

EL107. Document Files

[EL107-2006/2/2012-36]



1. Scope

The criteria shall apply to document files made with synthetic resin and paper as its raw material that is used for storing and organizing paper documents.

Note) Document files refer to stationary products which bind paper documents by using tools like tweezers or putting paper documents into the inner paper in the form of an envelope or punching holes in the document and pinning them up.

2. Definition

2.1

"Waste paper or waste synthetic resin" refers to materials drained after serving its intended end use through the distribution channel as goods and those generated in the form of scrap during the post-production process after the production of base materials, so that it cannot be used as a product. It must be noted that those generated during the base production process and then input to the same process as raw materials are excluded.

2.2

"Usage rate of waste paper or waste synthetic resin" refers to the weight percentage of the inputted waste materials 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.

2.3

"Optical Brightener" refers to a material which has an effect of radiating fluorescence through ultraviolet rays out of incident rays and that which makes something seem whiter in general by its usage.

2.4

"Bleaching" refers to causing chemical reaction with residual lignin and coloring substance of pulp and eliminating the color of the pulp or reducing its color to enhance its whiteness. For bleaching agents, there are oxidizing bleaching agents and deoxidizing bleaching agents.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

With respect to the occurrence of wastes and consumption of resources during the manufacturing process, the product shall satisfy the following requirements.

3.1.1.1

The usage rate of waste paper of paper covers shall be more than 30% of the weight.

3.1.1.2

The usage rate of waste synthetic resin of synthetic resin cover shall be more than 40% of the weight.

3.1.1.3

The product shall not use metal printing such as gold foil or silver foil when printing.

3.1.2

With respect to the occurrence of waste during the usage stage, the product shall satisfy the following requirements.

3.1.2.1

It shall not use halogenated synthetic resin including PVC.

3.1.2.2

Its thickness shall be not more than 1 mm.

3.1.2.3

In case that its weight is not less than 25g and the square measure of the flat surface is not less than 200mm², material classification shall be indicated on the relevant part in order to separate and collect easily upon disposal.

3.1.3

With respect to the recyclability of the product in the recycling or disposal stage during the manufacturing process, the product shall satisfy the following requirements.

3.1.3.1

In case that the main raw material constituting the body is synthetic resin, it shall satisfy the following requirements.

3.1.3.1.1

Material classification is indicated so that the product is easy to separate and collect upon disposal.

3.1.3.1.2

It shall be 1 type of polymer (homopolymer or copolymer) or recyclable composite material (polymer alloy). Moreover, in case it is not easy to separate attached label, mark or sticker, it shall be the same material with the part where it is attached or not cause any problems when recycling.

3.1.3.2

The paper cover shall not be covered with synthetic resin film or sheet, synthetic fabrics & non-woven fabrics, and non-water-soluble laminated film & coating to collect and recycle easily.

3.1.3.3

Paper and synthetic resin shall not be used at the same time for the raw material of the product. However, the criteria do not apply to products separable without any tools.

3.1.4

With respect to the emission and recyclability in the stage of disposal, the sum of total of lead(Pb), cadmium(Cd), mercury(Hg), and chromium 6(Cr6+) shall be no more than

100 mg/kg.

3.2 Quality Criteria

3.2.1

Progress Document File shall satisfy the quality criteria of KS G 2401(Office Files (Folder and Guide)) or KS G 2402(Office Files (Flat)). However, criteria related to the size of the product shall not be applied.

3.2.2

The book cover shall satisfy the quality criteria of KS G 2507(Black Cover). However, criteria related to the cotton cloth of the book cover shall not be applied.

3.2.3

O-ring binder, D-ring binder, ladder binder, pipe binder, lever arch binder, sport binder, and computer binder shall satisfy the quality criteria of KS G 2403(Binder).

3.2.4

If the national standard of the product in question is available, it should satisfy the quality and performance criteria according to the following sequence.

3.2.5

The quality of other products except 3.2.1~3.2.4 shall satisfy the following criteria.

3.2.5.1

Synthetic resin cover and board shall satisfy the following requirements.

3.2.5.1.1

Thermoplastic synthetic resin products shall satisfy the following requirements.

Classification	Tearing Strength [N]	Tensile Strength [N]
Criteria	≥ 86	≥ 155

3.2.5.1.2

Thermoplastic synthetic resin product shall not split or break following impact test.

3.2.5.2

Paper cover shall satisfy the following requirements.

Classification	Moisture[%]	Tensile Strength[N]	
		Width	Length
Criteria	≤ 13	≥ 147	≥ 196

3.2.5.3

In case of product including the binding tool inside the cover, the extent of the closing of the cover shall be within 0 ~ 1/3 in relation to the width of the product.

