

EL432. Video Media Players

[EL432-1999/7/2013-23]



1. Scope

The criteria shall apply to the product using usual electric power mainly, such as playback or playback-record equipment of visual-audio signals recorded on storage medium, except for mobile devices. In addition, the unified all-in-one product (hereafter referred to as "all-in-one product"), which features unification of more than one function such as audio-DVD or DVD-BD, shall be included.

2. Definitions

2.1

"Active state" refers to a state in which a product is performing primary functions such as playing video or recording with power on.

2.2

"Idle state" refers to a state in which a product is not performing primary functions such as playing video or recording with power on. This also refers to a standby state for the next operation by the user.

2.3

"Sleep mode" refers to a standby state in which a product is not performing primary functions with power on and instead awaits before being switched into either active or idle state by signal such as a remote control. In this state, the product cannot perform timer, indication of operation state, etc.

2.4

"Off mode" refers to a state in which a product is not performing any function associated with active state, idle state or sleep mode with power on. In this state, the product cannot be switched into other modes except user operation of the power switch.

2.5

"Auto power down (APD)" refers to the capability of automatically switching a product from an idle state to a sleep mode after a predetermined period of time (APD timing) has elapsed. The

APD timing begins when all primary functions have stopped or the last user input has been received (e.g., remote control signal, volume adjustment).

2.6

"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 when CFC-11's ozone depleting effect is arbitrarily set as 1.0.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

With respect to the energy consumption of a product during the use stage, the product shall satisfy the following requirements.

3.1.1.1

Standby power shall satisfy the standard of the Standby Power Saving Program in accordance with the Rationalization of Energy Use Act, which is applicable when the application for certification is made. However, in case the product meets the requirements of the International Energy Star Program applicable at the time of the application, it is regarded as equivalent.

3.1.1.2

The power consumption in an active state and an idle state shall satisfy the applicable requirements of the International Energy Star Program.

3.1.1.3

In principle, it should attach a switch capable of completely intercepting power (or maintaining power consumption with less than 1 W) on the front side of product's main body. However, a product with the APD function is regarded as being compliant with this requirement.

3.1.2

With respect to the use of chemical substances in the manufacturing process and the recyclability of components in the disposal process, the product shall satisfy the following requirements.

Note) This criteria shall not apply to materials which are exempted from the Hazardous Substances Restriction lists of EU Directive 2002/95/EC or the Law on Resource Recycling of Electrical and

Electronic Products & Automobiles, and lead in solder of printed circuit board (PCB). However, in case of revision of EU Directive 2002/95/EC or the Law on Resource Recycling of Electrical and Electronic Products & Automobiles, this shall follow the revised EU Directive or the law which is applicable when the application for eco-label certification is made.

3.1.2.1

Lead, cadmium, mercury and their compounds, and hexavalent chromium compounds shall not be used in the product.

3.1.2.2

The contents of lead (Pb), cadmium (Cd), mercury (Hg) and hexavalent chromium (Cr^{6+}) in the parts of the product shall comply with one of the following requirements.

a) The applicant shall have an appropriate system to control the contents of hazardous substances as following requirements.

Substance	Pb	Cd	Hg	Cr^{6+}
Content [mg/kg]	$\leq 1\ 000$	≤ 100	$\leq 1\ 000$	$\leq 1\ 000$

b) Provided that the applicant does not have an appropriate system for the control of hazardous substances, the content of hazardous substances in the parts of the product shall comply with the following requirements.

Substance	Pb	Cd	Hg	Cr^{6+} Note)
Content [mg/kg]	$\leq 1\ 000$	≤ 100	$\leq 1\ 000$	$\leq 1\ 000$

Note) In case the content of total chromium (Cr) is 1000 mg/kg or less, it is regarded as equivalent

3.1.2.3

Polybrominated biphenyls (PBBs:), polybromodiphenyl ethers (PBDEs) and short-chain chlorinated paraffins (C=10~13) whose chlorine concentration is 50 % or more shall not be used in the product.

3.1.2.4

Batteries used for a product shall meet the following criteria:

- a) The contents of lead (Pb), cadmium (Cd), mercury (Hg) and their compounds shall comply with EU Directive 2006/66/EC.
- b) Built-in batteries shall be designed to be easily separated, and the type of batteries shall be specified.

