

## Eco Mark Product Category No.163

# “Fluorocarbon-free Smoke Testers Verion1.0” Certification Criteria

—Applicable Scope—

Smoke testers used in fire equipment inspection activities and heat and smoke testers.

Established            May 20, 2019  
Expiration date      May 31, 2026

Japan Environment Association  
Eco Mark Office

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

**Eco Mark Product Category No.163****“Fluorocarbon-free Smoke Testers Version1.0” Certification Criteria**

Japan Environment Association  
Eco Mark Office

**1. Purpose of Establishing Certification Criteria**

Omitted

**2. Applicable Scope**

Smoke testers used in fire equipment inspection activities and heat and smoke testers.

**3. Terminology**

Omitted

**4. Certification Criteria and Certification Procedure**

To show conformance to the individual criteria item, the Attached Certificates shall be submitted.

**4-1. Environmental Criteria and Certification Procedure****4-1-1. Resource Saving and Resource Recycling**

(1) Testers must be designed to allow for easy recycling. (e.g.: segregation between heterogeneous materials is possible; plastic material must be labeled; and metal must use a material of a versatile ingredient, etc.).

In addition, information on repair or expendable parts and replacement parts shall be provided.

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. The list of material used (Form 1) shall be submitted. In addition, a copy of the corresponding part of the instruction manual, leaflet, web site, etc. that clearly states the information on repair or expendable parts and replacement parts shall be submitted.

(2) Packaging material of testers shall be as simple as possible and give consideration to ease of reuse and reduce of environmental burden when being disposed of. Specifically, the product shall comply with “Packaging Material Check List” of [Appendix 1](#).

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, Form 2 “Packaging Material Check List” shall be submitted.

**4-1-2. Prevention of Global Warming**

- (3) No fluorocarbon shall be used as a smoke producer of the smoke testers. The smoke testers using cylinder as their smoke producer are designed to attach only fluorocarbon-free cylinder unless the smoke testers which is registered to use the fluorocarbon-free cylinder as their smoke producer have passed the performance assessment on or before December 31, 2018.

## [Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In case of the smoke testers using a cylinder as their smoke producer, any document, including, but not limited to, any copy of the document to which the seal of approval of the Fire Equipment and Safety Center of Japan is affixed, that confirms the gas composition shall be submitted. In addition, related explanation documents shall be submitted.

**4-1-3. Restriction and Control of Hazardous Substances**

- (4) The content rate of lead, mercury, cadmium and those compounds, hexavalent chromium compounds, Polybrominated biphenyl (PBB) or Polybrominated diphenylether (PBDE) in the product using batteries shall comply with Annex II (Table 1) of the Commission Delegated Directive (EU)2015/863 of 31 March 2015 amending Annex II to RoHS(II) Directive. However, this does not apply to those substances specified in Annex III.

## [Certification Procedure]

Compliance with this item and the checking method shall be indicated in the Attached Certificate. In addition, it is recommended that checking is performed based on JIS Z 7201 “Management of chemical substances in products - Principles and guidelines”.

Table 1. Content rate

Material	Content rate [wt%]*
Lead and its compounds	≤ 0.1
Mercury and its compounds	≤ 0.1
Cadmium and its compounds	≤ 0.01
Hexavalent chromium compounds	≤ 0.1
Polybrominated biphenyl (PBB)	≤ 0.1
Polybrominated diphenylether (PBDE)	≤ 0.1

\* The content rate refers to the content proportion in a homogeneous substance (minimum unit that can be separated by rule with totally uniform composition).

- (5) Plastic parts of testers shall have no short-chain chlorinated paraffin (SCCPs) (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over), Polybrominated diphenylether (PBDEs, Bromine 4-7 and 10) and Hexabromocyclododecane (HBCD) added as prescriptive constituents.

## [Certification Procedure]

Compliance with this item and the confirmation method shall be indicated in the Attached Certificate. In addition, the List of material used (Form 1) shall be submitted. The manufacturer of the raw material and the name and CAS number of the flame retardants used or the code number according to the ISO1043-4 (JIS6899-4) shall be indicated. In addition, it is recommended that confirmation is performed based on JIS Z 7201 “Management of chemical substances in products - Principles and guidelines”.

- (6) The applicant must make the SDS (safety data sheet) of a smoke producer available, except where an incense stick is used as a smoke producer.

## [Certification Procedure]

SDS shall be submitted.

- (7) For batteries used in the products, mercury, cadmium and lead in batteries shall be the rate or less in Table 2.

## [Certification Procedure]

Compliance with this item and the confirmation method shall be indicated in the Attached Certificate. In addition, it is recommended that confirmation is performed based on JIS Z 7201 “Management of chemical substances in products - Principles and guidelines”.

Table 2. Standard value of heavy metals in batteries

	mercury[wt%]*	cadmium[wt%]*	lead[wt%]**
Content rate	≤ 0.0005	≤ 0.002	≤ 0.004

\* value specified in EU Directive 2013/56/EU

\*\* value specified in EU Directive 2006/66/EU

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

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

## [Certification Procedure]

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a

certificate issued by the representative of the manufacturer of the applying product or the manager of the relevant plant (entry or attachment of the list of names of the Environmental Laws, etc.) must be submitted.

