

EL252. Decorative Synthetic Resin Sheets

[EL252-2004/3/2010-13]



1. Scope

The criteria shall apply to the synthetic resin decoration sheet and interior sheet that is used for decoration and closing of the product surface.

2. Definitions

2.1

"Decoration sheet" refers to the synthetic resin-textured sheet without adhesive layer and is used as the surface finishing material for the internal building components, furniture, and electronic products. However, thermosetting resin sheet such as melamine resin shall be excluded.

2.2

"Interior sheet" refers to the synthetic resin-textured adhesive sheet which is coated with adhesives on one side of the product, and is used as the finishing material of building interior.

2.3

"Support material" refers to comparatively thin and flexible material for sheet.

2.4

"Adhesive layer" refers to the side of sheet coated with adhesives.

2.5

"Release paper" refers to the exfoliated material which is to protect the adhesive surface and easily release from the sheet.

2.6

"Release layer" refers to the surface with remover in the sheet.

2.7

“VOCs (volatile organic compounds)” refers to liquid or solid organic compounds which volatilizes constantly by established temperature and pressure in air.

2.8

“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

3. Certification criteria

3.1 Environmental criteria

3.1.1

The use of chemical substances in the manufacturing process shall conform to the following criteria.

3.1.1.1

The decoration sheets used in electric · electronic products shall not use halogen-system polyvinyl, such as polyvinyl chloride resin(PVC), etc.

3.1.1.2

The decoration sheets used in electric. electronic products shall not use halogen-system polyvinyl such as polyvinyl chloride resin(PVC), etc.

3.1.1.3

As additives of resin, organo-tin compound (TBT, TPT), lead compound and cadmium compound shall not be used. Pb, Cd, Hg included in the product shall satisfy following criteria.

Item	Pb	Cd	Hg
Criteria [mg/kg]	≤ 50	≤ 0.5	≤ 0.5

3.1.1.4

Phthalate-system plasticizer shall not be used as the plasticizer of resin, which has the boiling points of DEHP: di-(2-ethylhexyl) phthalate) or less.

3.1.1.5

For flame-retardants in products, PBBs: polybrominated biphenyls, PBDEs: polybrominated diphenylethers, and short-chain chlorinated paraffins C=10~13 shall not be used as flame retardants.

3.1.2

With respect to releasing pollutants in use, the product shall satisfy following criteria.

3.1.2.1

The VOCs emission from the product after 7 days shall be less than 0.4 mg/m³.h, and the toluene emission shall be less than 0.080 mg/m³.h.

3.1.2.2

The formaldehyde emission from the interior sheet after 7 days shall be less than 0.12 mg/m³.h.

3.1.3

For the purpose of reusability, release paper generated at the use stage shall conform to one of the following:

3.1.3.1

Release paper shall use paper with 20% of notified usage rate or over as materials. However, this shall be excepted in the case of recovery & recycling of release paper, as when 'original release paper' which qualifies as environment indication certification is used for release paper or laminated paper which makes recovery & recycling difficult isn't used.

3.1.3.2

Release paper shall use materials for the 100% recycling of waste polyethylene terephthalate (PET).

3.2 Quality Criteria

3.2.1

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.

3.2.2

If no Korean Industrial Standards are available as a national standard of the product in question, it should satisfy the quality and performance criteria 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.).

3.2.2.1 National standards other than Korean Industrial Standards.

3.2.2.2 Overseas national standards or international standards regarding the product quality in question.

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

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

3.3 Consumer Information

3.3.1

Indication on the items that the product contributes to the reasons for certification (harmful substance reduction, indoor pollution reduction) in its consumption stage

3.3.2

In case of the product without halogen synthetic resin such as PVC, and the product without using phthalate plasticizer for its resin, the corresponding information shall be indicated on the product.

Ex: "No PVC," "No phthalate plasticizer," etc.

4. Test Methods

Certification Criteria		Test and Verification Methods	
Environmental Criteria	3.1.1	3.1.1.1	Verification of submitted documents
		3.1.1.2	Test report by an accredited testing laboratory in accordance with KS M 0031 (Directives for gas chromatograph analysis)
		3.1.1.3	Verification of submitted documents and the test report by an accredited testing laboratory in accordance with KS M 0018(Directives of atomic absorption analysis), KS M 0032 (Directives of spectrometry for emitting high frequency inductively coupled plasma)
		3.1.1.4~ 3.1.1.5	Verification of submitted documents
		3.1.2.2	a) Test report by an accredited testing laboratory in accordance with the following test method or equivalent test methods <ul style="list-style-type: none"> ▪ Indoor air quality process test standards (Contamination substance emitting construction

			<p>material test method)</p> <ul style="list-style-type: none"> ▪ Or KS M ISO 16000-9(Indoor air - Section 9 : Emission measurement method of volatile organic compounds- Emission test chamber method), KS M ISO 16000-6(Indoor air - Section 6 : Collecting active samples on absorbent TENAX TA, Measuring volatile organic compounds in the indoor and chamber air by gas chromatography using thermal desorption and MSD/FI) and KS M ISO 16000-11(Indoor air - Section 11 : Measurement method for emission of volatile organic compounds - Sampling, storage and making test pieces)
		b)	<p>Test report by an accredited testing laboratory in accordance with the following test method or the equivalent test method</p> <ul style="list-style-type: none"> ▪ Indoor air quality process test standards (Contamination substance emitting construction material test method) ▪ Or KS M ISO 16000-9(Indoor air - Section 9 : Emission measurement method of volatile organic compounds - Emission test chamber method), KS M ISO 16000-3 (Indoor air - Section 3: formaldehyde and other carbonyl compounds measurement - Sampling method) and KS M ISO 16000-11(Indoor air - Section 11 : Measurement method for emission of volatile organic compounds - Sampling, storage and making test pieces)
		3.1.3	Verification of submitted documents
Quality Criteria			Test report by the relevant accredited testing laboratory or certificate of equivalent
Consumer Information			Verification of submitted documents

4.1 General Matters

4.1.1

One test sample shall be required for each applied product. However, if more than one test sample is needed, the former requirement shall not be met.

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

“Reduced harmful substances, Less indoor air pollutants”

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.