3.1.2.5

Halogenated plastics such as PVC shall not be used for the plastic case parts weighing 25 g or more, and also halogenated compounds shall not be contained in the plastic parts. Exempted from this criterion are the fluorogranic additives with less than 0.5 % by weight(e.g. anti-dripping).

3.1.3

With respect to the recycling in manufacturing process and recyclability of the product at disposal stage, the product shall comply with the following requirements.

3.1.3.1

Products shall be easily disconnected to allow for separation of synthetic resins and metal components and be designed and manufactured for recycling by material.

3.1.3.2

The classification of quality shall be marked on each part of synthetic resin (with more than 25 g of weight and more than 200 mm² of area of the flat part) used for the product in order to make separation-withdrawal of the product easily in the disposal stage.

3.1.3.3

Plastic case parts weighing 25 g or more shall be made with maximum of four different materials in easily separable way. At the same time, each plastic case part weighing 25 g or more shall be made of a single polymer (homo- / copolymer) or recyclable polymer blends (polymer alloys). In addition, labels, markings and stickers shall be made of the same material as the plastic parts to which they are affixed or shall be recycling-compatible.

3.1.3.4

The total contents of lead (Pb), cadmium (Cd), mercury (Hg) and hexavalent chromium (Cr⁶⁺) in packaging and shock-absorbing materials in packaging shall be less than 100 mg/kg.

3.1.3.5

Halogenated plastics such as PVC shall not be used for packaging materials.

3.1.3.6

Separate shock-absorbing material in packaging of a product shall meet one of the following criteria and shall be composed of a single quality of material.

- a) Recycled paper and pulp material, such as pulp mold
- b) Shock-absorbing materials with the eco-label certification as "EL606. Packing Material" of the certification criteria by eco-label subject product.
- c) Shock-absorbing materials in packaging manufactured by using more than 50 % by weight of waste synthetic resin.
- d) Shock-absorbing materials made of foamed synthetic resins (EPS, EPE, EPP) manufactured by using substances with ODP of 0 as foaming agents
- e) Air-cell shock-absorbing materials made by injecting air into synthetic resin material

3.1.3.7

The applicant shall establish, implement and operate the collecting and recycling system of the disused product (including shock-absorbing materials in packaging). However, in case that the applicant has managed the system by designating a professional agency and suggested specific results, he or she shall be regarded to satisfy the requirement.

3.1.3.8

In accordance with the Act on the Resource Circulation of Electrical ·Electronic Equipment and Vehicle, a recycle rate of the product that has the audio function must be 70 % by weight or more.

3.1.4

The product shall be designed and manufactured in consideration of resource-energy saving, reduction of emitting pollutants and using harmful substances, use of recycled materials, improvement of recyclability and expansion of life span of the product in order to reduce the environmental burden in the whole process of the product.

3.2 Quality Criteria

The quality of product shall satisfy the Safety Standard of Electric Appliances in accordance with the Electric Appliances Safe Control Act.

3.3 Information for Consumers

3.3.1

Indication on the items to which the product contributes as for the reasons of certification (power-saving, design for environment) during its consumption stage

3.3.2

Instruction on power saving functions such as use of the power-intercepting switch, the APD timing adjustment, etc.

3.3.3

Indication of the periods for quality guarantee and supply of parts

3.3.4

Guide for collection of waste products

4. Test Methods

Certification Criteria			Test and Verification Methods
Envir. Criteria	3.1.1	3.1.1.1	Test report by an accredited testing laboratory in accordance with the test method of the Standby Power Saving Program or the International Energy Star Program or a certificate of equivalent or higher criteria
		3.1.1.2	Test report by an accredited testing laboratory in accordance with the test method of the International Energy Star Program or a certificate of equivalent or higher criteria
		3.1.1.3	Verification of submitted documents or test report by an accredited testing laboratory in accordance with the measurement methods specified in 4.2.
	3.1.2	3.1.2.1	Verification of submitted documents
		3.1.2.2	Verification of submitted documents in accordance with the verification and test methods specified in 4.3.
		3.1.2.3~5	Verification of submitted documents
	3.1.3	3.1.3.1~3	Verification of submitted documents
		3.1.3.4	Test report by an accredited testing laboratory in accordance with the Ministry of Environment notification No. 2006-143 (Recommended criteria for the heavy metal content of packing materials & test method) or a certificate on equivalent or higher criteria
		3.1.3.5~8	Verification of submitted documents
	3.1.4		Verification of submitted documents

Quality Criteria	Test report by an accredited testing laboratory in accordance with the Safety Standard of Electric Appliances or a certificate on equivalent or higher criteria.
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

In principle, all the measurements shall be conducted when the product reaches the normal state and becomes stabilized after setting it up as in the usual use state.

