 4-1.(4), a written self-proclaimed certificate by the plant manager shall be submitted showing the plant's five-year compliance with agreements on pollution prevention and other environmental regulations applicable to the area in which the plant is located.
- (5) Regarding environmental criterion 4-1.(5), where fluorescent whitening agent is used, a certificate by paper producer showing the volume of the fluorescent whitening agent shall be submitted.
- (6) Regarding environmental criteria 4-1.(6) and (7), explain concretely in the Eco Mark certification application.
- (7) Regarding quality criterion 4-2.(1), a certificate which shows that the product conforms with the corresponding quality standards and a written self-proclaimed certificate by the plant manager showing that the manufacturing processes include adequate quality control procedures and that there are no violations of the standards shall be submitted.

Established: November 28, 1997

Revised: July 1, 1998 Article 5(1)

Revised: May 1, 2001 The percentage of the waste paper in the pulp mixture and  
quality criterion

This product category shall remain in effect for five years at maximum from the above date of establishment, and is subject to review for change or abolishment if necessary.

## **Interpretation**

# **Product Certification Criteria for “Printing Paper”**

Established on November 28, 1997

Revised on May 1, 2001

## **4. Certification Criteria**

### **A. Manufacturing Stage**

#### **A-1 (Consumption of Resources)**

For this item, the following subjects were investigated.

- (1) Consumption of resources such as energy and tap water
- (2) Coating

A great deal of water of 50 m<sup>3</sup> are used to manufacture a ton of base board for corrugated fiberboard and a great deal of water of 160 m<sup>3</sup> are used to manufacture fine quality paper which is used for the book and the notebook. In other words, more water is used to manufacture paper with the higher brightness. Therefore, making a brightness decline and reducing the quantity of water consumed to manufacture become a consideration to the environment. However, the quantity of water consumed for the industry is already managed by the factory unit and the quantity of water consumed to manufacture paper is reduced by an average of about 40 % for every a ton of paper compared with the 1980s because of reusing in the circulation as much as possible.

The quantity of energy consumed to manufacture paper is also reduced by an average of about 27 % compared with the 1980s. But the quantity of energy consumed is affected by the production facilities and the production processes greatly because the efficient use of energy to manufacture such as collection of black liquor and effective use of waste etc. is managed by every factory.

Therefore, this item was not selected as it is difficult to prepare criteria for this item at present.

The paper which is coated in the surface improves in the quality of the paper such as the aptitude of printing, but when processing its waste paper to pulp, it increases the use quantity of chemicals and makes waste called paper making sludge.

The nationwide situation of the paper making sludge disposal is not clear, but in Fuji City it was generated by 720,000 tons in 1995, most of it was utilized as fuel and 60,000 tons of

ash, which is nearly half of burning-up ash, was landfilled.

This item, which is expected to be effective in reducing the environmental impacts such as reducing the wastes and curtailing the use of chemicals, has been selected to prepare criteria for coating that is thought to be over-quality at Eco Mark products. But the paper which is containing white pigment shall be handled as the uncoated paper.

#### **5. Quality criterion**

As for the quality of the printing paper, there is no quality standard of slightly coated printing paper and coated printing paper at present. Also, Japanese Industrial Standards regarding uncoated paper was abolished. Therefore, the quality of the printing paper shall be guaranteed independently.



**Eco Mark Product Category No.111**  
**Board Made of Wood or the Like**

Japan Environment Association  
Eco Mark Office

(Extract of the Criteria)

**4. Criteria for Eco Mark Certification**

4-1. Environmental criteria

- (1) The percentage of reused/unused wood as materials for wooden parts shall be 100%.
- (2) As for products which use materials other than reused/unused wood, the percentage of the materials shall be 5% or less (weight percentage) of the whole product.  
(Note) The weight percentage means the percentage of weight of the product or each material measured when the material has reached stable phase under the dry condition of  $20 \pm 3$  degrees Celsius and 65% moisture
- (3) Additives (bonding agent, hardener, wax) or ant repellent, preservatives (ex. CCA), fireproofing agent for paints shall not be used (The use of reused/unused lumber containing these additives shall be avoided). Toluene or xylene shall not be used.
- (4) The volume of emission of formaldehyde from the material shall be 0.5mg/l or less.
- (5) Consideration shall be given to reducing the environmental burden at the time of disposal by incineration.
- (6) The production process shall conform to relevant environmental regulations and agreements on preventing air pollution, water contamination, noise, odor and emission of hazardous materials.
- (7) As for fiber boards, efforts to reduce energy consumption shall be made in the production process.

Established: July 1, 1998

Revised: May 1, 2001    The amount of emission of formaldehyde

This product category shall remain in effect for five years at maximum from the date of establishment, and is subject to review for change or abolishment if necessary.

## **Interpretation**

### **Product Certification Criteria for “Board Made of Wood or the like”**

Established on November 29, 1998

Revised on May 1, 2001

#### **3. Certification Criteria**

C-8 (Use and Emission of Hazardous Substances)

For this item, the following subject was investigated.

(1) Control of formaldehyde in the material storage

As for the control of formaldehyde at the distribution stage, it was judged that environmental impact was decreased by setting criterion for the amount of formaldehyde emission from a product. Concretely, as the bonding agent extremely reduced the use of the formaldehyde is in widespread use, this item was selected for preparing criteria with settling the amount of emission of the formaldehyde less than 1.5mg/l. After that, the spreading situation of the bonding agent were examined again in January, 2001, and the amount of emission was revised and became less than 0.5mg/l.

D Use/Consumption stage

D-5 (emission of air pollutants)

For this item, the following subject was investigated.

(1) Emission of air pollutants from composition of bonding agent

As for emission of formaldehyde at the use stage, recently an indoor air pollution problem by emission of formaldehyde from the house etc. using the products which contains formaldehyde is pointed out and that attracts the attention of the consumers. Therefore, regarding the materials that are pointed out that they have the possibility to be the harmful materials, it has been decided that the environmental impacts are decreased by taking up the emission amount of them from product as the items for preparing criteria. When these criteria were established in July 1998, it had been decided that emission of the formaldehyde at the use stage should be less than 1.5mg/l because the boards in Japan was in high level compared with quality standards in the world and it was recognized that the amount of formaldehyde emission was reduced by covering the surface of

floor base board and secondary elaboration. After that, this criterion has been decided to revise and be less than 0.5mg/l because the movement that criterion of the indoor formaldehyde emission amount should be less than 0.5mg/l becomes popular in accordance with the change of social conditions. When revised, it was pointed out that there was the possibility of increasing energy consumption along with manufacturing low-formaldehyde boards. And as the measuring methods of formaldehyde are all different in all countries of the world and the conversion factor between different measuring methods and the relations between the measurement value in the material and the indoor atmospheric concentration are not developed now, the criterion has been decided to revise when a more suitable method is settled on in future. Though Japanese industrial standards prescribe the formaldehyde emission amount of the base board for the decorative board, this criteria prescribe the formaldehyde emission amount of the decorative board itself.



## Eco Mark Product Category No.112 Paper Stationery

Japan Environment Association  
Eco Mark Office

(Extract of the Criteria)

### 4. Criteria for Eco Mark Certification

#### 4-1. Environmental criteria

(1) The weight percentage of the waste paper in the whole product shall be at least 50% (excluding binders for filing supplies and consumption articles for supplement), and further, meet the following requirements.

As for the products using Paper board, the percentage of the waste paper board for materials in the product shall be at least 90%.

As for the products using paper, the percentage of the waste paper for materials in the product shall be at least 50%.

But, as for the notebook, lined paper and paper for preparing a draft, the percentage of the waste paper for materials in the product shall be at least 70%.

As for filing goods etc., using cardboard for materials, the percentage of the waste cardboard in the product shall be 100%.

(2) As for the products also using materials other than paper, the percentage of the paper in the whole product including added materials shall be at least 70% (weight percentage).

(3) As for paper and paperboard, coating shall be 30g/square meters or less for both sides of the paper.

(4) As for the products using uncoated paper and paperboard, the brightness of the paper and paperboard shall be some 70% or less. This provision, however, shall not apply to “drawing paper”, “congratulatory or consolatory envelopes and wrapping paper for gift of money”, “folded red and white paper” and “paper for calligraphy” according to “Japanese Standard Product Classification”.

(5) The product shall be produced without use of excessive fluorescent whitening agents. As for account books, fluorescent whitening agent shall not be used.

