

## **EL242. Wallpaper**

[EL242-2001/4/2009-72]



### **1. Scope**

The criteria shall apply to the wallpaper that takes paper as backing material, and is attached on wall or ceiling by spreading an adhesive. However, products with separate certification criteria are excluded.

### **2. Definitions**

#### 2.1

"Backing material" refers to the comparatively thin and pliable material that is used as basic material of wallpaper.

#### 2.2

"Second layer" refers to the layer that is attached or glued with paper, fiber, synthetic resin, and metal to give a feeling of texture. According to the form of the second layer or whether there is the second layer or not, it is classified in various kinds such as gravure wallpaper, foamed vinyl wallpaper, united-paper wallpaper and arrowroot wallpaper.

#### 2.3

"Adhesive layer" refers to the side of the wallpaper that is spread in advance with adhesives.

#### 2.4

"Release paper" refers to the release-processed material to protect the glued side of wallpaper and make it easy to remove in use.

#### 2.5

"Volatile organic compounds (VOCs)" refers to the liquid or solid organic compound that is consecutively volatilized by certain temperature and pressure in air.

## 2.6

“Volatile organic compounds emissions (VOCs emissions)” refers to the quantity of the VOC (Volatile Organic Compounds) per unit hour that is discharged to the outside while the product is running under the defined conditions.

Note) This standard tentatively defines them as VOCs from n-hexane to n-hexadecane on the chromatogram, which is created by the gas chromatograph equipped with the mass spectrometer

## 2.7

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

## 2.8

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

## 2.9

“Pre-consumer waste paper” refers to the unused paper as a product that is generated in a form of scrap during the follow-up processing after original paper is produced. However, the paper that is generated in the manufacturing process of original paper and then used again as material in the same process shall be excluded.

## 2.10

“Waste Paper input rate” refers to the mass percentage of waste paper over the total raw material for products. As calculated on mass percentage, the raw material of pulp is applicable to the weight with 10 % of water contents, while waste paper is applicable to the weight when it becomes naturally dried.

## **3. Certification Criteria**

### **3.1 Environmental Criteria**

#### 3.1.1

With respect to using chemical materials in manufacturing process, the product shall satisfy following criteria.

### 3.1.1.1

The product shall not use halogen-class compound resin such as polyvinyl chloride (PVC).

### 3.1.1.2

The product shall not use polybrominated biphenyls (PBBs:), polybrominated diphenylethers (PBDEs), short-chain chlorinated paraffins (C=10 ~ 13) that has 50% or more than 50% of chlorine as flame retardant.

### 3.1.2

With respect to the emission of pollutants in use, the product shall satisfy the following criteria

#### 3.1.2.1

Emission volume of VOCs from the product after 7 days shall be less than  $0.4\text{mg}/\text{m}^3 \cdot \text{h}$  and the toluene emission shall be less than  $0.080 \text{ mg}/\text{m}^3 \cdot \text{h}$ .

#### 3.1.2.2

Emission volume of formaldehyde from the product after 7days shall be less than  $0.05\text{mg}/\text{m}^3 \cdot \text{h}$ .

#### 3.1.2.3

Harmful elements shall satisfy the following criteria.

Item	Pb	As	Cd	Sb	Ba	Cr	Hg	Se
Criteria [mg/kg]	≤ 90	≤ 8	≤ 25	≤ 20	≤ 500	≤ 60	≤ 20	≤ 165

### 3.1.3

With respect to the recyclability of release paper, the product using release paper makes a rule that paper with 20% or more than 20% waste paper input rate shall be used as raw material for the release paper. However, the following cases in which release paper can be recollected and recycled are exceptional: the case that the product uses 'original release paper' as release paper certified in accordance with the Act on Environment Technology Development and Support, or that the product does not use laminate paper which is waste paper and makes recollection and recycling

difficult.

### 3.2 Quality Criteria

#### 3.2.1

Sunlight color fastness, rubbing color fastness, concealment ability, construction capability, wet density, sulfidation resistance and inflammability resistance shall satisfy the quality requirements of KS M 7305 (wallpaper).

#### 3.2.2

Arrowroot wallpaper shall satisfy the qualification of KS M 7303 (arrowroot wallpaper).

### 3.3 Consumer Information

Mark the items that contribute to the reasons for certification of the product (Less indoor air pollution, less harmful substances) in the use stage.

## 4. Test Methods

Certification Criteria		Test and Verification Methods
Environmental Criteria	3.1.1	Verification of submitted documents
	3.1.2	Test report conducted by an accredited testing laboratory in accordance with the following test methods or their equivalent. <ul style="list-style-type: none"> <li>▪ Indoor air quality process test method (building materials test method for the emission of pollutants)</li> <li>▪ Alternatively, ISO 16000-9 (Indoor air – Part 9: Measurement for the emission of VOCs – Emission test chamber), ISO 16000-6 (Indoor air – Part 6: Extraction of active samples from adsorbent TENAX TA, and VOC measurement in indoor and chamber air according to a gas chromatography using a thermal desorber and MSD/FID), and ISO 16000-11 (Indoor air - Part 11: Measurement for the emission of VOCs – Sampling, storage of samples, and preparation of test pieces).</li> </ul>
	3.1.2.2	Test report conducted by an accredited testing laboratory in accordance with the following test methods or their equivalent.

		<ul style="list-style-type: none"> <li>▪ Indoor air quality process test method (building materials test method for the emission of pollutants)</li> <li>▪ Alternatively, ISO 16000-9 (Indoor air – Part 9: Measurement for the emission of VOCs – Emission test chamber), ISO 16000-3 (Indoor air - Part 3: Determination of formaldehyde and other carbonyl compounds – active sampling method), and ISO 16000-11 (Indoor air - Part 11: Measurement for the emission of VOCs – Sampling, storage of samples, and preparation of test pieces).</li> </ul>
	3.1.2.3	Authorized test institution test reports pursuant to KS G ISO 8124-3 (Safety of toys - Part 3: Migration of certain element) or submitted documents that can prove the test reports
	3.1.3	Verification of submitted documents
Quality Criteria	3.2.1	Test report by an accredited testing laboratory in accordance with KS M 7305 (wallpaper)
	3.2.2	Test report by an accredited testing laboratory in accordance with KS M 7303 (arrowroot wallpaper)
Consumer Information		Verification of submitted documents

#### 4.1 General Matters

##### 4.1.1

One test sample shall be required for each applied product. However, in case that more than one test is needed, it shall not be required.

##### 4.1.2

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

##### 4.1.3

Test result 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**

“Less indoor air pollutants, Reduced harmful substances”

## **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.