

Scheduled to be Established: October 20, 2002



Eco Mark Product Category No.101

**“Recyclable Suitcase with Collecting System
after Use Version 2.0 (Draft Criteria)”**

Japan Environment Association
Eco Mark Office

1. Environmental Background

In Japan, discarded suitcases are collected by municipalities as bulky refuse and are then either incinerated or buried; little attempt is made at recycling.

In order to deal with this, Product Category No. 101 “Recyclable Suitcase with Collecting System after Use” was established in 1997 for suitcases that are effectively recycled as a resource, rather than being disposed as domestic bulky refuse, after their use.

This Product Category sets environmental criteria requiring that products should be largely recycled and collected through an established system. It is the first of the Product Categories that have been established since the General Procedures for the Eco Mark Program was revised to take into consideration a product’s entire life cycle in formulating certification criteria.

Unfortunately, there has been no Eco Mark certified product under this Product Category as of April 2002.

Under these circumstances, new criteria have been introduced in the certification criteria for revision in October 2002, in order to support suitcases with comparatively small environmental impact.

2. Applicable Products

Applicable products shall be suitcases that are defined as bags for travelers by the Japan Luggage Association according to the criteria of the Standard Commodity Classification for Japan. These include large bags, semi-folding suitcases, air cases, window cases, smart cases, car cases, two-handle type suitcases, open cases and foldable type cases, all of which are made mostly of synthetic resin.

3. Terminology

Recycling: Material recycling only; energy or oil recovery, gasification and use as reducing agent for blast furnace and raw material for coke oven are not included.

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

4. Criteria for Eco Mark Certification

4-1. Environmental Criteria

- (1) At least 80% of the product by weight shall be recyclable as a material. For those products for which Eco Mark use contract term expires on or before October 19, 2005, recycling as a blast furnace reducer shall be considered as conforming to this Criterion 4-1.(1) provided in this subsection.
- (2) Manufacturers (including related industrial organizations) shall establish a system for accepting and collecting discarded products at their expense; consumers can readily benefit from such a system when disposing of these products without paying any costs incurred by collection and recycling. Moreover, the information of existence of such a system shall be provided.
- (3) Manufacturers shall have an established system for contracting to repair products, in which products are repaired upon user's request (repairing system). As a part of improving upon such a system, appropriate information shall be provided, including that regarding 1) the manufacturer contracts for repairing, and 2) applicable areas for repairing (i.e. spectrum of the service) as well as quick-fix tips for users. Warnings for uses of the product when exposed to precipitation shall be given where necessary.
- (4) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, odor and emission of hazardous materials.
- (5) The products with foaming resin shall not use specified chlorofluorocarbons (5 CFCs), other CFCs, carbon tetrachloride, 1,1,1,-trichloroethne and CFC substitutes (HCFCs) as indicated in Attachment 1.
- (6) Neither halogen-containing polymers nor organohalogen compounds shall be used as constituents for plastic materials used for the products.
- (7) Resource conservation and degree to which a product can be recycled shall be considered for packaging of products.
- (8) Neither halogen-containing polymers nor organohalogen compounds shall be used as constituents for plastic materials used for packaging appliances.

4-2. Quality Criteria

- (9) Product quality and safety shall comply with the provisions of the standards set by a third party testing body or in-house standards. A test for such standards must include: 1) shatter strength, 2) rolling of wheels, 3) strength of handle, 4) locking/unlocking properties, and 5) strength of resin (examples of testing procedures are given in Attachment 2).

5. Certification Procedure

Data certifying the conformity to individual criteria shall be attached to the application.

5-1. Certification procedure for “4-1. Environmental criteria”

- (1) For Criterion 4-1.(1), documents, such as design specifications showing the structure or weight of the recyclable parts, shall be submitted certifying that at least 80% of the product is recyclable. For those products for which Eco Mark use contract term expires on or before October 19, 2005, however, recycling as a blast furnace reducer shall be considered as conforming to Criterion 4-1.(1). Documents including recycling service providers, application of recycled parts, and other detailed information about the recycling shall also be submitted.
- (2) For Criterion 4-1.(2), documents outlining the collection and recycling system shall be submitted. The filing shall also be accompanied by user manuals which describe that consumers are able to readily avail themselves of such a system without paying any costs caused by collection and recycling (For example, home delivery service by cash on delivery or collection at retailing shops).
- (3) For Criterion 4-1.(3), user manual describing that the manufacturer has an established system for contracting to repair products, in which products are repaired upon user’s request, shall be submitted. Where it is necessary to give warnings for uses of the product in the rain, user manual describing such warnings shall also be submitted.
- (4) For Criterion 4-1.(4), submit a certificate issued by the manager of the final assembling plant where the product is manufactured to the effect that relevant local environmental laws, regulations, etc. have been observed with no violation for the last five years before the filing of the application.
- (5) For Criterion 4-1.(5), whether specified CFCs (5 CFCs), other CFCs, carbon tetrachloride, 1,1,1,-trichloroethne and CFC substitutes (HCFCs) are used or not shall be clearly described in Eco Mark Certification application forms.
- (6) For Criterion 4-1.(6), whether halogen-containing polymers or organohalogen compounds are used or not shall be described in Eco Mark Certification application forms.
- (7) For Criteria 4-1.(7), packaging status and materials used for packaging shall be described specifically in Application for Eco Mark Certification. (Drawings or pictures may be supplied)
- (8) For Criterion 4-1.(8), whether halogen-containing polymers or organohalogen compounds are used or not shall be described in the Eco Mark Certification application forms.