(6) The production process shall conform to related environmental regulations and agreements on preventing air pollution, water contamination, noise, odor and emission of hazardous materials.

(7) The products shall be separable from materials other than paper after consumption. Paper material shall contain no prohibited materials.

As for materials other than paper, an excessive amount of materials difficult to decompose shall not be contained. Materials under control shall not be used.

The products shall reflect consideration to reducing the environmental burden at the time of disposal.

(8) The products shall not increase the volume of waste (shall not be so-called throwaway goods).

(9) The product packaging shall be designed to reflect consideration to less resource consumption,

facilitation of recycling and reducing the environmental burden when incinerated.

#### 4-2. Quality criterion

(1) The quality and safety of the product shall conform to the quality standard provisions of the Japan Industrial Standard etc.

#### Paper Stationery List on Environmental Criteria (1) (2) (3) (4)and (5)

		Standard figure	Remarks
Percentage of the waste paper in the product		At least 50% of the weight of the whole product	
Percentage of the paper used for materials		At least 70% of the weight of the whole product	
Paper	Percentage of the waste paper in the product	At least 50%, <u>but at least 70% for the notebook, lined paper and paper for preparing a draft.</u>	
	Brightness	Some 70% or less	Applicable to uncoated paper and paperboard. Not applied to drawing paper
	Volume of coating	30g/square meters or less (both sides)	
Paper board	Percentage of the waste paper in the product	At least 90%	
	Brightness	Some 70% or less	Applicable to uncoated paper and paperboard. Not applied to drawing paper
	Volume of coating	30g/square meters or less (both sides)	
Cardboard	Percentage of the waste paper in the product	100%	Applicable only to filing goods etc.
Use of fluorescent whitening agent		Avoidance of excessive use	Not used in account books

Established: August 3, 1998

Revised: September 1, 1999 Article 4, No.1 (4) Paper for calligraphy is added

Revised: May 10, 2000 Article 4, No.1

Revised: May 1, 2001 The percentage of the waste paper in the product etc.

This product category shall remain in effect for five years at maximum from the date of establishment, and is subject to review for change or abolishment if necessary.



Eco Mark Product Category No.117

Copier

Japan Environment Association  
Eco Mark Office

(Extract of the Criteria)

### 3. Terminology

(The followings are added.)

- :
- Low power mode : The low power consuming condition which is realized automatically after some non-operate time
- Off mode : The condition in which a power supply was cut by the automatic blocking-off function after some time passed
- Sleep mode : When output operation isn't done continuously after the switchover into the low power mode, the secondary low power consuming condition which is continuously realized automatically without switching off the power supply
- Copy speed : Number of sheets per minute (CPM), a both side copy is counted with two sheets.  
For the copy machine which excludes a large-sized copy machine, the form with A4 size makes copy speed. Also, as for the large-sized copy machine, copy speed is computed, converting the copy number per minute for the maximum size form of the concerned equipment to the copy number of A4 size form as follows.
- (1) 4 times the number of copy for the form of A2 size
  - (2) 8 times the number of copy for the form of A1 size
  - (3) 16 times the number of copy for the form of A0 size
- Double-sided copy function : The function to copy or image-output both sides automatically
- Picture reproduce speed : Output number of monochrome images with preset resolution (IPM), a both side image-output is counted with two sheets. When the copy speed and the print speed are different, it is decided to use either fast one.  
A picture shall be the monochrome image with 12 point font, double spacing and 1 inch (2.54cm) blank from each side of the form of A4 size or 8.5"×11" size.

### 4. Certification Criteria

#### 4-1 Environmental Criteria

- (1) The product shall use recycled plastic parts or reused plastic parts.

:

- (9) The applicant shall take back and reuse or recycle the toner container etc. (inclusive of toner cartridge) by the request of appliance user after use. Non-reusable parts of the toner container

etc. shall be treated and disposed of in an environmentally acceptable manner (inclusive of thermal recycling).

- (10) Double-sided copy function shall comply with the standard applicable at the time when registered in the International Energy Star Program<sup>2)</sup> (hereafter referred as “Energy Star”).
- (11) The energy consumption of the product shall comply with the standard applicable at the time when registered in the Energy Star and the gauge of the specified procurement item goods based on the Green Purchasing Law (attached table 1) at the time of application for the Eco Mark program.

And, the criteria of following ((1)) – ((4)) shall be complied with.

((1)) Energy consumption efficiency of the copy machine (excluding the copy machine which has the function for not less than 86 sheets of copy per minute, large-sized copy machine, complex copy machine and color copy machine ) shall not exceed the benchmark shown in attached table 1. (“\*”part of attached table 1 shall comply with the benchmark shown in attached table 2. )

((2)) The large-sized copy machine ( excluding complex copy machine and digital copy machine which has extensibility ) shall comply with the benchmark shown in attached table 3.

((3)) The complex copy machine shall comply with the benchmark shown in attached table 4. (But the large-sized complex copy machine shall comply with the benchmark shown in attached table 5 and the copy machine which has only a copy function in forwarding shall comply with ((1)).)

((4)) The digital copy machine which has extensibility (excluding the monochrome copy machine) shall comply with the benchmark shown in attached table 6 and the large-sized digital copy machine which has extensibility shall comply with the benchmark shown in attached table 7.

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- (18) The noise testing method shall be in accordance with ISO 7779 or the Blue Angel, and the measured values shall be within the range in the attached table 8. However, for copiers using larger paper sizes (A2 or larger), the number of sheets copied may be counted on an A4-paper basis (by Energy Star).

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## **5. Certifying Conformity to Criteria**

The applicant (if subject to a raw material, the supplier) shall submit certificates listed in Table 1 in the form of a document affixed with an official seal. Certificates may be copies of the original.

- (1) Regarding environmental criterion 4-1-(1), the applicant shall submit a certificate of using recycled plastic parts or that of using reused plastics. (Corresponding to Example Certificate 1.)
- (9) Regarding environmental criterion 4-1-(9), the applicant shall submit an explanatory leaflet which explain the system of recovering, re-using, recycling or disposal in an environmentally acceptable manner are prepared, (recovery system, disposal capacity and disposal documents etc.) (Corresponding to Example Certificate 9.)
- (10) Regarding environmental criterion 4-1-(10) and 4-1-(11), the applicant shall submit a registration document of the products using the Energy Star logo. (Corresponding to Example Certificate 10.) Also regarding environmental criterion 4-1-(11), the applicant shall submit a certificate of complying with the attached table 1-7. (Corresponding to Example Certificate 10-1.)

Established: November 15, 1999

Revised: December 1,2000 Article 4 (18)

Revised: May 1,2001 Article 4 (9)-(11),Article 5 (9)-(10)

This product category shall remain in effect for five years at maximum from the above date of establishment, and is subject to review for change or abolishment if necessary.

Attached table 1 The benchmark concerning copier

Copy speed (number of copies/minute)	Benchmark of the energy consumption efficiency			
	A4type	B4type	A3type	A3Ytype
-10	12	*	19	27
11-20	*	*	55	77
21-30	*	85	99	139
31-40	88	108	125	175
41-50	123	151	181	246
51-60	144	176	*	287
61-70	180	221	*	391
71-80	200	246	*	433
81-85	258	317	*	483

Note ) 1 “A4 type”, “B4 type”, “A3 type” and “A3Y type” mean the copy machines whose maximum width of applicable paper are short side of A4 size paper, short side of B4 size paper, short side of A3 size paper and long side of A3 size paper respectively.

2 Calculation method of energy consumption efficiency shall be based on the clause 3 “Measuring method of energy consumption efficiency” of MITI Announcement No.193 (March 31, 1999) under the Law concerning Rationalization of Energy Consumption (No.49, 1979).

Attached table 2 Benchmark of power consumption

(The parts of \* in the attached table 1 is shown in this table.)

Copy speed (CPM: number of copies / minute)	Power consumption in low power mode	Transition time to low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<CPM≤ 20	-	-	-	≤ 5W	≤30 min.
20<CPM≤ 44	≤3.85×CPM+5W	≤15 min.	≤30 sec	≤15W	≤60 min.
44<CPM	≤3.85×CPM+5W	≤15 min.	≤30 sec (recommended)	≤20W	≤90 min.