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

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

#### **4-1-4. Information Provision to users**

(9) Information shown in a. to e. below shall be provided to users through the instruction manual, leaflet, website, etc.

a. For a tester that is able to use a fluorocarbon cylinder as the smoke producer, information that prompts the use of a fluorocarbon-free cylinder, and the description relating to a company that promotes the use of the fluorocarbon-free cylinder as the whole company and the significance of the promotion of using the fluorocarbon-free cylinder socially...

(Description example: “Our company promotes the use of the fluorocarbon-free smoke testers from the view point of the ozone layer protection and prevention of global warming. At present, an alternative to CFCs (HFC-134a) is widely used in the market as a cylinder of the smoke testers, and the green-house effect of such alternative to CFCs is 1,430 times as much as carbon dioxide (GWP=1430). The “smoke testers” have been added in 2018 to the services stipulated in the Law Concerning the Promotion of Eco-friendly Goods and Services by the State and Other Entities Authorities (Green Purchasing Law). The implementation of tests in a manner not using the fluorocarbon has become mandatory in public institutions since 2019. These Eco Mark certified fluorocarbon-free smoke testers work by using

the replacement cylinder designated by our company. Therefore, please ensure to use the products designated by our company, whose product number is 00-00.”

- b. Explanation about the disposal method of used cylinders, etc.
- c. Explanation about collection of used secondary batteries
- d. Proper maintenance method of a tester and replacement method of expendables
- e. Information on proper handling methods and safety

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, copies of the corresponding part of the instruction manual, leaflet or website, etc. which include information for users shall be submitted.

#### 4-2. Quality criteria and certification procedures

- (10) The tester shall meet the standards in “On Handling of Testers, Tools, etc. of Fire Equipment, etc. (Notification)” (FDP Notification No. 6 in 1987).

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, submit a copy of performance certificate issued by the Fire Equipment and Safety Center.

#### 5. Considerations

In the process of manufacturing products, it is desirable to consider the following items, although they are not requirements for certification. Compliance with each item shall be indicated in the Attached Certificate

- (1) The applicant has developed a system in place for collection and recycling of used fire equipment or inspection tools.
- (2) The tester uses reusable part(s), recycled plastic part(s) or plant-based plastic part(s) with confirmed environmental load reduction.
- (3) A tester using an incense stick as the smoke producer uses 100% of thinned wood, waste wood and waste plant fiber in the incense stick (excluding the dye, fragrance and glue).
- (4) In the case of a tester using an incense stick as the smoke producer, the fragrance added to the incense stick should be in accordance with the standard by the IFRA (International Fragrance Association). The dye should meet the “food additives” specified in the Food Sanitation Law or the “Cosmetic Standard” specified under the Pharmaceutical Affairs Law or is certified under the “Ministerial Ordinance

Specifying Tar Dyes That May be Used in Drugs, etc. (Cosmetic Statutory Dyes.”

## 6. Product Classification, Indication and Others

(1) A product classification shall be based on an item number (performance certification number).

(2) In principle, Eco Mark shall be indicated on the product body, etc. In case of the smoke testers using a cylinder as their smoke producer, the product number of a fluorocarbon-free cylinder shall be indicated as the product number of an alternative to CFCs beside Eco Mark.

B type or C type display shall be conducted in accordance with the "Guide to Eco Mark Usage" (<https://www.ecomark.jp/office/guideline/guide/>). Note that an Eco Mark license holder that has already held the Eco Mark product under other product category may also indicate the type A. The display position and contents shall be submitted when applying for Eco Mark certification and its use.

[Example]

B type display	Condition of indication
 <p>エコマーク商品 ……1)          ノンフロン加煙試験器 (or          ノンフロン加熱・加煙試験器) ……2)          12345678(or ○○○株式会社)          ……3)          交換ボンベの品番:○○-○○</p> <p>Not to require the numbers 1), 2) and 3) themselves.</p>	<p>1-2(1) “Certification information” of "Guide to Eco Mark Usage" shall includes (1)-(3) below.</p> <p>1) The wording of "Eco Mark" or any expression of Eco Mark products stipulated in Section 1-6 in the "Guide to Eco Mark Usage"</p> <p>2) The wording indication of environmental information</p> <p>3) The Eco Mark certification number or the name of the Eco Mark Usage Licensee (The indication of the both is acceptable)</p>
C type display	Condition of indication
 <p>交換ボンベの品番:○○-○○</p>	<p>This is a sample. Conduct a proper indication by referring samples in 1-3 of the "Guide to Eco Mark Usage".</p> <p>Please make an Eco Mark product information page on the website which includes the certification information in order for customers to refer the certification information,</p>

May 20, 2019

Established (Version 1.0)

May 31, 2026

Expiration

Certification Criteria of this Product Category shall be revised as needed.