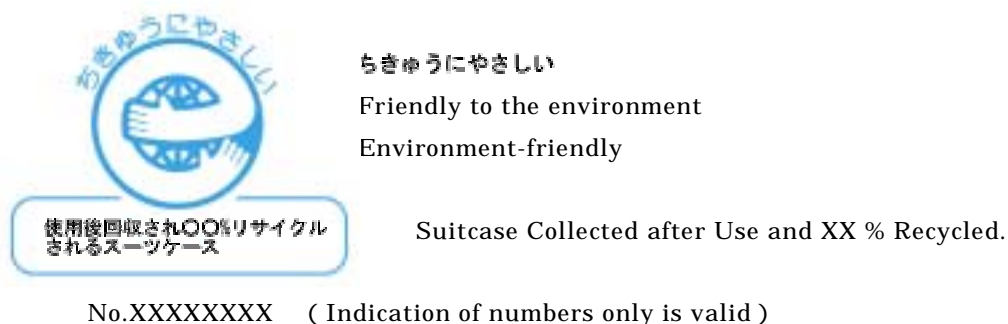
5-2. Certification procedure for “4-2. Quality Criteria”

- (9) For Criterion 4-2.(9): a test report from an independent testing authority shall be submitted. Otherwise, an applicant shall prepare and file a declaration of compliance with in-house standards.

6. Others

- (1) Product classification shall be applied for on the basis of brand name alone, without regard to product color or size.
- (2) Products for which the use of the Eco Mark is applied shall not use flame-retardant, antibacterial agents and biodegradable plastics in principle. Where these chemical substances are used for special reasons, the requirements shall be met in the provisions on the statement regarding the use of flame-retardant agents, antibacterial agents, and biodegradable plastics, set forth in the General Procedures for the Eco Mark Program. Specifically, applicants shall specify whether or not these chemical substances are used in the product for which the use of the Eco Mark is applied in the Eco Mark Certification application form. If such substances are used, the applicant shall file documents provided as an attachment to the application form.
- (3) The statement appearing below the Eco Mark shall be environmental information. This includes submitting indication of the logo, specifying the location of the logo and environmental information when certification and use of the Eco Mark has been applied for. Environmental Information shall be a two-line marking, left-justified, framed in a rectangle, and state 使用後回収され〇〇%リサイクルされるスーツケース (means "Suitcase Collected after Use and XX % Recycled") XX herein shall be the total percentage of recycled material used in the product. (Decimal numbers are to be omitted.) In cases where the use as a blast furnace reducer is intended after the product collection, the statement shall be "Recyclable Suitcase with Collecting System after Use."

The certification number shall be shown close to the Eco Mark. An example is shown below.



Scheduled to be established on October 20, 2002 (Version2.0)*

These certification criteria for the product category will be reviewed in five years from the date of enactment, and the certification criteria and/or the product category will be revised or abolished if necessary.

*Validity period of current certification criteria No.101 "Recyclable Suitcase with Collecting System after Use" is extended until the date before this draft criteria (Version2.0) is established.