Attached table 3 Benchmark concerning large-sized copy machine (excluding complex copy machine and digital copy machine which has extensibility)

Copy speed (CPM: number of copies / minute)	Power consumption in low power mode	Transition time to low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<CPM≤ 40	-	-	-	≤10W	≤30 min.
40<CPM	≤3.85×CPM+5W	≤15 min.	≤30 sec. (recommended)	≤20W	≤90 min.

Attached table 4 Benchmark concerning complex copy machine (excluding large-sized copy machine )

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in sleep mode	Transition time to sleep mode
0<IPM≤ 10	-	-	≤ 25W	≤15 min.
10<IPM≤ 20	-	-	≤ 70W	≤30 min.
20<IPM≤ 44	≤3.85×IPM+50 W	≤30 sec.	≤ 80W	≤60 min.
44<IPM≤100	≤3.85×IPM+50 W	≤30 sec. (recommended)	≤ 95W	≤90 min.
100<IPM	≤3.85×IPM+50 W	≤30 sec. (recommended)	≤105W	≤120min.

As for attached table 4, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

Attached table 5 Benchmark concerning large-sized copy machine

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in sleep mode	Transition time to sleep mode
0<IPM≤ 40	-	-	≤ 70W	≤30 min.
40<IPM	≤4.85×IPM+50 W	≤30 sec. (recommended)	≤105W	≤90 min.

As for attached table 5, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

Attached table 6 Benchmark concerning digital copy machine which has extensibility(excluding monochrome copy machine and large-sized copy machine )

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<IPM≤ 10	-	-	≤ 5W	≤15 min.
10<IPM≤ 20	-	-	≤ 5W	≤30 min.
20<IPM≤ 44	≤3.85×IPM+5W	≤30 sec.	≤15W	≤60 min.
44<IPM≤100	≤3.85×IPM+5W	≤30 sec. (recommended)	≤20W	≤90 min.
100<IPM	≤3.85×IPM+5W	≤30 sec. (recommended)	≤20W	≤120min.

As for attached table 6, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

Attached table 7 Benchmark concerning large-sized digital copy machine which has extensibility

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<IPM≤ 40	-	-	≤ 65W	≤30 min.
40<IPM	≤4.85×IPM+45 W	-	≤100W	≤90 min.

As for attached table 7, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

Notes about attached table 2-7 )

- 1 The method of measuring power consumption is due to the attached table 2 of the detailed operation rules of the Energy star.
- 2 When the power consumption of the low power mode is always less than the power consumption of an off mode or sleep mode, the off mode or sleep mode has not to be equipped with.

Attached table 8 Benchmark of noise

Operating	≤30 sheets/min	≤63 (66) dB(A)
	≤50 sheets/min	≤68 (71) dB(A)
	≤70 sheets/min	≤75 (78) dB(A)
Stand-by	≤30 sheets/min	≤40 (40) dB(A)
	≤50 sheets/min	Measurement not required (Measurement not required)
	≤70 sheets/min	Ditto (Ditto)

( ) denotes the value defined in the Blue Angel

## Interpretation

### Product Certification Criteria for “Copier”

Revised on May1,2001

#### 4. Certification Criteria

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##### D Usage/Consumption Stage

##### D-1 (waste and its disposal )

For this item, the following subjects were investigated:

- (1) The recycled paper could be used.
- (2) The toner container shall be reusable.
- (3) Double-sided copying shall be possible.

As for the subject (1), it was considered a required condition in view of the “Applicable Paper”, and the requirement was set as “at least one or more of the papers usable in the product shall be the recycled paper with recycled-pulp of 100%”, in accordance with the Blue Angel.

As for the subject (2), the recovery of toner is considered meaningful, and therefore the preparation of a “recovery system” was set to be required. Also corresponding to the Green Purchasing Law, the description was aligned with that of Eco Mark Product Certification Criteria for “Personal Computers”.

As for the subject (3), the requirement was set to be the compliance to the Energy Star.

##### D-2 (Emission of substances contributing to global warming)

For this item, the following subjects were investigated:

- (1) Energy saving design shall be applied.
- (2) Electric power consumption should be low (complying with the Energy Star).

As for the subjects (1) and (2), the energy saving design and low-power consumption were considered the requirement in regard to the emission of global warming substances, and the criteria was set to describe as “to comply with the Energy Star.” Also corresponding to the Green Purchasing Law, the conformance to attached table 1-7 informed from the gauge of the specified procurement item goods based on the Green Purchasing Law was added. But, the benchmark of energy consumption efficiency is to be examined and discussed further in the future.

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# Example Format

## Certificate 9 Explanatory leaflet of the system of recovering, re-using and recycling

We have the following recovery system.  
(recovery system, disposal capacity, disposal documents etc.)

## Certificate 10-1 Certificate that shows energy consumption efficiency and energy saving design

- 1 . The copy machine (excluding the copy machine which has the function for not less than 86 sheets of copy per minute, large-sized copy machine, complex copy machine and color copy machine )

### Attached table 1 The benchmark concerning copier

	Copy speed (number of copies/minute)	Benchmark of the energy consumption efficiency			
		A4type	B4type	A3type	A3Ytype
Benchmark	-10	12	*	19	27
	11-20	*	*	55	77
	21-30	*	85	99	139
	31-40	88	108	125	175
	41-50	123	151	181	246
	51-60	144	176	*	287
	61-70	180	221	*	391
	71-80	200	246	*	433
	81-85	258	317	*	483
Actual Measure- ment	30 CPM	Attached Table 2 / Wh	Attached Table 2 / Wh	Attached Table 2 / Wh	Wh

### Attached table 2 Benchmark of power consumption

(The parts of \* in the attached table 1 is shown in this table.)

Copy speed (CPM: number of copies / minute)	Power consumption in low power mode	Transition time to low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<CPM≤ 20	-	-	-	≤ 5W	≤30 min.
20<CPM≤ 44	≤3.85×CPM+5W	≤15 min.	≤30 sec	≤15W	≤60 min.
44<CPM	≤3.85×CPM+5W	≤15 min.	≤30 sec (recommended)	≤20W	≤90 min.

- 2 . The large-sized copy machine ( excluding complex copy machine and digital copy machine which has extensibility )

Attached table 3 Benchmark concerning large-sized copy machine (excluding complex copy machine and digital copy machine which has extensibility)

Copy speed (CPM: number of copies / minute)	Power consumption in low power mode	Transition time to low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<CPM≤ 40	-	-	-	≤10W	≤30 min.
40<CPM	≤3.85×CPM+5W	≤15 min.	≤30 sec. (recommended)	≤20W	≤90 min.

3 . The complex copy machine ( excluding large-sized complex copy machine )

Attached table 4 Benchmark concerning complex copy machine  
(excluding large-sized copy machine )

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in sleep mode	Transition time to sleep mode
0<IPM≤ 10	-	-	≤ 25W	≤15 min.
10<IPM≤ 20	-	-	≤ 70W	≤30 min.
20<IPM≤ 44	≤3.85×IPM+50 W	≤30 sec.	≤ 80W	≤60 min.
44<IPM≤100	≤3.85×IPM+50 W	≤30 sec. (recommended)	≤ 95W	≤90 min.
100<IPM	≤3.85×IPM+50 W	≤30 sec. (recommended)	≤105W	≤120min.

As for attached table 4, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

4 . The large-sized complex copy machine

Attached table 5 Benchmark concerning large-sized copy machine

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in sleep mode	Transition time to sleep mode
0<IPM≤ 40	-	-	≤ 70W	≤30 min.
40<IPM	≤4.85×IPM+50 W	≤30 sec. (recommended)	≤105W	≤90 min.

As for attached table 5, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

5 . The digital copy machine which has extensibility ( excluding monochrome copy machine )

Attached table 6 Benchmark concerning digital copy machine which has extensibility(excluding monochrome copy machine and large-sized copy machine )

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<IPM≤ 10	-	-	≤ 5W	≤15 min.
10<IPM≤ 20	-	-	≤ 5W	≤30 min.
20<IPM≤ 44	≤3.85×IPM+5W	≤30 sec.	≤15W	≤60 min.
44<IPM≤100	≤3.85×IPM+5W	≤30 sec. (recommended)	≤20W	≤90 min.
100<IPM	≤3.85×IPM+5W	≤30 sec. (recommended)	≤20W	≤120min.

As for attached table 6, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.

6 . The large-sized digital copy machine which has extensibility

Attached table 7 Benchmark concerning large-sized digital copy machine which has extensibility

Picture reproduce Speed (IPM: number of images / minute)	Power consumption in low power mode	Recovery time from low power Mode	Power consumption in off mode	Transition time to off mode
0<IPM≤ 40	-	-	≤ 65W	≤30 min.
40<IPM	≤4.85×IPM+45 W	-	≤100W	≤90 min.

