

Eco Mark Product Category No. 124

“Glass Products Version2.1” Certification Criteria

—Applicable Scope—

- A. Glass Bottles
- B. Plate Glass
- C. Safety Glass for Road and Railway Vehicles
- D. Electrical glass
- E. Glass for Physics and Chemistry and Medical Use
- F. Glass Filaments
- G. Other Glass Products

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Japan Environment Association

Eco Mark Office

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

A. Glass Bottles

Japan Environment Association
Eco Mark Office

1. Applicable Scope

Bottles made of soda lime glass

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

By the way, in the event that the product is the certified product of Product Category No. 124 “Glass Products Version 1” and is subject to reexamination under the present certification criteria, the certification procedures of 4-1.(3) and (5) and 4-2.(7) of the applicable criterion items may be replaced by stating that there is no change in the requirements and the existing certified product in the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) Glass bottles shall satisfy the glass cullet content of Table 1 in accordance with colors of completed products. However, this shall not apply to ultra-lightweight glass bottles.

Table 1 Glass cullet content (excluding ultra-lightweight glass bottles)

Glass bottle color	Glass cullet content
Transparent	More than 65% cullet
Brown	Cullet (other than other colors) + other colored cullet* = 65% or more *The content of other colored cullet shall not be less than 10%.
Other colors	More than 70% other colored cullet

[Certification procedure]
Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) For ultra-lightweight glass bottles, the value obtained by the following equation shall be less than 0.7.

$$\text{Equation: } L \text{ value} = 0.44 \times \text{bottle weight (g)} / \text{capacity when full (ml)}^{0.77}$$

[Certification procedure]

Enter the weight of bottle, capacity when full, and L value obtained by calculation in the attached certificate and submit the certificate.

- (3) Additives (coloring agents, etc.) used in the bottle shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents. However, additives (achromatizing agent, etc.) used in transparent glass bottles and transparent lightweight glass bottles shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, and their compounds as prescribed constituents.

[Certification procedure]

Enter the use or no-use of the relevant substance in the attached certificate. In addition, with respect to other colored glass bottles and other colored lightweight glass bottles, submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.), too.

- (4) Safety of glass bottles shall be verified and explained (elution of total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]

Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the completed glass bottle.

- (5) The glass bottle shall conform to the elution test for cadmium and lead in accordance with the Food Sanitation Law.

[Certification procedure]

Submit the test results in accordance with the Food Sanitation Law with respect to the elution of the relevant substances from the glass bottle.

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

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass bottle manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

2-2. Quality Criteria and Certification Procedure

- (7) The product quality shall conform to self-imposed standards of the industry. Further, the quality control shall be fully practiced at the production process.

[Certification procedure]

Submit a certificate that the product conforms to the applicable quality standard. In addition, submit a certificate issued by a director of the plant where the product is manufactured, stating that quality control is fully practiced in the production process and the plant has not violated any of the regulations, etc.

B. Plate Glass

1. Applicable Scope

The present standard applies to the products which fall under the following (material shall be limited to soda-lime glass).

“Float Glass and Polished Plate Glass” JIS R 3202

“Patterned Glass” JIS R 3203

“Wired Glass” JIS R 3204

“Laminated Glass” JIS R 3205

“Tempered Glass” JIS R 3206

“Heat Absorbing Glass” JIS R 3208

“Solar Reflective Glass” JIS R 3221

“Glass Mirror, Unworked” JIS R 3220

“Heat-strengthened glass” JIS R3222

“Multiple glass” JIS R 3209

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) The product shall contain 10% or more (by weight) glass cullet. However, this shall not apply to solar reflective glass and multiple glass.

[Certification procedure]
Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) The solar reflective glass shall provide not more than 0.4 solar radiation heat acquisition rate.

[Certification procedure]
Enter the solar radiation heat acquisition rate in the attached certificate. The test method and calculation method shall conform to JIS R 3221.

- (3) The multiple glass shall provide $2.70\text{W}/(\text{m}^2 \cdot \text{K})$ or less heat transmission coefficient, and $0.37 \text{ m}^2 \cdot \text{K}/\text{W}$ or more heat transmission resistance.

[Certification procedure]
Enter the heat transmission coefficient or heat transmission resistance in the Attached Certificate. The test method and calculation method shall conform to JIS R 3107 or JIS A 1420.

- (3) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

[Certification procedure]

Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.), too.

- (4) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]

Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

- (5) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

- (6) The product must be able to separate dissimilar material set forth in Table 1 so that the product can be easily recycled as sheet glass material after use. However, glass mirror, shall not be subject to this item.