Attachment 1

Substances prescribed in 4-1. (5)

Specified CFCs (5 CFCs)	Trichlorofluoromethane
	Dichlorodifluoromethane
	Trichlorotrifluoroethane
	Dichlorotetrafluoroethane
	Chloropentafluoroethane
Other CFCs	Chlorotrifluoromethane
	Pentachlorofluoroethane
	Tetrachlorodifluoroethane
	Pentachlorofluoropropane
	Hexachlorodifluoropropane
	Pentachlorotrifluoropropane
	Tetrachlorotetrafluoropropane
	Trichloropentafluoropropane
	Dichlorohexafluoropropane
	Chloroheptafluoropropane
	Carbontetrachloride
	1,1,1-trichloroethane
CFC substitutes (HCFCs)	Dichlorofluoromethane
	Chlorodifluoromethane
	Chlorofluoromethane
	Tetrachlorofluoroethane
	Trichlorodifluoroethane
	Dichlorotrifluoroethane
	Chlorotetrafluoroethane
	Trichlorofluoroethane
	Dichlorodifluoroethane
	Chlorotrifluoroethane
	Dichlorofluoroethane
	Chlorodifluoroethane
	Chlorofluoroethane
	Hexachlorofluoropropane
	Pentachlorodifluoropropane
	Tetrachlorotrifluoropropane
	Trichlorotetrafluoropropane
	Dichloropentafluoropropane
	Chlorohexafluoropropane
	Pentachlorofluoropropane
	Tetrachlorodifluoropropane
	Trichlorotrifluoropropane
	Dichlorotetrafluoropropane
	Chloropentafluoropropane
	Tetrachlorofluoropropane
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	Chlorotetrafluoropropane
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Chlorodifluoropropane	
Chlorofluoropropane	

Attachment 2

Examples of testing procedures

Item	Procedure example
Shatter strength	- Drop the product with a load of XX kgf, at a height of YY cm.
Rolling of wheels	- Roll the wheels with a load of XX kgf for Y km, at a speed of Z km/h.
Strength of handle	- Raise the product with a load of XX kgh, for a period of YY seconds.
Locking/unlocking properties	- Repeat locking and unlocking XX times.
Strength of resin	- Conformity to JIS (e.g. K6873 Acrylonitrile-Butadiene-Styrene (ABS) Sheets).

Interpretation

Product Certification Criteria for “Recyclable Suitcase with Collecting System after Use (Draft Criteria)”

Scheduled to be established: October 20, 2002

1 . Environmental Background

Annual sales of large-sized suitcases in Japan are estimated as approximately 26 billion yen, and the estimated number of units sold annually exceeds 2.5 million. Since used suitcases are disposed of as bulky refuse, decreasing their disposal is of great importance in reducing environmental impacts. Although the number of large-sized suitcases disposed of nationwide is not clear, the number of suitcases disposed of as bulky refuse in central Tokyo (23 wards in fiscal 2000) was 28,796, according to the Yearbook of Public Cleaning published by the Clean Association of Tokyo 23.

2 . Applicable Products

Under this product category, the certification criteria are applicable to suitcases made of synthetic resins only. Metal suitcases, such as those made from duralumin, are excluded from this product category since their share in the total number of suitcases sold do not exceed 1-2%, and their life cycle is different from that of suitcases made mainly from synthetic resins.

3 . Terminology

Definition of “recycling” is according to the definition of ISO14021.

<Reference> Definition of “Recyclable” of ISO14021

A characteristic of a product, packaging, or associated component that can be diverted from the waste stream through available processes and programmes, and can be collected, processed and returned to use in the form of raw materials or products.

4. Environmental Criteria

4-1. Details of Establishing Environmental Criteria

For setting up the criteria, environmental impacts over the whole life cycle of a product was considered, using a table of Environmental impacts at each stage of product life cycle. As a result, impact items that are considered to be important to establish criteria for Eco Mark certification were selected. For these items, qualitative or quantitative criteria were established.

Environmental impact items considered for the product category “Recyclable Suitcase with Collecting System after Use Version 2.0” are as shown in the table of Environmental impacts at each stage of product life cycle (X and XX in the table). Out of these items were finally selected as the environmental criteria: B-3, B-7, B-8, B-9, C-1, D-1, D-7, E-8, F-1 and F-7 (indicated with XX in the table). The blank

columns in the table show items that were out of the scope of review or which were reviewed in combination with other items. Following is the details of establishing environmental criteria.

Table 1: Chart for Selecting Environmental Impact Items at Each Stage of Product Life Cycle

Environmental Impact Item	Product Life Stage					
	A. Resource Extraction	B. Manufacturing	C. Distribution	D. Use/Consumption	E. Disposal	F. Recycling
1.Resource consumption	X		XX	XX		XX
2.Discharge of greenhouse gases			X			
3.Discharge of the ozone layer depleting substances		XX				
4.Destruction of eco systems						
5.Discharge of atmospheric pollutants						
6.Discharge of water pollutants						
7.Discharge/disposal of wastes		XX	X	XX		XX
8.Use/discharge of hazardous materials		XX		X	XX	
9.Other environmental impacts						

A. Resource Extraction Stage

The following points were reviewed under this item:

(1) Secondary materials shall be used as much as possible.
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Recycling used synthetic resin parts as raw material for suitcases has caused difficulties in terms of strength, and this issue is to be dealt with taking future progress in technology development into consideration. This issue, therefore, has not been included as a provision in the criteria.

