

Eco Mark Product Category No. 134

“Watches and Clocks Version1.4”

Certification Criteria

- Applicable Scope-

“Watch completes” and “Clock completes” of the category “Watches and clocks” based on the Japan Standard Commodity Classification issued by the Ministry of Internal Affairs and Communications.

Established: June 1, 2005

Last revised: July 13, 2012

Expiration date: May 31, 2025

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.134

**“Watches and Clocks Version1.4”
Certification Criteria**

Japan Environment Association
Eco Mark Office

1. Purpose of Establishing Criteria

Timepieces are classified into watches and clocks. According to the Japan Clock & Watch Association, the production of watches and clocks worldwide is estimated at about 1.3 billion watches and about 300 to 400 million clocks. Major producer countries of timepieces are Japan and China in Asia, and Switzerland in Europe.

Regarding watches, it is considered that each consumer possesses several watches. This means that many watches are not often used but are kept rather than being thrown away. Therefore, the development of power sources including self-generation by natural energy sources has been a challenge. With such power generation, watches which have been possessed for a long time but not used can be immediately available without changing batteries.

Eco Mark Product Category No. 71 “Solar-powered Watch” was enacted in 1996 and applied to timepieces running with solar cells. Solar cells are a clean energy source because they can contribute to a reduction in the disposal of used batteries and toxic materials. In reviewing the product category, it was decided that the category would be applied to watches and clocks which are environment-friendly throughout the product life cycle from the gathering of resources to recycling. However, most of the environmental burden from raw materials derives from manufacturing of movements and is difficult to differentiate. Consequently, this product category focuses mainly on the energy sources of running systems. Specifically, natural energy sources other than solar cells are added to the category to promote clean power sources. Moreover, as there have been some timepieces with primary batteries seen in recent years that have improved energy-saving capability, it was decided that the revised product category would also apply to them because such batteries are considered to lead to a reduction of environmental burden.

2. Applicable Scope

“Watch completes” and “Clock completes” of the category “Watches and clocks” based on the Japan Standard Commodity Classification issued by the Ministry of Internal Affairs and Communications.

3. Terminology

Watch	Timepiece which works in any position and is designed to be portable
Clock	Timepiece (bracket clock or wall clock) which is used in a certain position
Natural energy	Energy which is not gained from primary batteries or AC power but from solar light, body temperature or wrist movements. Natural energy includes solar generation, thermal generation, auto- and hand-wound generation and auto- and hand-wound spring running.
Running system	Generation system in a generation type, and power source part in a spring-running type
Prescription constituent	Components intentionally added with the purpose of providing specific characteristics to the product. Impurities which are inevitable mixed during the manufacturing process are excluded.
Capacitor	Part for power source, which uses a physical phenomenon allowing repetitious charge and discharge

4. Certification Criteria and Certification Procedure

An applicable product shall satisfy all items in 4-1-1 and items A or B in 4-1-2 according to energy sources used. Furthermore, if it is a product that includes a package regulated in 4-1-3, it shall satisfy all items concerned.

4-1. Environmental Criteria and Certification Procedure

4-1-1. Common criteria

(1) 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]

1. With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the business of manufacturing the applied product or the 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).

2. If the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof is applicable to a plant manufacturing products and substances covered thereby (Class 1 designated chemical substance) are used more than the prescribed amount the reporting responsibility of which is defined by the law, a certificate stating the amount of emission and transfer of each substance to be issued by Manager of the plant manufacturing the product shall be submitted.

(2) In the final assembly phase, an applicable product shall not use solutions which are specific chlorofluorocarbons (5 CFCs), other CFCs, carbon tetrachloride, or

trichloroethane indicated in Attachment 1 and shall not emit CFC substitutes (here HCFC).

[Certification Procedure]

A certificate that the solution does not contain specific chlorofluorocarbons (5 CFCs) and that there is no elusion of HCFC in the final assembly phase, which is issued by the manufacturing manager shall be submitted.