Table 1 Dissimilar material to be separated

Dissimilar material	Applications of glass to be used
Intermediate membrane	Laminated glass, security glass, soundproof glass, etc.
Wire mesh, wire rod	Wired glass
Metal tape	Heat-resistant tempered glass, etc.

[Certification procedure]

Explain the separation method of dissimilar material of Table 1.

2-2. Quality Criteria and Certification Procedure

- (7) The product quality shall conform to JIS standards.

[Certification procedure]

Submit test results (a copy of JIS-certified plant is acceptable) that evidence the conformance to the applicable JIS standards.

C. Safety Glass for Road and Railway Vehicles

1. Applicable Scope

The present standard applies to the products which fall under the following (material shall be limited to soda-lime glass).

“Safety Glazing Materials for Road Vehicles” JIS R 3211

“Safety Glass for Railway Rolling Stock” JIS R 3213

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) The product shall contain 10% or more (by weight) glass cullet.

[Certification procedure]
Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

[Certification procedure]
Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.).

- (3) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]
Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

- (4) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]
Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which

the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

- (5) The product must be able to separate dissimilar material set forth in Table 1 so that the product can be easily recycled as sheet glass material after use.

[Certification procedure]
Explain the separation method of dissimilar material of Table 1.

Table 1 Dissimilar material to be separated

Dissimilar material	Applications of glass to be used
Intermediate membrane	Laminated glass, infrared cut glass, security side glass

2-2. Quality Criteria and Certification Procedure

- (6) The product quality shall conform to JIS standards.

[Certification procedure]
Submit test results (a copy of JIS-certified plant is acceptable) that evidence the conformance to the applicable JIS standards.

D. Electrical Glass (For lighting and electronic devices)

1. Applicable Scope

The present standard applies to the products which fall under the following .

“Glass Tubing for Fluorescent Lamps” JIS C 7708

Glass globes or glass tubes of shapes prescribed in “Designation method for Glass Bulbs of Lamps” JIS C7710

“Glass for Braun tubes”

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) The product shall contain 15% or more (by weight) glass cullet. However, Braun tubes shall contain more than 10% (by weight) glass cullet.

[Certification procedure]
Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

However, for glass tubes for fluorescent lamps, this item shall not apply to mercury. For Braun tubes, this item shall not apply to lead.

[Certification procedure]
Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.).

- (3) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002). However, for glass tubes for fluorescent lamps, this item shall not apply to mercury. For Braun tubes, this item shall not apply to lead.

[Certification procedure]

Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

- (4) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

2-2. Quality Criteria and Certification Procedure

- (5) The product quality shall conform to applicable JIS standards or self-imposed standards of the industry. Further, the quality control shall be fully practiced at the production process.

[Certification procedure]

Submit test results (a copy of JIS-certified plant is acceptable) that evidence the conformance to the applicable JIS standards, or test results that evidence the conformance of self-imposed standards of the industry. In addition, submit a certificate issued by a director of the plant where the product is manufactured, stating that quality control is fully practiced in the production process.

E. Glass for Physics and Chemistry and Medical Use

1. Applicable Scope

The present standard applies to glass for physics and chemistry as well as medical use.

“Glass Tubes” JIS R 3644

“Glass Rods” JIS R 3645

“Cover Glasses for Microscopes” JIS R 3702

“Slide Glasses for Microscope” JIS R 3703

“Glass Apparatus for Chemical Analysis” JIS R 3503

“Vials for Injection” JIS R 3521

“Glass Bottles for Drug” JIS R 3522

“Glass Syringes” JIS T 3201

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) The product shall contain 20% or more (by weight) glass cullet. However, this shall not apply to solar reflective glass.

[Certification procedure]

Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

[Certification procedure]

Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.).

- (3) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]

Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

- (4) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

- (5) Plastic materials used for product packaging shall not have halogen elements added to the polymer skeleton as prescribed constituents.

[Certification procedure]

State in the attached certificate use or non-use of halogen elements added to the polymer skeleton for the plastic material used for packaging.

- (6) It shall be stated in any medium such as product proper, operating instructions, catalogues, or Website, etc. that the borosilicate glass products are unable to be segregated and disposed of together with glass bottles, and how to properly dispose of after use must be stipulated.

[Certification procedure]

Submit the applicable portion (a copy may be acceptable) which stipulates the above information.

Statement example: "This product is unable to be segregated and disposed of together with glass bottles. When this is disposed of, discharge in accordance with the rules of each municipality."

*Glass can be classified into soda-lime glass which is used for bottles, windowpanes, tableware, etc., flint glass which is used for high-class tableware, accessories, etc., borosilicate glass used for laboratory glass apparatus, medicine bottles, heat-resistant utensils of general household, etc., and it is unable to recycle by mixing these. In glass for physics, chemistry and medical use, borosilicate glass which has resistance to chemical erosion and thermal impact is generally used.