As for attached table 7, the switchover time to the low electric power mode shall be set in 15 minutes before shipment.



## Eco Mark Product Category No.119

### Personal Computers

Japan Environment Association  
Eco Mark Office

( Extract of the Criteria )

#### 4. Certification Criteria

##### 4-1. Environmental Criteria

###### A. System Unit (desk-top type PC)

###### A-2. Resumption and Recycling System

- (9) The applicant at the request of the user of appliances shall undertake to withdraw his/her appliances with the Eco Mark after use in order to forward them for reuse or recycling, respectively. The appliances mean business persons and this item doesn't apply to the individuals at present. Non-reusable parts of the appliances shall be treated and or disposed of in an environmentally acceptable manner (inclusive of thermal recycling). The applicant may refuse to withdraw his/her appliance after use if said appliances are inappropriately converted by the user from the viewpoint of reusing, recycling and environmentally acceptable treatment & disposal.

###### A-4. Energy Consumption

- (20) Energy consumption efficiency of the system unit shall not exceed the standard value of the attached table 3 which is drawn up from “Judgment Criteria concerning Car and Home Electric Appliances and the office automation appliance (energy-saving criteria)” provided for by “Law concerning the Rational Use of Energy” at the time the application for the Eco Mark is made.

###### E. Notebook-type PC

###### E-4. Energy Consumption

- (20) Energy consumption efficiency of the notebook-type PC shall not exceed the standard value of the attached table 3 which is drawn up from “Judgment Criteria concerning Car and Home Electric Appliances and the office automation appliance (energy-saving criteria)” provided for by “Law concerning the Rational Use of Energy” at the time the application for the Eco Mark is made.

###### F. The User Manual

- (35) The paper of the user manual issued and provided by the applicant together with the product shall meet the requirements of the Eco Mark Certification Criteria “for printing paper” at the time of applying for Eco Mark (use of paper with the Eco Mark is not required).

###### G. Packaging Materials (The user manuals of the basic software issued beyond applicant responsibility and CD-ROM cases are excluded.)

- (36) Plastics used for product packaging shall be marked according to ISO11469. However, material marking can be pretermitted in conformity with “Readiness for plain-colored containers and packaging”, “Countermeasure to containers and packaging”

physically restricted by marking space”, “Requirement of marking and its system for multiple containers and packaging”, “Readiness for company name or brand name printed packaging” and “Counter measure to import products” concerning identifying mark of “Report of the committee exploring identification of containers and packaging (July, 2000 MITI)”.

H. Single-unit type PC

H-4. Energy Consumption

- (20) Energy consumption efficiency of the single-unit type PC shall not exceed the benchmark of the attached table 3 which is drawn up from “Judgment Criteria concerning Car and Home Electric Appliances and the office automation appliance (energy-saving criteria)” provided for by “Law concerning the Rational Use of Energy” at the time the application for the Eco Mark is made.

5. Certifying Conformity to Certification Criteria (Among A to G)

- (4) With respect to Certification Criteria 4-1 (3), a certificate for performing repair works at the request of the appliance users shall be submitted. The user manual clearly stating that the system (repairing capacity, contents of furnished information provided by the criteria) is well established shall be submitted.

Established: September 1, 2000

Revised: December 1, 2000      Article 4, H Single-unit type PC

Revised: May 1, 2001      Article 4, Energy consumption and packaging materials

The Certification Criteria of this product category shall remain in effect for five years at maximum from the above date of establishment, and be subject to review for revision of the Certification Criteria, or for abolishment of the product category if necessary.

Attached table 3 Benchmark of energy consumption efficiency described in 4-1.(20)

Classification			Benchmark of energy consumption efficiency
Classification of personal computer	Number of the signal transmission routes for the input/output (N)	Main memory capacity (C)	
Server-type personal computers	$N \geq 32$		21
	$32 > N \geq 16$		3.6
	$16 > N \geq 8$	$C \geq 16 \text{ GB}$	2
		$16 \text{ GB} > C \geq 4 \text{ GB}$	2
		$4 \text{ GB} > C$	1.4
	$8 > N \geq 4$	$C \geq 16 \text{ GB}$	1.8
		$16 \text{ GB} > C \geq 4 \text{ GB}$	0.41
		$4 \text{ GB} > C$	0.41
	$4 > N$	$C \geq 16 \text{ GB}$	1.8
		$16 \text{ GB} > C \geq 4 \text{ GB}$	0.41
		$4 \text{ GB} > C \geq 2 \text{ GB}$	0.29
		$2 \text{ GB} > C$	0.28
Client -type personal computers except for battery-operated ones	$4 > N \geq 2$	$4 \text{ GB} > C \geq 2 \text{ GB}$	0.19
		$2 \text{ GB} > C \geq 1 \text{ GB}$	0.19
		$1 \text{ GB} > C$	0.16
	$2 > N$	$4 \text{ GB} > C \geq 2 \text{ GB}$	0.19
		$2 \text{ GB} > C \geq 1 \text{ GB}$	0.12
		$1 \text{ GB} > C$	0.043
Battery-operated personal computers among client -type ones			0.0065

Note : “VD12243,Part 1 ,30/42 Table 2 : Conformability of thermoplastic resin[49;67]” of Attached table3 in the certification criteria revised on December 1,2001 is prescribed in attached table 4.

[Interpretation]

Established on Sept. 10, 2000

Revised on May 1, 2001

### Certification Criteria for the Products Category "Personal Computers"

E Wasting Stage

E-8 (Use and Emission of Hazardous Substances etc.)

The following points were examined in this item.

- |   |
|---|
| <ol style="list-style-type: none"><li>(1) Neither PBBs nor PBDEs nor chloridization paraffin shall be added as a constituent to the print circuit board.</li><li>(2) Neither PBBs nor PBDEs nor chloridization paraffin shall be added as a constituent to plastic materials.</li><li>(3) Neither cadmium nor lead shall be added as a constituent to plastics.</li><li>(4) Neither carcinogenic substances nor mutagenic nor teratogenic substances shall be added to plastics.</li><li>(5) Neither cadmium nor lead nor mercury shall be added as a constituent to batteries.</li><li>(6) Neither polymer that contains the halogen nor the organic halogen compound shall be used as constituents for plastics (including plastic materials used for packaging).</li><li>(7) Neither substances classified into cancer-causing substances by LARC (Level 1, 2A and 2B) nor cancer-causing substances in MAK list (Class 1, 2 and 3) shall be added as a constituent to the display (LCD). However, mercury and mercury compounds are excluded.</li></ol> |
|---|

The Chemical Substances are involved in various forms such as contents in PC and use/emission/generation etc. at the Manufacturing Stage.

The content is an environmental impact inherent to the product, and therefore, the portions of the appliance, the substances and the content level are described. Basically, chemical substances are selected as an item to establish the criteria that do not allow any addition at Manufacturing Stage of the products.

The relation between the contents of polyvinyl chloride, polyvinylidene chlorides and bromine flame retarders and generation of dioxin at the time of combustion/wasting is pointed out for (1) and (2) and (6). As a result of the examination under consideration of keeping firesafety, they were selected as items to establish the criteria to evade the generation of the hazardous substances as much as possible. As for the use limitation of PVC, it may be used for miniature parts including coating films and cables etc., and there are not any prevailing substitutes, so it is not established as the criteria at present.

Moreover, an opinion was raised that there is no need to restrict the contents and use when any appliances use hazardous substances and the resumption of them was done.

As for (7), the description about the addition of antifoaming agent ( $As_2O_3$ ) in the manufacturing process was arranged as the following.

1. Antifoaming agent is used in the manufacturing process of the product which is called antifoaming, and is not the raw materials of glass.)
2. Antifoaming is separated by the heating.

Therefore antifoaming agent is judged to treat as "the impurity mixed by necessity in the manufacturing process", and is not nonconforming to the Eco Mark product certification criteria.

## F Recycling Stage

### F-1 (Consumption of resource)

The following points were examined in this item.

Designed for recycling and long-term use

- (1) The appliance shall comply to “a design suitable for the recycling of the appliance” in the attachment table 1, based on the “Guideline of preparing a prior evaluation manual in products designing to contribute to the promotion etc. of the use of the recycled resource.”
- (2) The packaging material shall conform to the “Guidelines on the Preparation of Pre-assessment Manual for Product Design Contributing to the Promotion, etc. of the Utilization of Recycled Resources.”