3.2.5.4

With respect to the binding performance of the product, the product shall satisfy the following requirements.

3.2.5.4.1

In case of products binding paper documents in inner paper in the form of an envelope, when testing binding performance by putting in 4 pages in each inner paper, there shall be no deformation of binding tools.

3.2.5.4.2

In case of products binding documents by picking it up with tools such as tweezers and bars, and products binding paper documents by punching holes, when performing binding performance test by containing paper in the amount that is 1/2 of the maximum capacity of the binding tool, the paper shall not fall off from the binding tool and there shall be no problem with the binding tool.

3.2.5.4.3

When performing the binding performance test on document storage box, there shall be no alteration of the product form and paper shall not fall off from the binding tool.

3.2.5.5

In case of products using synthetic resin as cover material, it shall be no split after repetitive bending tests.

3.2.5.6

The metal binding tool shall satisfy the following requirements.

3.2.5.6.1

With respect to corrosion resistance, inflation, there shall be no occurrences of inflation, discoloration, cracking, and rusting of plating & coating following the Neutral Salt Spray Testing (NSS).

3.2.5.6.2

In case of plating binding tool, the product shall satisfy the following requirements.

Classification	Chromium Plating	Nickel Plating	Nickle-Chromium Plating	
			nickel	chromium
Criteria [μm]	≥ 0.2	≥ 5	≥ 5	≥ 0.05

3.2.5.7

With respect to the product exterior, the product shall satisfy the following requirements.

3.2.5.7.1

In the case of paper cover, it shall not be bent more than 6mm.

3.2.5.7.2

In the case of synthetic resin cover, if the edge of the file is curved upwards it shall not be more than 100mm and if it is bent downwards, it shall not be bent more than 15 mm

3.2.5.7.3

Opening and closing movement of the tool shall be smooth, interlock condition shall be good with the teeth in order, and the mandrel shall not be pulled out easily.

3.2.5.7.4

By making sure the riveting of the connection between the tool and the cover is firm, there shall be no shaking to the top and bottom or left and right, and looseness or damage of the condition of connection.

3.2.5.7.5

The cover shall not have harmful defects during use such as splits, peeling, scars, and stains; it shall be smooth without any splinters when observing with bare eyes.

3.2.5.7.6

The attached material on the cover shall maintain its strength and balance by being attached in a correct position.

3.2.5.7.8

The metal part shall be in good condition, and have no harmful flaws and splinters.

3.2.5.7.9

The plating condition of the tool shall be smooth upon observation with bare eyes without any defects such as scratches, stains, and peelings.

3.3 Information for Consumers

Indication on the items that the products contribute to the reasons for certification (use of recycled materials, readily recyclable, reduction of packaging wastes) during its consumption stage

4. Test Methods

Certification Criteria		Test and Verification Methods
Environmental Criteria	3.1.1~3.1.3	Verification of Submitted Documents
	3.1.4	Test report by the relevant accredited testing laboratory in accordance to KS M 0016(General Rules for Atomic Absorption Spectrochemical Analysis), KS M 0032(General Rules for ICP Emission Spectrochemical Analysis), and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) ^{note)} .
Quality Criteria	3.2.1~3.2.4	Test report by the relevant accredited testing laboratory or certificate of standards equivalent or higher.
	3.2.5	3.2.5.1 Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.2'
		3.2.5.2 Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.3'

		3.2.5.3	Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.4'
		3.2.5.4	Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.5'
		3.2.5.5	Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.6'
		3.2.5.6	Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.7'
	3.2.5.7	3.2.5.7.1 ~3.2.5.7.2	Verification of test report by the accredited testing laboratory in accordance to 'test method of 3.1 & 3.8'
		3.2.5.7.3~3.2.5.7.8	Verification of Submitted Documents
Consumer Information			Verification of Submitted Documents

Note) test specimen : produce by separating binding tool

4.1 General Matters

4.1.1

One test sample shall be required for each applied product. However, the case that more than one test sample is needed is excepted.

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

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

4.2 Synthetic resin cover

4.2.1

Tensile strength: The collection of test samples is prepared with the same size as the test sample type 1 in diagram 1 of KS M 3001(Testing Methods for Mechanical

Characteristics of Polyethylene Film), then arithmetic means of the value is conducted by testing it at the speed of 300 mm/min by collecting 4 of each so that it comes into the center of folded part.

4.2.2

Tearing strength: The collection of test samples is prepared with the same size as the test sample in diagram 2 of KS M 3001(Testing Methods for Mechanical Characteristics of Polyethylene Film), then arithmetic means of the value is conducted by testing it at the speed of 300 mm/min by collecting 4 of each so that it comes into the center of folded part.

