

EL702. Solar Water Heating Systems

[EL702-1996/6/2002-219]



1. Scope

The criteria shall apply to the warm water device using solar heat that is mainly used for household water supply.

2. Definitions

2.1

“Halogenated hydrocarbons” refers to hydrocarbon in which halogen family elements such as chloride (Cl) and bromine (Br) are linked.

2.2

“Ozone depletion potential (ODP)” refers to the ratio of a particular ozone depleting compound of environmental effect compared to the depleting ability of a standard compound, CFC-11, which arbitrarily defined as 1.0.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

Halogenated hydrocarbons or methyl alcohol shall not be used as heat collector.

3.1.2

The heat-collecting performance of the product shall be $9,200\text{kJ}/\text{m}^2$ { $2,200\text{kcal}/\text{m}^2$ } or more.

3.1.3

With respect to the recycling capability of product at the manufacturing process or at the disposal stage, the product shall satisfy the following requirements.

3.1.3.1

Recycled material such as pulp mold shall be used as packaging shock-absorbing material. However, styrofoam manufactured by using 0 ODP material as foaming agent shall be considered for the same material.

a) The package filler that is certified with “E-mark” as “Packing material (EL606)”, among the certification criteria by E-mark target product.

b) The package filler that is made of more than 50% waste plastic.

c) The package filler made of synthetic resin foam, which uses a foaming agent with zero ODP.

d) Air cell packing bubble wrap that injects air into synthetic resins

3.1.3.2

Applicants shall establish and implement/operate collecting and recycling system of products to be scrapped (including packaging shock-absorbing material). However, in case that a designated professional agency is managing the system and shows specific results, the applicant shall be regarded to satisfy the requirement.

3.2 Quality Criteria

3.2.1

Performance of the heat insulation and tapping, intensity test and durability test shall satisfy the quality criteria of KS B 8202(warm water device using solar heat for household).

3.2.2

The quality of heat collector in use shall satisfy the quality criteria of KS M 1511 (propylene glycol), KS M 1512 (ethylene glycol), KS M 1657 (ethyl alcohol) by type of heat collector.

3.3 Information for Consumers

3.3.1

Power consumption of heater using night electricity

3.3.2

Type, amount and dilution concentration of heat collector and heat accumulator

3.3.3

Ways of emergency treatment when human body is exposed to or sucked in heat collector and heat accumulator

3.3.4

Information on disposal and recycling

4. Test Methods

Certification Criteria		Test and Verification Methods
Environmental Criteria	3.1.1	Verification of submitted documents
	3.1.2	Test report by an accredited testing laboratory in accordance with S B 8202 (warm water device using solar heat for household)
	3.1.3	Verification of submitted documents
Quality Criteria	3.2.1	Test report by an accredited testing laboratory in accordance with S B 8202 (warm water device using solar heat for household) or certificate of equivalent
	3.2.2	Test report by an accredited testing laboratory in accordance with M 1511 (propylene glycol), KS M 1512 (ethylene glycol), KS M 1657 (ethyl alcohol) or verification of submitted documents
Consumer Information		Verification of submitted documents

4.1 General Matters

4.1.1

One test sample shall be required for each applied product.

4.1.2

Test samples shall be collected at random by a certification institute from products in market or those in storage at the production site.

4.1.3

The result of test shall be numerically set according to KS Q 5002 (Statistical interpretation method of the data – Part 1: Statistical description of the data).

5. Reason for Certification

“Use of solar heat”

Common Criteria, Notice No. 2012-36, the Ministry of Environment

1. Eco-label products must follow the following provisions with regard to the proper treatment of environmental pollution substances, such as air and water wastes and noxious chemical substances emitted in the process of manufacturing or service operation.

A. When first applying for certification, the product manufacturer should observe the environment related laws and agreements pertaining to the region where the production factory or the place of service operation is located for a period of one year prior to the date of application. Any case of violation of the penalty clause will be verified by confirming documents involved during a period of one year to the date of application. Regarding any violation not related to the penalty clause, confirmation will be made on the completion of appropriate measures.

B. A person who has received a certification of eco-labeling shall observe the environment related laws and agreements pertaining to the region where the production factory or the place of service operation is located during the period of certification. However, regarding any violation besides a penalty, confirmation will be made on the completion of appropriate measures.

2. As a general rule, information for consumers shall be indicated on the surface of the product in such a way not to be easily erased. However, in case that indication on the surface of the product is impossible or undesirable, it can be indicated on the appropriate part such as product packaging, product guidebook and user's manual that consumers can recognize. However, the service information should be indicated inside and outside of the place of service operation. In case that indication inside and outside of the place of service operation is impossible or undesirable, it can be indicated on the appropriate part such as an agreement, letter of delivery, letter of guarantee, and PR materials that consumers can recognize.

3. In order to establish fair trade and to protect consumer, the applicant for eco-label and the holder of eco-label license shall observe the Act on the Fairness of

Indication and Advertisement with respect to the environmental aspects of the product.

4. For Various standards referred in the certification criteria by target product, the latest revised edition applies at the date of application, if not specified otherwise.

5. In applying the quality related criteria for each target product, if no standard is available that can be applied as the quality criteria, the president of Korea Environmental Industry & Technology Institute (KEITI) (hereafter referred to as "president of KEITI") may establish and operate the quality criteria for the product involved after review by a competent committee.