

# EL721. Plastic Products

[EL721-1992/5/2004-58]



## 1. Scope

The criteria shall apply to the product formed and manufactured mainly based on waste plastic (including waste synthetic fiber). However, the product specified with separate certification criteria, the product whose purpose could be confused with the reason for certification (available resource recycling), the product that needs safety such as toy and tableware and parts that are not finished goods shall be excluded.

## 2. Definitions

### 2.1

“Plastic” refers to the singular or multi-type polymer product and the product mixed with an additive or filler in addition to polymer, main raw material, in order to reinforce the performance of product.

### 2.2

“Waste plastic” refers to the ‘post-consumer waste plastic’ and ‘pre-consumer waste plastic’.

### 2.3

“Post-consumer waste plastic” refers to the plastic that finishes its purpose of use and is let out after passing through normal circulation stages.

### 2.4

“Pre-consumer waste plastic” refers to the unused waste plastic as a product that is generated in a form of scrap in the manufacturing process of the product. However, the waste plastic that is generated in the manufacturing process of the product and then used again as raw material in the same process is excluded.

### 2.5

“Usage rate of waste plastic” refers to the weight percentage of waste plastic amount

among the raw materials that are used as products.

### 3. Certification Criteria

#### 3.1 Environmental Criteria

##### 3.1.1

With respect to the resource consumption in manufacturing process, the product shall comply with the following requirements.

##### 3.1.1.1

Product shall use plastics as component materials by more than 50 wt%.

##### 3.1.1.2

Usage rate of waste plastic shall comply with the following requirements.

a) Plastic product with singular material, the product assembled only with more than 2 types of plastic that can be easily separated into singular plastic, and the product assembled with plastic and other materials that can easily separate singular plastic shall use waste plastic by more than 40 wt%. However, in case that only post-consumer waste plastic is used as raw material, more than 30 wt% shall be used.

b) The product assembled only with more than 2 types of plastic that can be hardly separated into singular plastic, and the product assembled with plastic and other materials that can be hardly separated into singular plastic shall comply with the following requirements. In case that waste materials apart from waste plastic are additionally used, the value of deducting the amount of added waste materials from the weight of product shall be regarded as the weight of product.

Purpose	Usage Rate of Waste Plastic [wt%]	
	Mixed Use with Pre-consumer or Post-consumer Waste Plastic	Only Use of Post-consumer Waste Plastic
Civil Engineering / Construction Materials	≥ 60	≥ 40
Parts for Car	≥ 25	≥ 20

Stationary / Household Appliances	≥ 50	≥ 40
Other products	≥ 80	≥ 60

### 3.1.2

With respect to use of chemical substances in manufacturing process, the product shall comply with the following requirements.

#### 3.1.2.1

Regarding foaming product, substances with zero ODP shall be used as foaming agent.

#### 3.1.2.2

Polybrominated biphenyls (PBBs), polybrominated diphenylethers (PBDEs) and short-chain chlorinated paraffins (C=10~13) whose chlorine concentration is 50% or more shall not be used as flame retardants.

#### 3.1.2.3

Triphenyl tins (TPT), tributyl tins (TBT), lead compound and cadmium compound shall not be used as stabilizer or activator.

### 3.1.3

With respect to recycling in manufacturing process and recyclability of the product at disposal stage, regarding plastics (weighing 25g or more and covering a flat surface of 200mm<sup>2</sup> or more) used for plastic product with singular material, the product assembled only with more than 2 types of plastic that can be easily separated into singular plastic, and the product assembled with plastic and other materials that can easily separate singular plastic, each separable plastic part shall be visibly marked with material identification to facilitate separation and collection in disposal. However, in case that the mark of separation and release is on the product or packaging material in accordance with the law on resource saving and recycling promotion, the product shall be regarded to satisfy the requirement.

## 3.2 Quality Criteria

### 3.2.1

Waterway, slope protection bloc, rainwater catcher for road, sun block prop for breeding ginseng, plastic levee, ondol (hypocaust) pipe arrangement panel, tree protection board and prop, mat for car floor, plastic stick-board-stake, urethane floor material, plastic palette, snow removal sand box, waste separating and collecting box and urethane waterproof sheet shall satisfy respectively the quality criteria of KS M 3492 (recycled plastic waterway), KS M 3493 (recycled plastic slope protection bloc), KS M 3494 (recycled plastic rainwater catcher for road), KS M 3495 (recycled plastic sun block prop for breeding ginseng), KS M 3496 (recycled plastic levee), KS M 3497 (recycled plastic ondol pipe arrangement panel), KS M 3498 (recycled plastic tree protection board and prop), KS M 3499 (mat for car floor), KS M 3513 (recycled plastic stick, board and stake), KS M 3524(recycled urethane floor material), KS M 3525 (recycled plastic palette), KS M 3527 (recycled synthetic resin snow removal sand box), KS M 3528 (recycled waste separating and collecting box).

### 3.2.2

If Korean Industrial Standards are available as a national standard of the product in question, it should satisfy the quality or performance criteria of the standard in question. However, items related to “3.1 Environmental Criteria” are excluded

### 3.2.3

If no Korean Industrial Standards are available as a national standard of the product in question, it should satisfy the quality and performance standard according to the following sequence. However, the items related to “3.1 Environmental Criteria” are excluded. Also, if the E-Mark Certification Criteria Setting Committee determines that the applying criteria are not reasonable considering the characteristic of the product, it should satisfy the standards that were modified by the committee (test item, test method, standards, etc.).

#### 3.2.3.1

National standards other than Korean Industrial Standards.

#### 3.2.3.2

Overseas national standards or international standards regarding the product quality in

question.

### 3.2.3.3

Standards of the organizations at home and abroad that are referred by the current E-mark target product and certification standard.

### 3.2.3.4

A private standard that is recognized as higher than the national standard in the industry of the product in question.

## 3.3 Information for Consumers

Indication of the reason of certification (resource saving or use of recycled materials)

ex) Usage rate of waste plastic, phrase informing of the recyclability of the product after use (confined to recyclable products), characteristics or merits related to the quality or safety of the product such as no use of harmful substances

## 4. Test Methods

Certification Criteria		Test and Verification Methods
Environmental Criteria		Verification of submitted documents
Quality Criteria	3.2.1	Test report by an accredited testing laboratory in accordance with KS M 3492 (recycled plastic waterway), KS M 3493 (recycled plastic slope protection bloc), KS M 3494 (recycled plastic rainwater catcher for road), KS M 3495 (recycled plastic sun block prop for breeding ginseng), KS M 3496 (recycled plastic levee), KS M 3497 (recycled plastic ondol pipe arrangement panel), KS M 3498 (recycled plastic tree protection board and prop), KS M 3499 (mat for car floor), KS M 3513(recycled plastic stick, board and stake), KS M 3524 (recycled urethane floor material), KS M 3525(recycled plastic palette), KS M 3527 (recycled synthetic resin snow removal sand box), KS M 3528 (recycled waste separating and collecting box)
	3.2.2~3.2.3	Test report by an accredited testing laboratory in accordance with the relevant standard or certificate of equivalent
Information for Consumer		Verification of submitted documents

## **4.1 General Matters**

### 4.1.1

One test sample for each applied product is required in principle with the exception that more than one test sample is necessary.

### 4.1.2

Test sample shall be collected at random by eco-label certification body from products on the 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. Reasons for Certification**

“Resource-saving (confined to recyclable products) or use of recycled materials”

## **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.