(3) Applicable products, batteries and capacitors shall not have the following additives as formula constituents: mercury, cadmium, lead, hexad chrom or compounds comprising these substances, polybrominated biphenyl (PBB), polybrominated diphenyl (PBDE) or chlorinated paraffin (with 10-13 chain carbons and containing chloride concentration of 50% or more). However, applicable products, batteries and capacitors shall follow the “Applications of lead, mercury, cadmium and hexavalent chromium, which are exempted from the requirements of Article 4(1) in the “Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment” and the “Council Directive 91/157/EEC of 18 March 1991 on batteries and accumulators containing certain dangerous substances,” the containment of the substances concerned shall be approved.

[Certification Procedure]

A certificate showing that whether or not the substances concerned are added to an applicable product shall be submitted.

(4) Plastic materials of 25g or more shall not use polymers that contain halogen elements. In addition, organic halogen compound shall not be added as a formula constituent. However, this item shall not apply to printed board.

[Certification Procedure]

A certificate showing that whether or not the plastic materials of 25g or more are used shall be submitted. If used, a certificate showing that whether or not the substances concerned are added to an applicable product shall be submitted.

(5) Response systems including repairing shall be available at least 7 years after manufacturing of an applicable product has been discontinued

[Certification Procedure]

A certificate showing that response systems including repairing comply with standard items shall be submitted.

(6) Outsourcing systems for check-ups and repairs shall be established such that they

can be conducted according to customers' requests.

[Certification Procedure]

A certificate for an applicable product shall be issued to guarantee that check-ups and repairs will be conducted according to users' requests.

4-1-2 Criteria regarding energy sources

Energy sources of an applicable product shall be natural energy or primary battery. An applicable product with both natural energy and primary battery as energy sources shall satisfy the criteria A and B respectively.

A. Product with natural energy as an energy source

(7) Major parts of a running system shall have an assured service life of seven years in ordinary use.

[Certification Procedure]

A certificate issued by the manager shall be submitted.

B. Product with primary battery as an energy source

(8) Battery life based on JIS B 7026 shall be more than seven years for watches and more than five years for clocks.

[Certification Procedure]

A certificate of service life issued by the manager shall be submitted.

4-1-3. Criteria regarding packaging materials

(9) Specific chlorofluorocarbons (5 CFCs), other CFCs, carbon tetrachloride, trichloroethane and CFC substitutes (here HCFC) indicated in Attachment 1 shall not be used for packaging materials.

[Certification Procedure]

Whether or not the packaging materials are used shall be described in the Attached Certificate. If the packaging materials used, a certificate issued by the manager showing that the materials concerned are not used shall be submitted. are added to an applicable product shall be submitted.

(10) Polymer including halogen and organic halogen compound shall not be added as formula constituents to plastic materials that are used for packaging.

[Certification Procedure]

The packaging condition of the product and materials used for packaging shall be described concretely in the Attached Certificate (figures and photographs can be

attached). In addition, whether or not polymers including halogens and organic halogenides are added shall be described in the Attached Certificate.

4-2. Quality Criteria and Certification Procedure

(11) Watches shall conform to JIS B7021

[Certification Procedure]

A certificate which declares conformity to JIS B7021 shall be submitted.

(12) An applicable product using a secondary battery or a capacitor shall have a function to prevent overcharging and shall have a structure in which the product does not work if a primary battery is put in.

A product with a winding structure running with a spring shall have a function to prevent overwinding.

[Certification Procedure]

Documents shall be submitted which explain that a charge system has a function to prevent overcharging and an applicable product has a structure not to work if a primary battery is put in.

Documents shall be submitted which explain that a product with a winding structure running with a spring shall have a function to prevent overwinding.

(13) An applicable product with a natural energy source shall have assured normal running even if it is left in a place where a running system does not work for one week (in a state of full charge if the product uses a charge system).

If using a spring running system, an applicable product shall have assured normal running even if it is left in a place where a winding system does not work for 36 hours.

[Certification Procedure]

A certificate shall be submitted certifying that an applicable product has normal running even if it is left in a place where a running system does not work for one week (in a state of full charge if the product uses a charge system). A certificate shall be submitted, also declaring that an applicable product has normal running even if it is left in a place where a winding system does not work for 36 hours if using a spring running system.

