

EL103. Adhesive Paper Tapes and Adhesive Paper Sheets

[EL103-2001/5/2012-36]



1. Scope

This criteria shall apply to adhesive tape, (hereinafter referred to as “tape”), primarily used in packaging or sealing, products with paper support among the adhesive sheets, (hereinafter referred to as “sheets”), primarily used in the manufacture of label stickers, and release base papers for the use of tape or sheets (hereinafter referred to as “release base paper”) (Where a tape or sheet is composed of release papers, it shall be excluded).

2. Definitions

2.1

“Support material” refers to relatively thin and flexible materials used in tapes or sheets.

2.2

“Release paper” is a released material designed to protect the attachment side of a tape or a sheet and to make release easy during use.

2.3

“Adhesive coating layer” refers to one side of tape or sheet on which adhesive is applied.

2.4

“Released coating layer” refers to the side of release paper on which a release agent is applied.

2.5

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

2.6

“Post-consumer waste paper” refers to paper drained after serving its intended end use through the distribution channel as goods.

2.7

“Pre-consumer waste paper” is a paper product generated in the form of scrap during the post-production process after the production of base papers, so that it cannot be used as a product. It must be noted that papers generated during the base paper production process and then input to the same process as raw materials are excluded

2.8

“Recyclability rate of waste paper” refers to the weight percentage of inputted waste papers among concerned materials used for product. When calculating the weight percentage, the weight of pulp material at 10% of water content and the weight of dried waste papers with natural wind shall be applied.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

With respect to the recyclability of the tape and the sheet at recycling and disposal stages in the manufacturing process, the following requirements shall be satisfied.

3.1.1.1

To easily collect or recycle packages equipped with products, thermal papers, pressure papers, plastic laminated papers, etc. should not be used as raw materials of the support.

3.1.1.2

In case of the products using release papers, raw material of the release paper shall be paper and laminated paper, which is not easy to collect and recycle as waste paper, shall not be used.

3.1.1.3

Adhesives used in the adhesive coating layers shall not contain organic solvents.

3.1.1.4

Release agents used in the release coating layers shall be alkaline dissociative and alkaline dispersible (or water soluble and water dispersible).

3.1.2

With regard to recycling during the manufacturing process or recyclability during the disposal phase, release base papers shall conform to the following requirements.

3.1.2.1

Plastic laminated papers and that make collection or recycling difficult as waste papers shall not be used.

3.1.2.2

Release agents used shall be alkaline dissociative and alkaline dispersible (or water soluble and water dispersible).

3.1.3

With respect to the resource consumption in the manufacturing process, the following requirement shall be satisfied.

3.1.3.1

For the paper core of a tape, or release base papers, waste paper shall be used at a rate of not less than 70%.

3.1.3.2

The usage rate of waste paper used for release base papers and release paper for the use of tape or sheets (excluding paper of 120 g/m² or less) shall be used at a rate of not less than 50%.

3.1.4

Products shall be packaged in consideration of the ease of recycling, the reduction of waste quantity and environmental harmfulness.

3.2 Quality Criteria

3.2.1

The tapes shall comply with the quality standards of KS T 1055 (Adhesive paper

tapes).

3.2.2

The sheets shall comply with the quality standards of KS T 1050 (Adhesive paper for printing).

3.2.3

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.

3.2.4

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.).

3.2.4.1. National standards other than Korean Industrial Standards.

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

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

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

3.3 Consumer Information

Indication of matters contributing to reasons (easy to recycle, reduction of wastes or recycling of available resources) for the certification of the concerned product at the stage of consumption

4. Test Methods

Certification Criteria		Test and Verification Methods	
Environmental Criteria	3.1.1	3.1.1.1~ 3.1.1.3	Verification of submitted documents
		3.1.1.4	Test report by an accredited testing laboratory in accordance with "4.1 and 4.2 test methods"
	3.1.2	3.1.2.1	Verification of submitted documents
		3.1.2.2	Test report by an accredited testing laboratory in accordance with "4.1 and 4.2 test methods"
	3.1.4	Verification of submitted documents	

Quality Criteria	3.2.1	Test report by an accredited testing laboratory in accordance with the KS A 1525 (Adhesive paper tape) or certificate of the equivalent standards or over
	3.2.2	Test report by an accredited testing laboratory in accordance with the KS T 1050 (Adhesive paper for printing) or the equivalent certificates
	3.2.3 ~ 3.2.4	Test report by an accredited testing laboratory in accordance with the applicable standards or the equivalent certificates
Consumer Information		Verification of submitted documents

4.1 General Matters

4.1.1

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

4.1.2

Test samples shall be collected at random by eco-label certification body from products in market or those in storage at the production site.