Plastic Materials and Batteries

- (3) Parts made of plastic shall be produced from a homopolymer or a copolymer.
- (4) The plastic case parts shall consist of two separable polymers or polymer blends at the most.
- (5) Large –size case parts made of plastic must be so designed as to ensure to recycle as plastic materials.
- (6) Batteries shall be so designed as to ensure the user to change or remove them. Also batteries that are not assumed for the appliance user to remove shall be removable or replaceable.

Resumption and recycling system

- (7) Taking back, re-use or recycling of appliance
- (8) Taking back, re-use or recycling of batteries

Marking

- (9) Plastic parts shall be marked in accordance with ISO11469.
- (10) Batteries shall be marked in accordance with the marking guideline for compact rechargeable batteries of the Battery Association of Japan.
- (11) Plastic used for packaging shall be marked in accordance with ISO11469.

:

### Resumption and recycling system

With respect to (7) and (8), according to “Investigation report of JEIDA concerning the situation of the resumption, processing and recycling of used computers”, the Personal Computers which are the subject of this category are expected to generate approximately 70,000 tons in 2001, 130,000 tons in 2003 and the same level afterwards, so that the resumption and reuse of the used appliances are becoming more important issue.

Moreover, the hazardous substances such as heavy metals are used for PC, and it is also important not to discharge these substances into the environment by using them in circulation. When there is a product, which should use the hazardous substances, it is expected to arrange a system of withdrawal and reusing/recycling in advance.

Therefore, this item was selected as an item to establish criteria.

Compliance with this item may include the assignment to business entity other than the applicant.

The recovery is described as the criteria in the Blue Angel.

In Japan, permissions of head of cities, towns or villages are required for the resumption of the appliance classified as the non-industrial waste under the law concerning waste disposal and cleaning, and the buy-back will cause a difficult situation to form any system from the

viewpoint of the cost. Therefore the draft of certification criteria described that only Personal Computers for the business purpose shall be the subject of resumption for the time being and according to the judgement of Eco Mark Committee for Product Certificate, this criterion was to be applied to Personal Computers as the non-industrial waste from home because of undeveloped legal system regarding withdrawal and reusing/recycling. However, Ministry of International Trade and Industry begun to study setting personal computers as specified recycling products in the “Law concerning promoting efficient use of resources” after general publication of the draft certification criteria. So regarding withdrawal of appliances as industrial wastes, certification criteria were settled as the draft and regarding withdrawal of appliances as domestic wastes, certification criteria were determined to partly revise after implementation of legal system. After above mentioned prehistory, improving the regulations of the measures on the disposal processing method of the wastes included the personal computer products which has used at home and so on, the plan to introduce a measures relevant to the taking-back during 2002 was specified in “Regarding the measures for the 3 R promotion of personal computer based on the law concerning the promotion of the effective use of resources” in December, 2000. Based on this, it was decided to certify without applying this item for the individual at present in these criteria. There is no definition for resumption expenses in this category.

Moreover, though the Blue Angel describes the resumption place, no criteria was established by judging that there should be no problem in investigating the mutual certification because the system maintenance of the resumption, reuse and recycling need not be restricted to the system of bringing to the resumption place but be established according to the circumstances of respective region.

	<p>Eco Mark Product Category (Proposal) “Paper Printed Matter” (New Category)</p>	<p>Japan Environment Association Eco Mark Office</p>
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## 1. Environmental Background

It is required to establish a new product category, Paper Printed Matter, for the reasons described below: First, more than ten years have passed since the product category No. 7 “Magazines and Books on Environmental Problems” was defined on February 28, 1989. In the meantime, people became more and more aware of importance of environmental issues, and the goals of Eco Mark quoted below have been almost accomplished in terms of this category; (1) To impose less environmental impact than similar products in their manufacture, use and disposal; (2) To reduce the environmental impact in other ways, thus contributing significantly to the conservation of the environment.

Second, the procedures to allow Eco Mark for printed matter have become obsolete. Printed matter is specially categorized in “Printing Paper” (No. 107) in order to enhance recycling of waste paper. Also there is a rule that allows to use Eco Mark for free: Use of Eco Mark on the booklets made up of printing paper certified to bear Eco Mark. These procedures have become insufficient because the criteria for printing paper covers that for printed matter and now it is necessary to evaluate products from the viewpoint of life cycle. Moreover, printed matter is dealt with as an independent category in examples of the type-I labeling abroad.

Therefore, we have decided to abolish the procedure to allow printed matter based on printing paper and to establish a new category, Paper Printed Matter, while the product category No. 7 “Magazines and Books on Environmental Problems” was totally revised. This new category covers a large number of products and it is also based on the concept taken up in 1996 “Product Life Cycle” and at the same time on the examination results made regarding utilization of recovered paper and reduction of harmful substances.

## 2. Applicable Products

The new category includes paper printed matter (refer to “Japan Standard Commodity Classification” issued by Ministry of Public Management, Home Affairs, Posts and Telecommunications: the category named “Printed matter, film, record and other recorded matter” is applied but the non-paper recorded matter such as magnetic card and film is excluded.) except for the products covered by the Eco Mark product category No. 112 “Paper Stationery”.

### 3. Terminology

- Printed Matter: Printed material with the following purposes, (1) visual communication, (2) decorative or artistic expression and (3) providing special functions
- Print Ink: Refer to Chemical Industry Statistical Yearbook by Ministry of Economy, Trade and Industry. The main materials are solute (pigment or dye) and solvent (oil, plastic or thinner) with supplemental materials mixed whenever necessary. They are blended or kneaded together. Print ink is used to transform images on the script or the plate made from the script to the surface (paper and others) by forming and fixing the images.
- Alkaline Paper: Paper manufactured in the neutral area in order to raise the durability of paper etc.
- Prescribed Component: Component intentionally added to a product to provide it with new properties, excluding impurities that are unavoidably mixed in the manufacturing process.

### 4. Criteria for Eco Mark Certification

#### 4-1 Environmental Criteria

- (1) The paper used for printing shall meet the requirements for the Certification Criteria No. 107 “Printing Paper” (not necessarily certified as an Eco Mark product). When the criteria for the category No. 107 are revised, the paper already certified as an Eco Mark product should be treated as conforming until the contract expires.
- (2) For the other materials used for printed matter (such as ink and adhesive agent), if any chemicals of Designated Chemical Substances (Type I or Type II) by the PRTR law (Pollutant Release and Transfer Register) are used, the names and the quantities of them must be clearly stated in the application form. Furthermore, ink for printing must conform to the standard, a. or b. below:
  - a. For the ink for offset printing, the requirements for the Eco Mark Product Category No. 102 “Offset Printing Ink” shall be met (not necessarily certified as an Eco Mark product).
  - b. For the other types of ink, all the requirements stated in “Criteria related to environment (2 to 4)” for the Eco Mark Product Category No. 102 “Offset Printing Ink” shall be met.
- (3) No plastic consisting of halogenated compounds shall be used.
- (4) When manufactured, the environmental laws and agreements related to Prevention of Air Pollution, Water Pollution, Noises, Vibrations, Offensive Odors or Release of Harmful Substances shall be observed.
- (5) No materials defined as inhibitory substances for recycling waste paper (refer to the table-1) shall be used.
- (6) For the books intended to be stored for a long time (refer to the Japan Standard Commodity Classification: 92131), alkaline paper shall be used.
- (7) There must be an indication/statement providing information to prompt the

readers to recycle. For example: This booklet is recyclable. Please put it back to the recycling chain after you use it.

#### 4-2. Quality Criteria

- (1) The standard of quality for each application shall be observed. The quality control during manufacturing process shall be implemented sufficiently.