(14) The precision of an applicable product shall be within plus or minus 45 seconds per month for quartz clocks and within plus or minus 60 seconds per day for mechanical

clocks.

[Certification Procedure]

A certificate which declares conformity to the standard values based on JIS B7025 for quartz clocks and JIS B7001 for mechanical clocks shall be submitted.

5. Product Classification, Indication and Others

(1) Products shall be classified by every watch, clock, and energy source, and every model or every series model.

(2) The following environmental information shall be indicated below the mark. However, the indication of Eco Mark and certification information (Type B indication) can be allowed by following “Guide to Eco Mark usage” (enforced on March 1, 2011). The location and details of the Eco Mark to be indicated shall be submitted when applying for Eco Mark product certification and use. The environmental information indicated shall consist of aligned to the left and enclosed in a rectangular box and the line shall indicate “natural energy” for products with natural energy and “longevity of battery” for products with primary batteries as energy source.

Eco Mark products certified under Product Category No. 71 “Solar-powered Watch” are allowed to use the former indication below the mark and its certification numbers if those are certified under this product category.

Indication examples are as follows:

[A product with natural energy
as an energy source]



Natural Energy

Eco Mark Certification No.

No. xxxxxxxx

xxxx Co., Ltd.

(Name of contractor using an Eco Mark)

[A product with a primary battery
as an energy source]



Longevity of battery

Eco Mark Certification No.

No. xxxxxxxx

xxxx Co., Ltd.

(Name of contractor using an Eco Mark)

Established: June 1, 2005

Revised: October 19, 2006 (Version1.1)

Extension of Expiration Date: February 14, 2008

Revised: August 21, 2008 (Version1.2)

Revised: March 1, 2011 (Version1.3)

Revised: July 13, 2012 (Version1.4)

Extension of Expiration Date: February 1, 2014

Extension of Expiration date: January 7, 2019

Expiration Date: May 31, 2025

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

Attached Table 1

Substances regulated in 4-1-1(2) and 4-1-3(10)

Specific chlorofluorocarbon (CFC 5)	Trichlorofluoromethane	Hydrochlorofluorocarbon (HCFC)	Pentachlorofluoropropane	
	Dichlorodifluoromethane		Tetrachlorodifluoropropane	
	Trichlorotrifluoroethane		Trichlorotrifluoropropane	
	Dichlorotetrafluoroethane		Dichlorotetrafluoropropane	
	Chloropentafluoroethane		Chloropentafluoropropane	
Other CFCs	Chlorotrifluoromethane		Tetrachlorofluoropropane	
	Pentachlorofluoroethane		Trichlorodifluoropropane	
	Tetrachlorodifluoroethane		Dichlorotrifluoropropane	
	Heptachlorofluoropropane		Chlorotetrafluoropropane	
	Hexachlorodifluoropropane		Trichlorofluoropropane	
	Pentachlorotrifluoropropane		Dichlorodifluoropropane	
	Tetrachlorotetrafluoropropane		Chlorotrifluoropropane	
	Trichloropentafluoropropane		Dichlorofluoropropane	
	Dichlohexafluoropropane		Chlorodifluoropropane	
	Chloroheptafluoropropane		Chlorofluoropropane	
	Carbon tetrachloride			
	1,1,1-trichloroethane			
Hydrochlorofluorocarbon (HCFC)	Dichlorofluoromethane			
	Chlorodifluoromethane			
	Chlorofluoromethane			
	Tetrachlorofluoroethane			
	Trichlorodifluoroethane			
	Dichlorotrifluoroethane			
	Chlorotetrafluoroethane			
	Trichlorofluoroethane			
	Dichlorodifluoroethane			
	Chlorotrifluoroethane			
	Dichlorofluoroethane			
	Chlorodifluoroethane			
	Chlorofluoroethane			
	Hexachlorofluoropropane			
	Pentachlorodifluoropropane			
	Tetrachlorotrifluoropropane			
	Trichlorotetrafluoropropane			
	Dichloropentafluoropropane			
Chlorohexafluoropropane				