4.1.3

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

4.2 Test methods for alkaline dissociativity and alkaline dispensability of release agents used in release coating layers.

Note) This is a method intended to check that a release agent is not dissociated or scattered with an alkali liquid and does not remain in the pulp while re-pulping waste paper including release agent layers. Water-soluble or water-dispersed agents shall follow this method, but it is possible to test and assess with the use of 'water' rather than 'alkali liquid.'

4.2.1 Reagent and materials

4.2.1.1

Alkaline solution (0.5% of sodium hydroxide solution): Dissolve 5g of sodium hydroxide (NaOH) in water to make 1L of sodium hydroxide solution. It doesn't matter without standardization.

4.2.1.2

Filter Media: The opening size of metal wire cloth and perforated metal plate as the filter media shall be between 100 – 150 μm .

Note) Test sieves, of which opening size is 106 μm and 150 μm , as the Tyler screen is equal with the test sieve of 150 mesh and 100 mesh repetitively.

4.2.2 Test apparatus and equipment

4.2.2.1

Dissociation vessel: Glass beaker with the volume of 2L or more or glass vessel for Jar tester

4.2.2.2

Agitator: It shall be adjustable to 2000 r/min and the shape of impeller shall be similar to 'figure 2 (propeller)' of KS M 7030 (Method of Preparing Handsheets for Pulp testing) or the blade of a knife.

4.2.2.3

Heater: It shall regulate the temperature within the dissociation vessels between $55 \pm 5^\circ$ C when cooking in a double boiler.

4.2.2.4

Dryer: It shall regulate the temperature between $105 \pm 5^\circ$ C.

4.2.3 Preparation of test sample

Take tapes, sheets (excluding release papers), or converting papers of release papers with the size equal to 20g and cut them fine in 1cm^2 or less.

4.2.4 Test methods

4.2.4.1

Put 1 L of alkaline solution into a dissociation vessel with test sample and heat to $55 \pm 5^\circ$ C slowly.

4.2.4.2

Dissociate it at 1500 ± 100 r/min for 10 minutes with an agitator.

4.2.4.3

Stop agitating and wash extraneous matter off from wall of vessel with alkaline solution, and then dissociate it at 1500 ± 100 r/min for 10 minutes again with an agitator.

4.2.4.4

After repeating '4.2.4.3' process three times, set a sample solution for five minutes and then filter with a filtering material. Rinse the dissociation vessel with warming alkaline solution not to remain any extraneous matter on the wall, and remove floating matters from the upper layer of the solution, and then put it into filter media. When filtering, rinse the media with the alkaline solution several times in order to pass enough soluble alkaline substances through the filter media and wash the media with water of $80 \pm 5^\circ$ C several times to remove sodium hydroxide remaining on pulp sludge.

4.2.4.5

Let stand the pulp sludge on the filter media for 20-30 minutes with the media and dry

for 2 hours in the dryer of $105 \pm 5^{\circ}$ C.

4.2.4.6

Let the dried filter media cool and take the remaining pulp on the media to evaluate alkaline dissociativity and alkaline dispersability.

4.2.5 Evaluation of alkaline dissociativity and dispersibility

4.2.5.1

Conduct a visual inspection to check whether there are any impurities such as rubber or plastic lumps in the dried pulp.

4.2.5.2

Press the surface of the pulp with a dry hand or a filter paper to see if the pulp has adhesive property.

4.2.5.3

In case the pulp doesn't contain any other impurities as well as not having adhesive property, it shall be determined to be alkaline dissociativity or alkaline dispersibility.

5. Reasons for Certification

"Readily recyclable, less wastes, use of recycled materials (confined to applicable products)"

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.