#### 5. Certification Procedure

- (1) Evidence materials that prove conformity to the certification criteria shall be attached to the application form. A sample printed matter shall be attached to the application form.
- (2) In case that the Certification Criteria 4-1. (1) is applicable, observe the Demonstration of Conformity to Certification Criteria for the product category No. 107 "Printing Paper". However, if the paper is Eco Mark certified, entry of the product name (brand name) and the certification number can substitute for demonstration of conformity.
- (3) In case that the Certification Criteria 4-1. (2) a. is applicable, observe the Demonstration of Conformity to Certification Criteria for the product category No. 102 "Offset Printing Ink". However, if the ink is Eco Mark certified, entry of the product name (brand name) and the certification number can substitute for demonstration of conformity. For the ink that the Criteria 4-1. (2) b. is applicable, the component table issued by the ink manufacturer or MSDS (Material Safety Data Sheet) shall be submitted.
- (4) For the Certification Criteria 4-1. (4) is applicable, the self-certificate issued by the factory manager shall be submitted. The self-certificate shall demonstrate that the factory (printing and bindery) has been observing the local environmental laws/regulations for at least five years.
- (5) For the Certification Criteria 4-1. (3), (5), (6) and (7), specific statement shall be made in the application form for Eco Mark.
- (6) For the Certification Criteria 4-1. (7), a sample carrying the required information shall be attached.
- (7) For the Certification Criteria 4-2. (1), a document stating the printed matter conforms to the applicable quality standard shall be submitted. Or, the self-certificate issued by the factory manager shall be submitted, demonstrating that the manufacturing process has sufficient quality control without violation of laws/regulations.

#### 6. Other Requirements

- (1) The contents on the paper shall have no violation of "Copyright Law", "Criminal Law" and "Self-imposed Restrictions of the Book Publishing Industry".
- (2) The publisher of the printed matter shall do an application.
- (3) Division of application shall be made for each corporation and it shall

conform to the classification of Japan Standard Commodity Classification (Medium division-92: Printed matter, film, record and other recorded matter; indicated by a five-digit number; refer to the table-2). If more than one types of paper are used (different compounding ratios of recovered paper), they are included in one application form.

- (4) The brand name that is to be used for the application form shall be “Printed matter by XX corporation” and the actual designation of the printed matter shall be entered in the space for the model (for example, Model: “YY News by XX corporation”).
- (5) In close proximity to Eco Mark, there shall be the certification number and a statement such as “This printed matter is made of recycled paper and certified as Eco Mark Product. However, the printed contents have nothing to do with Eco Mark itself.” The purpose of this statement is to inform the readers that Eco Mark is not concerned with what is printed. The statement shall be entered in the application form.
- (6) The statement in the lower part of the mark contains the phrase: Printed matter partly/fully made of recovered paper.
- (7) In order to supplement the expression in the lower part of the mark, environmental information can be added. In that case, the statement shall consist of three lines (left alignment) as shown in the figure below. And the statement shall be surrounded by a rectangular.

ちきゅうにやさしい

Environment-friendly



This printed matter contains  
XX% of used paper ; Recyclable ;  
Alkaline paper

(ポスターなどは「製本」を「印刷」)

(For a poster, the word “bound”  
should be replaced by “printed”.)

(「中性紙」は書籍のみ)

(“Alkaline paper” can be  
used only for books.)

To be established on September 1, 2001 (plan).

The Certification Criteria for this Product Category shall be reviewed within five years of the establishment data. It will be revised or abolished whenever necessary.

Table-1 4-1.(5) Inhibitory Factors for Waste Paper Recycling:

<p>(1) Prohibitive (including vinyl coating which is so called PP cover; metal material excluding staple)</p> <p>(2) Hot-melt adhesive (excluding water-soluble adhesive)</p> <p>(3) UV ink, forming ink, gold/silver/pearl ink</p> <p>(4) Indian paper</p> <p>(5) 3D printing</p> <p>(6) Aromatic supplements (aromatic agent, perfume, lipstick and so on)</p> <p>Note: Definition of “Prohibitive”: Refer to “Quality Standard of Waste Paper” by Paper Recycling Promotion Center.</p>
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Table-2 Japan Standard Commodity Classification

Class No.	Title
92 1	Published Matter
92 11	Newspaper (Main contents are news, commentary and critique, containing advertisement. However, those whose contents are only commercial advertisement should be excluded. For the printing method, both typographic printing and other special printings are applicable. They should not be bound, but so-called correspondence that is distributed to newspaper publishers and others is included here even if it is temporarily bound.)
92 111	Daily newspaper, general
92 112	Non-daily newspaper, general
92 113	Daily newspaper, special
92 114	Non-daily newspaper, special
92 12	Periodical publication except for magazines and newspapers (It should have a certain title and be published continuously. However, those which are published once a year or less frequently should be excluded. For the printing method, both typographic printing and other special printings are applicable.)
92 121	General cultural magazines, General interesting magazines
92 122	Academic journals
92 123	Literary magazines, Art magazines
92 124	Entertainment, amusement and sport magazines
92 125	Management, industry and business magazines
92 126	Magazines for children
92 127	Magazines for women/housewives
92 128	Magazines for students (including entrance exam related)
92 129	Other periodicals
92 13	Books and Pamphlets
92 131	Books (49 pages or more)
92 132	Pamphlets (48 pages or less)
92 14	Maps and Diagrams (not included in books and pamphlets)
92 141	Maps (excluding statistical charts)
92 142	Models of maps and 3D maps
92 143	Globe and star globe
92 144	Photo-maps (including survey photos)
92 145	Diagrams
92 146	Charts/tables
92 15	Calligraphic works and paintings and musical scores (those excluded from books and pamphlets)
92 151	Replicas of calligraphic works and paintings (excluding postcards)
92 152	Print arts (only replicas)

Table-2 Japan Standard Commodity Classification (continued)

92 153	Musical scores
92 154	Programs for events
92 155	Calendars (not for advertisement) However, desk calendars are classified in ECO Mark Product Category No. 112 "Paper Stationery".
92 156	Telephone books
92 159	Other calligraphic works and paintings, and musical scores
92 19	Other published matter
92 2	Published printed matter
92 21	Periodical published printed matter
92 211	Printed matter for newspapers
92 212	Printed matter for magazines
92 219	Other Periodical published printed matter
92 22	Nonscheduled published printed matter
92 221	Printed matter for books
92 222	Pamphlets (48 pages or less)
92 223	Printed matter for maps
92 224	Printed matter for musical scores
92 225	Printed matter for study-aid books
92 226	Printed matter for drills
92 229	Other nonscheduled published printed matter
92 3	Commercial printed matter
92 31	Printed matter for advertisement
92 311	Posters
92 312	Pamphlets
92 313	Catalogs
92 314	POP
92 315	Calendars
92 319	Other printed matter for advertisement
92 32	Printed matter for other business
92 321	Commemorative papers/magazines
92 322	Report papers
92 323	Registers (name lists)
92 324	Specifications
92 325	Company magazines
92 329	Other printed matter for other business (including manuals)
92 33	Printed matter for office use (any forms made-to-order used by organizations including government offices, company offices and others; excluding made-up articles)
92 331	Business forms (printed)
92 332	Printed matter for business use
92 34	Packages and specially printed matter
92 341	Printed matter for packing
92 342	Special printed matter
92 39	Other printed matter for commercial use
92 4	Printed Certificates
92 41	General Printed Certificates
92 411	Financial certificates
92 412	Gift certificates (coupon)
92 413	Stamps and official postcards
92 414	Lottery tickets
92 415	Pass (safe-conduct)
92 419	Other general printed certificates
92 521	Paper photos

## Product Certification Criteria for “Paper Printed Matter” (Proposal)

Established on Sept. 1, 2001

### 1. Environmental Background

In 1999 approximate 65,000 new books were published, and the number of issues became about 420 million copies. In the same year, about 3,400 magazines were published and their number of issues became about 4,820 million copies. The breakdown of magazines shows that about 3.1 billion were monthly magazines (64.3%), while about 1.72 billion were weekly magazines (35.7%). (Source: "Publication Monthly Report" by Publication Science Research Institute of National Publication Association)

When examining the amount of shipment in 1998, daily newspapers, books, and magazines (including periodicals) had almost the same value of sales, 1,000 billion yen, while the other published matter had 210 billion yen, offset printed matter about 4,900 billion yen, intaglio printed matter (gravure printing) about 350 billion yen and letterpress (typography) printed matter about 580 billion yen. (Source: 1998 industry census; national total; business units with four or more workers)

Since books are either sent to the second-hand book market or stocked in a bookshelf after use, it is difficult to grasp how many books are discarded for the reproduction processing.

It should be noted that use of hot-melt adhesive, surface gloss processing by lamination treatment and mixing of prohibitive might obstruct recycling of waste paper (including both books and magazines). Although it is possible to handle magazines along the ordinary route of waste paper, if they carry compact discs as supplement they will also obstruct recycling.