B. Manufacturing Stage

B-3 Discharge of ozone layer depleting substances

The following points were reviewed under this item:

(1) CFCs shall not be used.

In addressing a concern of the destruction of the ozone layer as a global environmental issue, it was considered to be inappropriate to use CFCs in the process of manufacturing suitcases. Thus this issue has been included as a provision in the criteria.

While the first version of the criteria established in 1997 (Version 1.0) restricts the use of ozone-layer-depleting materials in contravention of the provisions of Appendixes A, B, C, and E of the Montreal Protocol, Version 2.0 (current version) specifies the names of restricted substances, namely, specified chlorofluorocarbons (5 CFCs), other CFCs, carbon tetrachloride, 1,1,1,-trichloroethne and CFC substitutes (HCFCs).

B-7 Discharge/disposal of wastes

The following points were reviewed under this item:

(1) Discharge of waste shall be limited.

In the discussion for formulating Version 2.0, it was considered that environmental impacts can be reduced as a result of compliance with the relevant environmental laws and regulations and pollution control agreements. This issue has thus been included as a provision in the criteria.

B-8 Use/discharge of hazardous materials

The following points were reviewed under this item:

- (1) Hazardous materials shall not be generated.
- (2) Hazardous materials shall not be used.

In the discussion for formulating Version 2.0, it was considered that environmental impacts can be reduced as a result of compliance with the relevant environmental laws and regulations and pollution control agreements. These issues have thus been included as a provision in the criteria.

C. Distribution Stage

C-1 Resource consumption

The following points were reviewed under this item:

(1) Materials used for packaging shall be reduced.

Concerning the reduction of packaging, it was considered necessary to establish environmental criteria from a resource consumption perspective, and thus this issue was included as a provision in the first version of the criteria established in 1997 (Version 1.0). In this version (Version 2.0), the text of the

provision has been modified. Indices of reduced packaging materials may include:

Packaging for a suitcase shall be as simple as possible, such as that of a dirt-guard bag and a cardboard box. Cushioning materials shall not be used. It is recommended that dirt-guard bags be made of paper or synthetic resins that only include carbon (C), hydrogen (H), and oxygen (O) without elements that are harmful when incinerated, such as chlorine.

C-2 Discharge of greenhouse gases

The following points were reviewed under this item:

(1) Weight of the product shall be reduced to save energy.

Concerning the reduction of the product weight, full consideration has already been made for the purpose of improving product quality. Thus this issue has not been included as a provision in the criteria.

C-7 Discharge/disposal of wastes

The following points were reviewed under this item:

(1) There shall be an established system to prevent the resources from being disposed of as a waste in the distribution process.

How wastes are dealt with in the distribution process varies depending on the attitudes of individual distributors and can be hardly controlled by manufacturers. Therefore, this issue has not been included as a provision in the criteria.

D. Use/Consumption Stage

D-1 Resource consumption and D-7 Discharge/disposal of wastes

The following points were reviewed under this item:

- (1) According to the purpose and frequency of use, the product is required to be durable and substantially strong.
- (2) In order to improve its durability, the structure of the product shall ensure that its parts are easily replaced or fixed, while there shall be an established system to supply parts for replacement, and the parts shall easily be fixed.
- (3) The life span of the product shall be long enough to make the cycle of its use longer to prevent dumping areas from expanding too rapidly, which may contribute to conserve a living environment.

Regarding issue (1), it has been considered as a criterion for the product quality.

Regarding issues (2) and (3), because suitcases are often disposed of due to broken wheels, lock, or handle, the first version of the criteria established in 1997 (Version 1.0) required that product parts should be replaceable at home. However, the product properties of suitcase for which durability is essential make it rarely

necessary to replace the parts at home; therefore, under the current version (Version 2.0) the requirement has been changed: the manufacturer shall have an established system to fix the product parts.

For products for which it is necessary to alert users against their exposure to precipitation, it has been required to provide relevant information in the user manual or other media.

D-8 Use/discharge of hazardous materials

The following points were reviewed under this item:

(1) The product shall not contain hazardous chemical substances, heavy metals and other restricted substances.

Although the use of hazardous substances in plastics are controlled by the Enforcement Regulation of Food Sanitation Law on food containers and toys and other relevant legislations, they are made focusing on the possibilities where the products may be put into the mouth, and thus they are not applicable to suitcases. As no other specific matters are of concern either, this issue has not been included as a provision in the criteria.