4.1.4

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

4.2 Measurement methods of power intercepting requirements

4.2.1

With respect to the structure in which power-intercepting switch is attached, check whether the power is perfectly intercepted when operating the switch, or measure whether the power consumption is maintained with less than 1 W.

4.2.2

With respect to the structure in which the APD function is automatically performed if the idle state continues for a certain period of time, measure whether the power consumption is maintained with less than 1 W after the APD timing.

4.3 Compliance verification and test methods regarding the control of harmful substances

4.3.1 Verification method for the hazardous substance management system

Note) This is the method to verify the compliance with the requirement of restricting the use of lead, cadmium, mercury and their compounds, and hexavalent chromium compounds in the parts of the product. This method is applicable to verify that the applicant properly controls PBBs (polybrominated biphenyls), PBDEs (polybrominated diphenylethers) and short-chain chlorinated paraffins (C=10~13).

4.3.1.1

Compliance verification shall be done by one of the following documents or more.

- a) Explanatory note on the management system established by the manufacturer on purpose to control the hazardous substances when each part of the product is supplied from the suppliers, and relevant documents
- b) Test result conducted by the manufacturer in order to control the hazardous substances when each part of the product is supplied from the suppliers (In this case, test method including pre-conditioning method applied shall be specified in detail)
- c) Certificate issued by the accredited third party showing that each part of the product satisfies the relevant requirements (e.g. Certificate of eco-label according to 'EL763. Electric and Electronic Parts')
- d) Other documents showing that the manufacturer properly controls the hazardous substances when each part of the product is supplied from the suppliers.

4.3.1.2

In case the compliance of the management system cannot be verified by "4.3.1.1" or the test result for specific parts of the product is required by deliberation committee of eco-label certification, compliance verification shall be done by the following "4.2.2 Test method for measuring the content of the hazardous substances" for the parts collected at random by eco-label certification body.

4.3.2 Test methods for measuring the content of the hazardous substances

Note) This is one of the test methods applicable to verify the content of lead (Pb), cadmium (Cd), mercury (Hg) and hexavalent chromium (Cr^{6+}) contained in the parts of the product. The content of the hazardous substances can be also verified according to the internationally recognized test methods. In this case, test method including pre-conditioning method shall be specified in detail and the specified test method shall be approved by deliberation committee of eco-label certification.

4.3.2.1.

Test samples shall be homogenized by pre-conditioning method such as pulverization of each part.

4.3.2.2

Analysis method of lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr^{6+}), total chromium (Cr)

- a) Lead (Pb), cadmium (Cd): KS M 0016 (General rules for atomic absorption spectrochemical analysis), KS M 0032 (General rules for ICP emission spectrochemical analysis), inductively coupled plasma mass spectrometry (ICP-MS)
- b) Mercury (Hg): Atomic absorption spectrochemical analysis by using gold amalgamation method, KS M 0016 (General rules for atomic absorption spectrochemical analysis)
- c) Hexavalent chromium (Cr^{6+}): Ultraviolet spectrophotometric analysis by diphenylcarbazide, ultraviolet spectrophotometric analysis by lead acetate trihydrate
- d) Total chromium (Cr): KS M 0016 (General rules for atomic absorption spectrochemical analysis), KS M 0032 (General rules for ICP emission spectrochemical analysis), inductively coupled plasma mass spectrometry (ICP-MS)

5. Reasons for certification

“Power-saving, design for environment”

Common Criteria

1. Ecolabelled 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 during 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 ecolabelling 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 appropriate parts 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 appropriate parts 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 protect consumer, the applicant for ecolabel and the holder of ecolabel 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 to 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.