The proportion of waste paper as a source of raw material for paper manufacturing is as low as only 18%. It is desired that more waste paper should be used for paper manufacturing in the future.

### 2. Applicable Products

Business cards, desk calendars, seals and labels are classified in “Paper Stationary” according to the Japan Standard Commodity Classification. Wrapping paper and shopping bags are classified in “Wrapping Paper”.

There was a suggestion that electronic media should be discussed about inclusion of this category. However, it was pointed out that too large a scope was difficult to deal with and at the moment promotion of use of waste paper should be put before anything else. Thus, it was decided that this category should include only paper products.

There was another suggestion that photocopied material should be included.

However, judging from the facts that “print ink” doesn’t contain toner and the ink for ink-jet printing, and that the statistics of photocopied material cannot be controlled objectively because there are so many copiers that are not owned by the printing companies.

### 3. Terminology

The definition of “print ink” was newly created based on the suggestions provided by Japan Printing Ink Makers’ Association because there was no established definition.

### 4. Environmental Criteria

#### 4-1. Details of Establishing Environmental Criteria

When the criteria related to environment are laid out, “Environmental Impact Item Selection Matrix for Each Life Stage of Products” is used. Environmental impact for each stage of life should be evaluated for each impact item as shown in the table below to decide whether the item is important for the product on a specific stage of life. When decided important, either qualitative or quantitative criterion for the item will be established.

For the new category “Paper Printed Matter”, the items (cells) with either X or XX were evaluated in the matrix below were evaluated. And finally the items (cells) with XX (A-1, A-8, B-5, B-6, B-8, B-9, C-1, E-7 and F-9) were selected as the items for criteria to be established.

The other cells in the matrix were either not evaluated or evaluated subsequently with other items.

Table : Chart for Selecting Environmental Impact Items  
at Each Stage of Product Life Cycle

Environmental Impact Item	Product Life Stage					
	A. Resource Extracti- on	B. Manufac- turing	C. Distri- bution	D. Use/Con- sumption	E. Dispo- sal	F. Recycling
1 Resource consumption	XX	X	XX	X		X
2 Discharge of greenhouse gases						
3 Discharge of the ozone layer depleting substances						
4 Destruction of eco systems	X					
5 Discharge of atmospheric pollutants		XX			X	X
6 Discharge of water pollutants	X	XX				X
7 Discharge/disposal of wastes			X		XX	X
8 Use/discharge of hazardous materials	XX	XX				X
9 Other environmental impactss		XX	X			XX

A Resource Extraction stage

A-1 Resource Consumption

The following points were studied under this item.

- (1) Whether the proportion of recycled paper is large,
- (2) Continuous forest management after wood cutting and wood-chip manufacturing,
- (3) Non-wood pulp,
- (4) Whether longer-life paper such as alkaline paper is used,
- (5) Coated paper is not used more than necessary.

(1) There was a comment that the proportion of recycled paper should be as high as possible for conservation of forest and reduction of paper waste from the viewpoint of promotion of waste paper utilization.

As for paper itself, there is the product category No. 107 "Printing Paper" and its certification criteria should be applied.

(2) This issue was already discussed when the product category No. 107 "Printing Paper" was determined. Since there was not an international consensus about woodcutting and forestation and it was almost impossible to make verification, this item was not selected.

- (3) This issue was discussed when the product category No. 107 “Printing Paper” was determined. Since the word “non-wood” covered a large scope and not enough objective data about the effects by non-wood pulp on the environment were available, it was decided not to be selected, but it should be reviewed when new information became available in the future.
- (4) There was a comment that for the printed matter to be stored for a long time, alkaline paper instead of acid paper should be used in order to make life of paper longer. On the contrary, it was pointed out that there was slight contradiction between expectation of longer life of paper and promotion of paper recycling. In the end, it was decided that only for the books to be stored for a long time, this item should be selected for the criterion to be established because acid paper would deteriorate after about 40 years passed (fiber would crumble).
- (5) As mentioned in the paragraph (1) above, the certification criteria of the product category No. 107 “Printing Paper” should be applied.

#### A-4 Destruction of eco systems

The following points were studied under this item.

- |   |
|---|
| (1) Continuous forest management after woodcutting and wood-chip manufacturing. |
|---|

This issue was already discussed in the section A-1 above.

#### A-6 Discharge of water pollutants

The following points were studied under this item.

- |   |
|---|
| (1) Water polluting substances shall not be released when pulp is manufactured. |
|---|

This issue was discussed in the section A-1 when coated paper was taken.

#### A-8 Use/discharge of hazardous materials

The following points were studied under this item.

- |   |
|---|
| (1) Print ink shall not contain harmful substances.<br>(2) Coating agents shall not contain harmful substances. |
|---|

For these two items, there was a comment that print ink should contain harmful substances. Furthermore, it was commented that not only print ink but also other materials should be subject to the PRTR Law (Pollutant Release and Transfer Register); if any substance covered by the PRTR Law is used, the applicant for Eco Mark should report on it.

Among the chemicals contained in print ink, those subject to the PRTR Law are toluene and xylene (solvent) and molybdenum red (pigment; used as a color fixing

agent from orange to red).

Solvent such as are toluene and xylene is used for gravure printing or screen-printing and is feared that it might be harmful in terms of environment because of its high volatility. However, ink without toluene and xylene has been developed and the needs for high volatile solvent are diminishing (this problem has been solved for offset printing). In addition to that, pigment (molybdenum red) is also used only partly. Thus, at first a proposal that no substances designated in the PRTR Law should be used for print ink was discussed. However, it was pointed out that use of toluene and xylene need not to be prohibited because almost all of them is recovered/recycled when they are used for printing and their hazard rank is as low as D. Use of moly was also decided not to be prohibited because existing laws such as the PRTR Law or Industrial Safety and Health Law cover it. In conclusion, the criterion was decided as follows: The names of the substances designated in the PRTR Law and the quantity used should be reported.

For the chemicals that are added to the other material than the print ink, it was decided that the names of the substances designated in the PRTR Law and the quantity used should be disclosed. And it was decided that the plastic made up from halogenated compounds should not be used.

## B. Manufacturing stage

### B-1 Resource Consumption

The following points were studied under this item.

(1) The limit for coating of paper should be set.

This issue was discussed in the section A-1.

### B-5 Discharge of atmospheric pollutants

The following points were studied under this item.

(1) No harmful substances shall be generated/released while manufacturing.

It was decided that harmful substances from manufacturing process should be minimized.

Thus, the criterion that the factory (printing and bindery) has been observing the local environmental laws/regulations and controlling the process properly was determined for requirement for qualification.

It was regarded that this criterion should be applied to other items, such as water polluting substances, vibrations, noises, offensive odors and other harmful substances: the factory should observe the local environmental laws/regulations related to these items.

### B-6 Discharge of water pollutants

The following points were studied under this item.

- (1) No harmful substances shall be generated/released while manufacturing.
- (2) The limit for degree of whiteness paper should be set.

- (1) This issue was already discussed in the section B-5 above.
- (2) As mentioned in the section A-1, there is already the product category No. 107 "Printing Paper" and its certification criteria should be applied here too. Therefore, it was decided no special criterion should be set.

#### B-8 Use/discharge of hazardous materials

The following points were studied under this item.

- (1) No harmful adhesive shall be used.
- (2) Chemical agents that are used for paper manufacturing shall not contain harmful substances.

- (1) Assuming that adhesive agents are used for binding, there is a comment that such adhesive agents should not contain harmful substances as raw materials. Generally speaking, volatile toluene is a typical harmful substance contained in adhesive. However, toluene is subject to the PRTR Law and the adhesive used for binding books usually doesn't contain toluene. The adhesive agents for bookbinding are hot-melt adhesive or water-soluble adhesive without solvent. Thus, it was thought that the issue of adhesive agents was not so important in terms of environmental stress. On the other hand, there was a comment that it would be important for us to provide users information about use of chemical agents so that they could understand them more and select such products with less chemicals used. In conclusion, the criterion was decided as follows: The names and the quantity of the substances designated in the PRTR Law if they are contained in the adhesive agents used should be reported.
- (2) As mentioned in the section A-1, there is already the product category No. 107 "Printing Paper" and its certification criteria should be applied here too. Therefore, it was decided no special criterion should be set.

#### B-9 Other environmental impactss

The following points were studied under this item.

- (1) There shall be no excessive noises or vibrations during printing process.