E. Disposal Stage

E-8 Use and discharge of hazardous materials

The following points were reviewed under this item:

(1) Hazardous substances shall not be discharged at the time of product disposal.

It is important not to have hazardous substances discharged at the time of product disposal in reducing environmental impact, and thus this issue was included as a provision in the first version of the criteria established in 1997 (Version 1.0). What is implied in this environmental criterion is that the product shall not contain halogens such as chlorine; taking it into consideration, the name of the element of concern, namely halogen, has been specified in this version (Version 2.0).

F. Recycling Stage

F-1 Resource consumption and F-7 Discharge/disposal of wastes

The following points were reviewed under this item:

(1) Materials usable as secondary materials shall be used as much as possible.
(2) Recycled products shall not turn into another waste.
(3) Amount of the waste shall be minimal during recycling.
(4) Upon its disposal, the product shall be smoothly collected in an established system of collecting and recycling, rather than being treated as waste.

(5) Survey on the suitcase collection rate

It was considered necessary to include issues (1)-(3) as a provision in the criteria, because it is essential to make a certain proportion of the product parts actually recyclable in order to give significance to the recycling of suitcases in reducing environmental impacts. Accordingly, environmental criteria were established in the first version of the 1997 criteria (Version 1.0).

As for the recycling rate, the first version of the criteria established in 1997 (Version 1.0) set the material recycling rate of 80%, which had been regarded as technically feasible. The percentage, however, proved to be difficult to be met at the time when the Version 2.0 was being formulated. As a consequence, the requirement has been modified: recycling as a blast furnace reducer can be considered as conforming to this criteria in products for which Eco Mark use contract term expires on or before October 19, 2005, by which time the manufacturers shall be encouraged to make further efforts.

Regarding issue (4), the development of a product collecting and recycling system is of great importance to secure the effectiveness of recycling, and it is especially necessary to have a user-friendly collecting system designed. Therefore, it was considered necessary to include issue (4) as a provision in the criteria, and an environmental criterion was established in the 1997 first version of the criteria (Version 1.0).

In formulating the Version 2.0, it was discussed again on how the product collection costs should be shared. Because there was a concern that if users are required to bear the cost for collecting suitcases, they may dispose of products instead of having them collected, it has been required that a product collecting and recycling system shall be readily available for users without holding them responsible to bear any cost arising from the collection and recycling.

Regarding article (5), in the 1997 first version of the criteria (Version 1.0), the manufacturer was required to submit data showing the collection rate and information on the recycling of parts when renewal of the contract is being sought. However, as it is difficult to calculate the collection rate for a product with a long life cycle such as suitcase, it has been decided for this version (Version 2.0) that the submission of data showing collection statistics will not be required for the time being.

4-2. Quality Criteria

In the 1997 first version of the criteria (Version 1.0), it was determined that quality criteria should be made based on Quality Standards for Synthetic Resin Suitcases (draft) developed by Japan Recreation and Miscellaneous Good Safety Laboratory. However, since manufacturers usually conduct quality tests according to in-house standards, modifications were made for Version 2.0: the product quality and safety “shall comply with the provisions of the standard set by a third party testing body or in-house standards.”

List of Documents

Brand name	
Series name	

No	Certification Criteria	Items	Required Certificates, etc.	Attach or not	Check by Secretariat	Notes
1	4-1.(1)	Recycling rate	*Certificate showing the recycling rate *Documents outlining the detailed information about the recycling			
2	4-1.(2)	Establishment of collection system	*Document outlining the collection and recycling system *Copy of the corresponding part of the user manual			
3	4-1.(3)	Establishment of product/parts fix system	*Copy of the corresponding part of the user manual			
4	4-1.(4)	Environmental laws and regulations	*Certificate issued by the manager of the plant			
5	4-1.(5)	Use of ozone-layer depleting substances	*Specification in the Eco Mark Certification application form			
6	4-1.(6)	Use of halogen	*Specification in the Eco Mark Certification application form			
7	4-1.(7)	Product packaging	*Specification in the Eco Mark Certification application form (with pictures and/or figures to supplement, if necessary)			
8	4-1.(8)	Use of halogen in product packaging	*Specification in the Eco Mark Certification application form			
9	4-2.(9)	Product quality	*Certificate on the test results issued by the independent testing authority (if the tests are conducted by an independent authority) *Certificate on the test results issued by the applicant (if the tests are based on the in-house standards)			

Notes on how to fill in:

- 1) An application shall be made for one product series of one brand.
- 2) If a document to be submitted is accompanied by an attachment, indicate the designation (e.g., Certificate 1-1)
- 3) Leave the "Check by Secretariat" column blank.

Applicant