## Appendix 1 “Packaging material checklist”

### ■List of packaging material used for the product.

Indicate a name, mass, ratio of recycled materials in use of packaging materials that are used per product.

No.	Packaging material used for the product	mass[g]	Ratio of recycled material in product
1			%
2			%
3			%
<b>Total</b>			

Entry examples of the packaging materials in use: cardboard, polyethylene, foamed polystyrene, pulp mold.

### ■Packaging material checklist

It is determined that the product complies with the criteria when it meets all of the mandatory requirements. It is desirable to meet “Optional” item.

No.	Requirement	Compliance	Remarks
1	Is the product designed giving consideration to weight reduction/volume reduction?	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	
2	Is the product designed giving consideration to use of recycled materials? (Waste paper, recycled plastic, etc.)	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	“Consideration” shall mean examination of the possibility of use of recycled materials at the stage of selection of materials for packaging or the designing.
3	Is the recycled waste paper used 70% or more, or the recycled plastic used 40% or more?	<b>[Optional]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	If any recycled material is used, indicate it in the above list.
4	Is the product designed giving consideration so that the amount of ink to be used in printing on a surface of packaging materials is reduced?	<b>[Optional]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is desirable to share materials by products of a same company or standardize packaging materials used for a same product.
5	Is the product such designed that sharing of materials is promoted?	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is desirable to share materials by products of a same company or standardize packaging materials used for a same product.
6	Is the product designed giving consideration to selection of a material that is easy to recycle or reuse?	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is desirable to select a material that consumers can easily send to recycling, etc.
7	If dissimilar materials are used in combination, is the product such designed that separation of parts is easy?	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No combined use of dissimilar materials	Dissimilar materials herein stated refer to metals and plastics, paper and plastics, etc., and do not mean a difference by a type of plastic.
8	Whether materials are indicated according to the regulations or JIS standard, etc., so that the product can be easily recycled or reused.	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is necessary to provide an appropriate indication so that consumers can send the product to recycling, etc. In Japan, the Law for Promotion of Sorted Collection and Recycling of Containers and Packaging is in effect, according to which the Report of the Committee for Considering Identification of Container and Packaging, etc. provides for the identification marks and method of displaying materials. As to products supplied to corporations, too, display of material shall be indispensable; however, indication of materials may be omitted based on such provisions concerning the identification marks as “For the case of solid-color container and packaging” and “For the

			container and packaging on which the display cannot be attached.”
9	Are materials to be used in packaging selected so that use of any chemical substances which affect the environment is avoided or reduced? (Non-use of polymers containing halogens, HCFC, etc. (Appendix 2))	<b>[Mandatory]</b> <input type="checkbox"/> Yes/ <input type="checkbox"/> No	If any chemical substance that affects the environment is used, it will be a problem when the product is recycled or disposed of.

**Appendix 2 HCFC Specified in “Packaging material checklist” No.9**

Name of substance	Name of substance
Dichlorofluoromethane (HCFC-21)	Trichlorotetrafluoropropane (HCFC-224)
Chlorodifluoromethane(HCFC-22)	Dichloropentafluoropropane (HCFC-225)
Chlorofluoromethane (HCFC-31)	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)
Tetrachlorofluoroethane (HCFC-121)	1,3- Dichloro -1,1,2,2,3-pentafluoropropane (HCFC-225cb)
Trichlorodifluoroethane (HCFC-122)	Chlorohexafluoropropane (HCFC-226)
Dichlorotrifluoroethane (HCFC-123)	Pentachlorofluoropropane (HCFC-231)
2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	Tetrachlorodifluoropropane (HCFC-232)
Chlorotetrafluoroethane (HCFC-124)	Trichlorotrifluoropropane (HCFC-233)
2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	Dichlorotetrafluoropropane (HCFC-234)
Trichlorofluoroethane (HCFC-131)	Chloropentafluoropropane (HCFC-235)
Dichlorodifluoromethane (HCFC-132)	Tetrachlorofluoropropane (HCFC-241)
Chlorotrifluoroethane (HCFC-133)	Trichlorodifluoropropane (HCFC-242)
Dichlorofluoroethane (HCFC-141)	Dichlorotrifluoropropane (HCFC-243)
1-Dichloro-1-Fluoroethane (HCFC-141b)	Chlorotetrafluoropropane (HCFC-244)
Chlorodifluoroethane (HCFC-142)	Trichlorofluoropropane (HCFC-251)
1-Chloro-1,1-difluoroethane (HCFC-142b)	Dichlorodifluoropropane (HCFC-252)
Chlorofluoroethane (HCFC-151)	Chlorotrifluoropropane (HCFC-253)
Hexachlorofluoropropane (HCFC-221)	Dichlorofluoropropane (HCFC-261)
Pentachlorodifluoropropane (HCFC-222)	Chlorodifluoropropane (HCFC-262)
Tetrachlorotrifluoropropane (HCFC-223)	Chlorofluoropropane (HCFC-271)

Source: Group I, Annex C of Montreal Protocol