4.2.3

Impact strength

4.2.3.1

Impact surface: Put tile of the following condition on top of the concrete with thickness of over 64 mm.

Classification	Material	Thickness[mm]	Hardness[HS]	Width of Surface[m ²]
Condition	Synthetic Resin	≥ 3	80±10	≥ 0.3

4.2.3.2

Drop product 4 times from the height of 93±5 cm above the impact surface in no particular direction.

4.2.3.3

Examine whether or not splitting or crack occurred on the product surface.

4.3 Moisture and tensile strength of paper cover

4.3.1

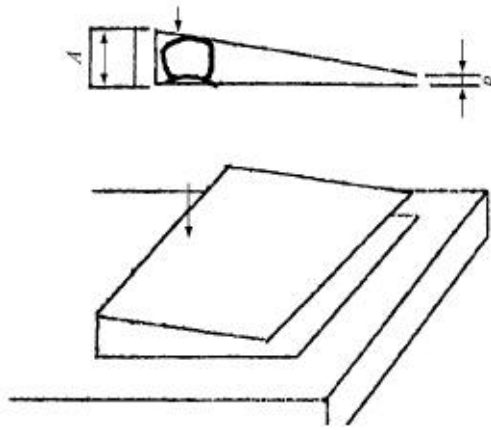
Moisture is tested in accordance to KS M 7023(Paper and board - Determination of moisture content - Oven-drying method).

4.3.2

Tensile strength adopts the minimum value by testing in accordance to KS M ISO 1924-2(Paper and board - Determination of tensile strength properties - Part 2: Constant rate of elongation method)

4.4 Closed state of cover

Put product on top of surface plate, then after naturally covering the cover, measure B

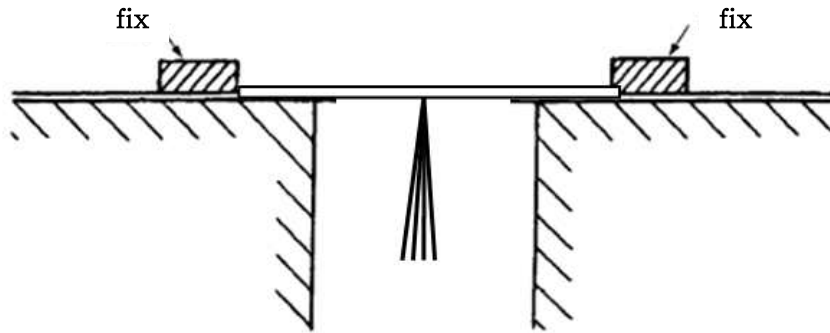


<Figure 1> Testing of Closed State of Cover on width A of the product.

4.5. Binding Performance

4.5.1

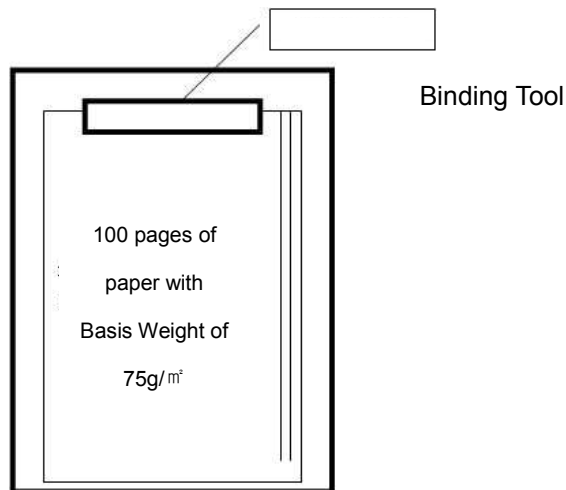
In case of product including transparent inner paper, put 2 pages of paper inside each transparent inner paper, and in case of product binding directly, examine whether or not there is any abnormality when hanging it for 1 minute by fixing the cover and binding 20 pages of paper on it.



<Figure 2> Binding Performance Test (Inner Paper, Bar)

4.5.2

For products binding documents by picking it up with tools such as tweezers and bars, and products binding paper documents by punching holes, bind papers of 1/2 amount of the maximum capacity of the tool so that it is in the air, and examine whether or not there is any abnormality in the binding tool or if the paper falls off from the tool binding