It was decided that dealing properly with complaints from the neighbors and observing related environmental regulations and agreements could reduce environmental stress. Therefore this criterion was determined as requirement for qualification.

### C. Distribution stage

#### C-1 Resource Consumption

The following points were studied under this item.

- (1) There shall be no excessive packing/binding.
- (2) To reduce the use of hard covers.
- (3) To save paper by making printed matter smaller and lighter.

- (1) There was a comment that control of excessive packing/binding could reduce the consumption of paper. As an example of excessive packing/binding, a book in a case such as a dictionary was mentioned. In conclusion, this item was selected for the criterion to be established as shown in the table-1 with the aims, reduction of resource consumption and facilitation of recycling. For binding, it will be mentioned in the section F-9 because it is related to recycling more than resource consumption.
- (2) It was regarded this issue was included in the paragraph (1) above.
- (3) It was decided that in case of printed matter it would be almost impossible to define the small size and the lightweight clearly and to establish the standard. Also, since this issue was partly included in the paragraph (1) above, it was not selected.

#### C-7 Discharge/disposal of wastes

The following points were studied under this item.

- (1) There shall be no excessive packing/binding.

This issue was already discussed in the section C-1.

#### C-9 Other environmental impactss

The following points were studied under this item.

- (1) There shall be little noises during transportation of printed matter.

It was decided that this item was too complicated to take in the actual state of noises for verification. Therefore, it was not selected.

### D. Use/Consumption stage

#### D-1 Resource Consumption

The following points were studied under this item.

- (1) Considering longer life of printed matter.

- (1) This means longer life owing to use of alkaline paper. Use of alkaline paper was already discussed in the section A-1.

## E. Disposal stage

### E-5 Discharge of atmospheric pollutants

The following points were studied under this item.

- (1) There shall be no harmful gases when disposed.
- (2) The cover or the case shall not generate harmful gases when disposed.

For these two items, it was assumed that burning of printed matter may accompany generation of harmful gases, these criteria were proposed. Generally, printed matter will be burnt when it is not recycled. Therefore, it was decided that plastic made up from halogenated compounds should not be used because dioxin may be generated depending on the burning conditions. In conclusion, this item was selected for criteria to be established.

### E-7 Discharge/disposal of wastes

The following points were studied under this item.

- (1) The binding shall not make treatment after disposed more difficult.

This statement implies that designing of products should consider recycling, for example easy separation after disposed and containing no harmful substances when burnt such as plastic made up from halogenated compounds (chloride, fluoride and so on). This item was selected for criteria (to limit use of the other materials than paper) to be established. This is also dealt with again in the section F-9.

## F. Recycling Stage

### F-1 Resource Consumption

The following points were studied under this item.

- (1) Less resources are consumed when recycled.
- (2) Hot-melt adhesive is not used for binding.
- (3) Water soluble adhesive is used whenever possible.

- (1) As stated in the section E-5 above, it was decided that it was almost impossible for the manufacturers to control the disposition method when recycled. Therefore, this item was not selected for the criterion.
- (2) It will be dealt with in the section F-9.
- (3) It will be dealt with in the section F-9.

### F-5 Discharge of atmospheric pollutants

The following points were studied under this item.

(1) Recycling process shall not release air-polluting substances.

As stated in the section E-5 above, it is almost impossible for the manufacturers to control the disposition method when recycled and to reduce the waste gas to the allowable level. Therefore, this item was not selected for the criterion.

#### F-6 Discharge of water pollutants

The following points were studied under this item.

(1) Recycling process shall not release water-polluting substances.

As stated in the section E-5 above, it is almost impossible for the manufacturers to control the disposition method when recycled and to maintain the wastewater to the allowable level. Therefore, this item was not selected for the criterion.

#### F-7 Discharge/disposal of wastes

The following points were studied under this item.

(1) Collected matter should have as much re-usable part as possible.  
(2) Bulky material shall not be used for binding/packing.

- (1) It means that no material should be used that may obstruct recycling. Thus, it will be dealt with in the section F-9 later.
- (2) It was already discussed in the section C-1 (excessive packing). Excessive decoration (binding) will be dealt with in the section F-9.

#### F-8 Use/discharge of hazardous materials

The following points were studied under this item.

(1) Harmful substances including adhesive agents shall not be used.  
(2) Materials that are difficult to be recycled shall not be used for binding.

- (1) It was already discussed in the section B-8.
- (2) It will be dealt with in the section F-9.

#### F-9 Other environmental impacts

The following points were studied under this item.

(1) The method of binding books shall be designed to make separation of component materials easy for recycling, and the materials to obstructing recycling shall not be used.  
(2) There shall be no special binding such as vinyl coating or varnishing.  
(3) Substances with environmental impacts shall not be discharged to the soil, and

such substances shall not remain in the soil.

The statements (1) and (2) above were considered very important in terms of facilitation of waste paper recycling, and selected for the criteria to be established.

First, the binding method was discussed. The following printed matter was considered to be obstructing to waste paper recycling: general magazines with CD attached or aromatic agents added, printed matter with a vinyl coated cover and clothbound printed matter. In addition to these, the printed matter containing prohibitive agents (specified by Paper Recycling Promotion Center) is also regarded as obstructing. However, varnishing is not considered to be obstructing to recycling.

Next, adhesive agents were taken up. There are two types of adhesive agents used for printed matter (binding), hot-melt type and water-soluble type. The former was pointed out to be obstructing to recycling because the plastic was unable to be dissolved. To this opinion, there was a comment that some newly developed hot-melt type adhesives would not be obstructing. In the course of discussion, there was a comment that the newly developed adhesives were not good enough to be removed from the prohibitive list because recyclable (meaning hot-melt adhesive is removable) depended on the equipment used. In conclusion, an improved type of EVA hot-melt adhesives (difficult to be torn into narrow strips) and water-soluble hot-melt adhesives were determined to be not obstructing to recycling.

Finally, paper type, ink and printing were discussed. It was pointed out that printed matter with UV ink used, printed matter with 3-D printing and printed matter with thin Indian paper (i.e. dictionary) were obstructing. UV ink is difficult to remove and Indian paper has too short fibers and contains much calcium carbonate (20 to 30%).

In summary, it was decided that the printed matter with these obstructions described above (ink, adhesive, paper, binding method and printing method) should be excluded from Eco Mark.

Regarding the statement (3), it was decided that harmful substances from manufacturing process should be minimized as mentioned in the section B-5. Thus, the criterion that the factory (printing and bindery) has been observing the local environmental laws/regulations and controlling the process properly was determined for requirement for qualification. However, as for recycling, it was decided that it was almost impossible for the manufacturers to control the disposition method when recycled. Therefore, this item was not selected for the criterion.

#### A to F-9 Other environmental impact

The following points were studied under this item.

(1) To provide information about attention/consideration to recycling.

There was a comment that if a piece of printed matter carries a statement, it is recyclable, its user will think of supplying the printed matter to recycling. In order to facilitate use of waste paper, increase of applicants for Eco Mark is not enough but it is

inevitable that users should be involved more positively. When users of printed matter supply waste paper properly to the recycling system, it will be utilized as one of resources. Therefore, it was decided that it was desirable for printed matter carry a statement to persuade consumers to pay more attention to recycling, and this item was selected for the criterion to be established.

Although there was a comment that the statement should include more detailed information, such as separation method. However, judging from the fact that local governments have different separation methods while printed matter is distributed freely throughout the country, it was decided a uniform statement was not practical, and no specific requirements were decided on this issue.

#### 4-2 Quality Criterion

When the criteria related to quality are laid out, only the quality for printed matter was established. For the component materials, such as paper and ink, quality should be dealt with in their own category of products.

#### 5. Other Requirements

The contents of printed matter were discussed. There was a comment that if the contents of printed matter are against public order and morals and considered to be harmful (containing violence, pornography, pirated copy, discrimination and so on), Eco Mark should not be permitted. However, it was decided not practical that Eco Mark Office, Judging Committee could make objective evaluations about this issue, because of the reasons below: Judgement may not be consistent about which is good and which is not (depending on an examiner's preference), and in case of periodicals the contents may vary for each issue.

In conclusion, in order to secure fair judgment, it was decided that a criterion of content quality should not be set but a principle based on the judgement of the court should be referred in the section of "Others".

It was decided that if Eco Mark permitted printed matter turns out to be violating Copyright Law, the certification should be cancelled, and that if an applicant violates Copyright Law, it will be rejected.