

# EL102. Office Paper

[EL102-1992/8/2012-36]



## 1. Scope

The criteria shall apply to stencil papers or cutting papers mainly used in output devices including papers for plain paper copier, coated papers for color printer, and computer paper, thermal paper, etc. However, , carbonless duplicating paper, laminated paper and thermal paper of which the surface of the heat sensitizing agent layer is coated one more time are excluded.

## 2. Definitions

### 2.1

“Paper for plain paper copier” refers to papers mainly used in copiers, laser and ink jet printers.

### 2.2

“Coated paper for color printers”<sup>1</sup> refers to papers mainly used in color printers or color copiers.

### 2.3

“Coated paper” refers to paper on the surface of which coats metallic pigments in order to improve the printing quality.

### 2.4

“Paper for computer machine”<sup>1</sup> refers to papers mainly used in computer printers as a serial paper.

### 2.5

“Thermal paper” refers to the paper used for surface heating printing, which sprays a heat sensitizing agent such as colorless dye and inorganic acid, on the surface of non-coated paper.

2.6

“Waste Paper” refers to both post-consumer waste paper and pre-consumer waste paper.

2.7

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

2.8

“Pre-consumer waste paper” refers to paper not used as a complete product and occurs in the form of scrap during the subsequent processing after stencil paper is produced. However, exception should be made to papers occurring during the manufacturing process of stencil paper and then putting it again in the same manufacturing process.

2.9

“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.

2.10

“Optical Brightener” refers to material having an effect of appearing whitened and fluorescing with blue or yellow color being reacted by the ultraviolet out of radiated lights by using it.

2.11

“Bleaching” refers to a process for improving the degree of brightness of pulp by reducing or eliminating color of pulp happened from having residual lignin and coloring agents reacted chemically.

### **3. Certification Criteria**

#### **3.1 Environmental Criteria**

### 3.1.1

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

#### 3.1.1.1

Waste paper input rate of papers for plain paper copier shall be 40 % of weight or higher.

#### 3.1.1.2

Waste paper input rate of papers for computer machine and other papers (excluding coated paper for color printer) shall comply with the following requirements by basis weight ranges.

Basis Weight [g/m <sup>2</sup> ]	≤ 80	80 ~ 120	> 120
Waste Paper Input Rate [weight%]	-	≥ 10	≥ 50

#### 3.1.1.3

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

Basis Weight [g/m <sup>2</sup> ]	≤ 70	70 ~ 90	90 ~ 120	> 120
Waste Paper Input Rate [weight%]	-	≥ 20	≥ 30	≥ 50

#### 3.1.1.4

The old paper use rate of thermal paper should satisfy the following standard for the basis weight range.

Basis Weight [g/m <sup>2</sup> ]	≤ 50	50 ~ 70	> 70
Waste Paper Input Rate [weight%]	-	≥ 10	≥ 20

### 3.1.2

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

#### 3.1.2.1

The paint coating amount (excluding thermal paper) should comply with the following standard by paper type.

Paper Types	Coated Papers for Color Printer	Papers for Plain Paper Copier
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		and Other Papers
Amount of pigment [g/m <sup>2</sup> ]	≤ 20	Uncoated or ≤ 12

### 3.1.2.2

Optical brightener shall not be used excessively during the manufacturing process.

### 3.1.2.3

Chlorine-bleaching agent (sodium hypochlorite, chlorine dioxide) shall not be used during the manufacturing process for the purpose of bleaching or dissociation.

### 3.1.2.4

Bisphenol A should not be used as the raw material of thermal paper.

## 3.2 Quality Criteria

### 3.2.1

Papers for plain paper copier shall be satisfied with the following regulations.

#### 3.2.1.1

Smoothness (the front and the back) shall be satisfied with the quality criteria of KS M 7212 [Plain Paper Copier (PPC Paper)]

#### 3.2.1.2

Ash shall be within 15%.

#### 3.2.1.3

Basis weight shall be less than  $\pm 3g$  of the indicated value in the range of 70 ~ 80 g/m<sup>2</sup>.

#### 3.2.1.4

As the paper may be copied up to 100 pages consecutively, such status as the printing quality, overlapping, or paper caught should be equal to or above those status compared to the paper products with the KS logo in accordance with the first type dry process of the KS M 7212 [Plain Paper Copier (PPC Paper)]

### 3.2.2

Tensile strength and tearing strength of papers for computer machine shall satisfy the quality criteria of KS M 7221(Base Paper for Computer Machine Paper).

### 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 Environment 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 Environment 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 Information for Consumers**

Displays certification background of the corresponding product in the product

consumption phase, such as resource saving, use of recycled materials, or less pollutants

Ex) Resource saving via basis weight loss, reduction of air & water pollutants, the usage rate of waste paper, etc.

#### 4. Test Methods

Certification Criteria		Verification Methods	
Environmental Criteria	3.1.1	Verification of submitted documents and the site.	
Quality Criteria	3.1.2	3.1.2.1~3.1.2.3	Verification of submitted documents and the site.
		3.1.2.4	Check the test results of the officially recognized agency or documents to submit, according to U.S. EPA 2550C (Analysis method by HPLC – Ultrasonic wave extraction).
	3.2.1	3.2.1.1~3.2.1.3	Test report by an accredited testing laboratory in accordance with the KS M 7212 [Plain Paper Copier (PPC Paper)] or certificate of the equivalent standards or over
		3.2.1.4	Verification of overlapping or paper caught, printing quality
	3.2.2	Test report by an accredited testing laboratory in accordance with the KS M 7222 (Base Paper for Computer Machine Paper) or certificate of the equivalent standards or over	
	3.2.3 ~ 3.2.4	Test report by an accredited testing laboratory in accordance with the standards or certificate of the equivalent standards or over	
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).

### **5. Reasons for Certification**

#### 5.1

Papers for plain paper copier:

"Resource-saving, less pollutants"

#### 5.2

Other papers (coated papers for color printer, papers for computer machine):

"Resource-saving or Use of recycled materials (only for products used waste paper), less pollutants, reduce the effects on human harmness(only for the related 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.