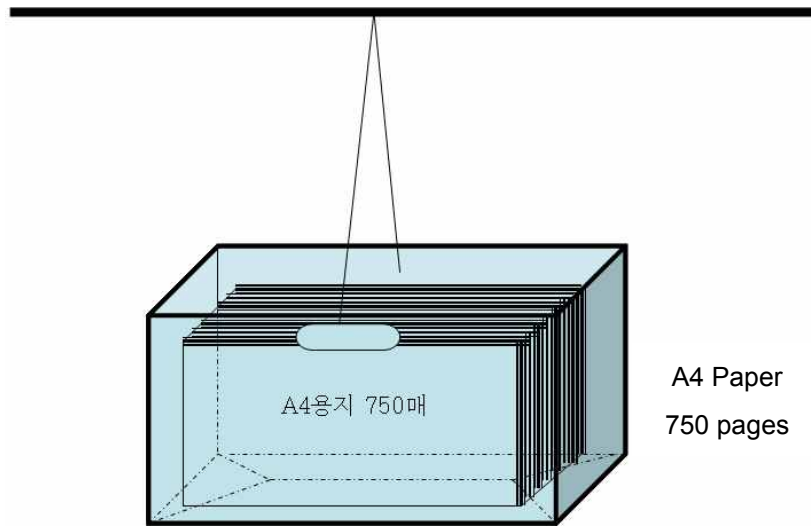
<Figure 3> Binding Performance Test (product binding by picking up paper documents with tools such as tweezers and bars, and paper binding paper documents by punching holes with tools including springs)

it for 1 minute.

4.5.3

Document storage box: In case of putting 750 pages of paper inside the document storage box, then hanging the box in the air by using a string that can withstand the

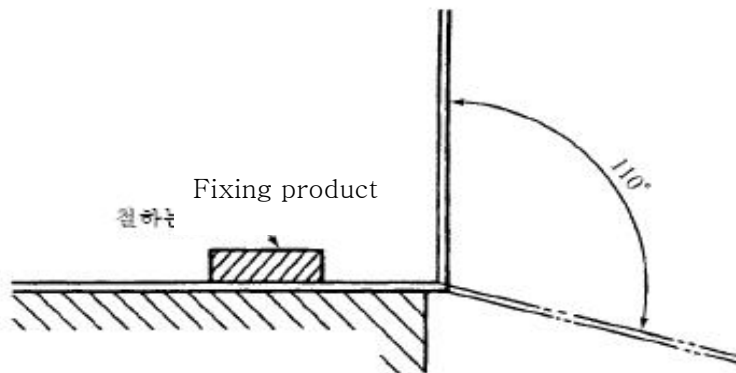
weight, examine whether or not papers put inside the box falls off from the document



<Figure 4> Document Storage Box Storage Performance Test storage box.

4.6 Durability of the bending part

Examine the condition of the bending part by fixing product on the flat surface at the end of the edge, and repeating folding movement of approximately 110° at the speed of 50 times per 1 minute



<Figure 5> Performance Test of Bending Part

4.7 Metal part

4.7.1

Corrosion resistance: Conduct neutral salt spray testing in accordance to KS D 9502(Methods of Neutral Salt Spray Testing (Neutral Salt, Acetic Acid and Cass Test), but examine the changes on the surface after 24 hours.

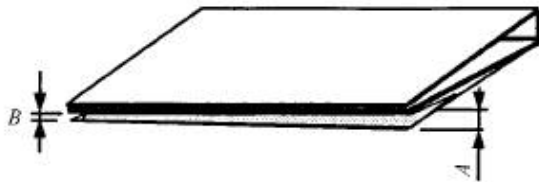
4.7.2

Plating thickness test method: Measure in accordance to KS D ISO 3882(Review of methods of measurement of thickness) and KS D ISO 3497(Metallic coatings - Measurement of coating thickness - X-ray spectrometric methods).

4.8 Curvature of cover

4.8.1.

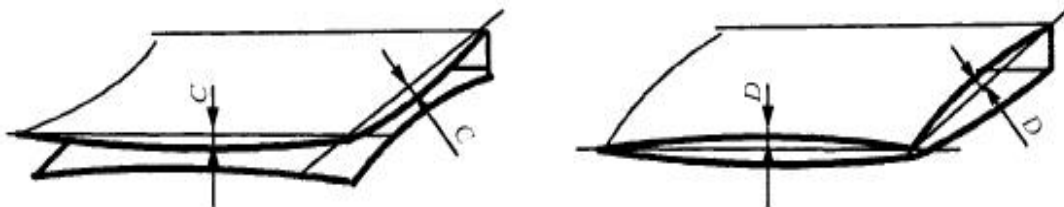
Examine curvature of cover by putting product on top of the surface plate, and measuring the difference between A and B by measuring the gap of A and B part using



<diagram 6> Bending test of paper cover
Vernier calipers.

4.8.2

The curvature of the plastic cover is measured by getting the maximum value from the measured value after putting the product on top of the surface plate and measuring 2



<Figure 7> Bending Test of Synthetic Resin Cover
places of part D or 2 places of part C of the upper cover.

5. Reasons for Certification

“Use of recycled materials, Readily recyclable, Reduction of packaging wastes”

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.