2-2. Quality Criteria and Certification Procedure

- (7) The product quality shall conform to JIS standards.

[Certification procedure]

Submit test results (a copy of JIS-certified plant is acceptable) that evidence the conformance to the applicable JIS standards.

F. Glass Filaments

1. Applicable Scope

The present standard applies to the products which fall under the following.

- “Textile Glass Yarns” JISR 3413
- “Textile Glass Rovings” JIS R 3412
- “Textile Glass Chopped Strand Mats” JIS R 3411
- “Textile Glass Fabrics” JIS R 3414
- “Finished Textile Glass Fabrics” JIS R 3416
- “Textile Glass--Woven Roving” JIS R 3417
- “Textile Glass Chopped Strands” JIS R 3419

2. Certification Criteria and Certification Procedure

For certification of compliance to each criterion item, submit the attached certificate.

2-1. Environmental Criteria and Certification Procedure

- (1) The product shall contain 10% or more (by weight) glass cullet.

[Certification procedure]
Enter the glass cullet content in the attached certificate and submit the certificate.

- (2) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

[Certification procedure]
Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.), too.

- (3) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]
Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

- (4) The production process shall conform to relevant environment regulations and

agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

2-2. Quality Criteria and Certification Procedure

(5) The product quality shall conform to JIS standards.

[Certification procedure]

Submit test results (a copy of JIS-certified plant is acceptable) that evidence the conformance to the applicable JIS standards.

G. "Other Glass Products"

1. Applicable Scope

Weed control gravel, noise-making gravel for home security, heat insulation material

Glass products that neither belong to any of the present Product Categories "A" through "F" nor are covered by the scope of application of any other Eco Mark Product Category may be certified additionally if the Eco Mark Committee for Product Certification finds no concern over the product performance and quality. Provided, however, this provision shall not apply to those glass products that are used as building material or civil construction material.

2. Certification Criteria and Certification Procedure

To show conformance to the individual criterion, the Applicant shall submit the respective Attached Certificate forms duly filled in.

In the event re-examination under the present Certification Criteria is sought for a product that is already certified in the Product Category No. 124 "Glass Products Version 1", the certifications 4-1.(1) to (3), (6) and 4-2. (7) may be substituted by filling in necessary items on the Attached Certificate form and declaring further therein that no alterations have been made to the product already certified.

2-1. Environmental Criteria and Certification Procedure

(1) Glass material shall be used in the product in 50% by weight or greater.

[Certification Procedure]

State the ratio of glass material in the product in the Attached Certificate to be submitted.

(2) The glass material shall be made of glass cullet in 100% by weight.

[Certification Procedure]

State the ratio of glass cullet used in the Attached Certificate to be submitted.

(3) Additives (coloring agents, etc.) used in the product shall not contain cadmium, lead, mercury, hexavalent chromium, arsenic, selenium, and their compounds as prescribed constituents.

[Certification procedure]

Enter the use or no-use of the applicable substance in the attached certificate and submit the ingredient table issued by the manufacturing business of additives (coloring agents, etc.) or MSDS (safety data sheet of chemical substances, etc.).

(4) Safety of the product shall be verified and explained (elution of cadmium, lead, total mercury, hexavalent chromium, arsenic, and selenium). The elution of the relevant substance shall conform to the requirements of Attached Table 2 provided in Enforcement Regulations of Soil Contamination Countermeasures Law (MOE Ordinance No. 29 issued on December 26, 2002).

[Certification procedure]

Submit the test results by a third-party institution or by your company with respect to the elution of the relevant substance from the product.

(5) The production process shall conform to relevant environment regulations and agreements on preventing air pollution, water contamination, noise, vibration, odor and emission of hazardous materials.

[Certification procedure]

Submit a certificate issued by a director of the plant where the product is manufactured, stating that the environmental regulations in the region in which the glass manufacturing plant is located have been observed for past 5 years since the application and the plant has not violated any of the regulations, etc.

(6) Plastic materials used for product packaging shall not have halogen elements added to the polymer skeleton as prescribed constituents.

[Certification procedure]

State in the attached certificate use or non-use of halogen elements added to the polymer skeleton for the plastic material used for packaging.

2-2. Quality Criteria and Certification Procedure

(3) The product quality shall conform to voluntary standards of the industry and the like. Quality control shall be sufficiently made in the manufacturing step.

[Certification Procedure]

Submit a certificate showing conformance to the applicable quality standards. Submit a certificate issued by the General Manager of the plant in which the product is manufactured showing that quality control is sufficiently made in the manufacturing step and no violations and the like have been committed.

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