

EL325. Toys

[EL325-2013/1/2013-23]



1. Scope

The criteria shall apply to toys used in kids' play. However, products specified in [ANNEX] and products with separate certification criteria shall be excluded.

2. Definitions

2.1

"Toys" refers to products intended for children under age 14 to use in their play, and this criteria classifies toys according to the material comprising a toy.

Note 1) Plastic, rubber, textile (including leather and padding material), hardwood, paper and metal materials.

Note 2) If a component made of separate material is 1 % or more by weight or if a raw material accounts for 2 % or more by weight when totaling the weight of the same components, they shall apply to the criteria.

2.2

"Waste wood" refers to waste wood specified in "Classification of Waste Wood and Criteria for Recycling" of 「Enforcement Regulations of Waste Control Act」.

2.3

"Adhesive layer" refers to the surface of a tape or sheet on which adhesive is applied.

2.4

"N-nitrosamine" refers to the following amine compounds with nitroso- (-NO).

CAS No.	Substance
62-75-9	N-nitrosodimethylamine (NDMA)
55-18-5	N-nitrosodiethylamine (NDEA)
621-64-7	N-nitrosodipropylamine (NDPA)
924-16-3	N-nitrosodibutylamine (NDBA)

CAS No.	Substance
100-75-4	N-nitrosopiperidine (NPIP)
930-55-2	N-nitrosopyrrolidine (NPYR)
59-89-2	N-nitrosomorpholine (NMOR)

2.5

“Phthalate plasticizer” refers to a plasticizer used to give flexibility to synthetic resins such as PVC, or used as a solvent for liquid chemical products. It is a compound classified as 1,2-benzenedicarboxylic acid.

2.6

“PAHs(polycyclic aromatic hydrocarbons)” refers to aromatic hydrocarbon with two or more benzene rings.

2.7

“Nanomaterials” refer to materials defined in KS A ISO TS 27687 (Nanotechnologies - Terminology And Definitions For Nano-objects - Nanoparticle, Nanofiber and Nanoplate).

2.8

“Padding materials” refers to materials in hardware to make a product soft or form to the shape of it.

2.9

“Bleaching” refers to making a chemical reaction for residual lignin and coloration material of pulp and consequently removing the color of the pulp or improving its whiteness by reducing the color. Bleaching agents are divided into oxidative bleaching agents and reduction bleaching agents.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

Waste wood and plywood shall not be used with respect to the consumption of resources in manufacturing and the discharge of harmful substances in the stage of use, and for wooden

toys that use hardwood as the main raw material by 50 % or more by weight, the wood shall be one that is certified by a third party regarding the sustainable use of forest resources, or wood that meets the criteria for sustainable forest management according to UNCED forest principles shall be at least 70 % of the product.

3.1.2

The following criteria shall be met in respect to the use of chemical materials in the course of production or the discharge of hazardous materials in the use of products.

3.1.2.1

The following chemical materials shall not be used in the process of manufacturing a product.

a) For the use of coating, surface processing or adding adhesive to materials and products, in the case of using the chemicals, plastic and rubber materials that fall under the following H code category according to UN Globally Harmonized System (GHS) regarding the classification and indication of “Carcinogenic, Mutagenic and Reprotoxic (CMR)” chemical substances as additives.

Note 1) If light sources made of plastic resins are used for products using electricity and power supply, the following criteria shall be met.

Note 2) For each list of substances, EU REGULATION (EC) No 1272/2008 ANNEX VI part 3 (HARMONISED CLASSIFICATION AND LABELLING TABLES) shall tentatively apply.

- Toxic substances:

- H300 : fatal if swallowed
- H301 : toxic if swallowed
- H304 : may be fatal if swallowed and enters airways
- H310 : fatal in contact with skin
- H311 : toxic in contact with skin
- H330 : fatal if inhaled
- H331 : toxic if inhaled
- H370 : causes damage to organs
- H371 : may cause damage to organs
- H372 : causes damage to organs
- H373 : May cause damage to organs

- Carcinogenic, mutagenic and reprotoxic substances :

- H340 : may cause genetic defects
- H341 : suspected of causing genetic defects

- H350 : may cause cancer
- H350i : may cause cancer by inhalation
- H351 : suspected of causing cancer
- H360F : may damage fertility
- H360D : may damage the unborn child
- H360FD : may damage fertility, may damage the unborn child
- H360Fd : may damage fertility, suspected of damaging the unborn child
- H360Df : may damage the unborn child, suspected of damaging fertility
- H361f : suspected of damaging fertility
- H361d : suspected of damaging the unborn child
- H362 : may cause harm to breast-fed children
- Allergies substances :
 - H334 : may cause allergy or asthma symptoms or breathing difficulties if inhaled

b) The materials that fall under “Group 1”, “Group 2A” and “Group 2B”, which are categories for carcinogenic substances defined by International Agency for Research on Cancer (IARC)

c) Fragrance and nanomaterials as additives or surface treatment agents for product processing

d) Allergenic disperse dyes, carcinogenic dyes and other dyes specified in <Attached Table>

e) Flame retardants as the ingredients of adhesive specified in <Attached Table>

f) Optical brighteners as an additive for textile and paper products

g) 1-toxylsemicarbazide (CAS No.10396-10-8) and azodicarbonamide (CAS No.123-77-3) shall not be used as additives for foamed plastics or synthetic leather products, and the content of formamide and dimethylformamide (DMF) shall be 10 mg/kg or below.

h) In plastic or textile products, total content of alkylphenol ethoxylates (APEOs) and alkylphenols (APs) shall not exceed 100 mg/kg.

Classification	Substance
Alkylphenol ethoxylates	Octylphenol ethoxylate
	Nonylphenol ethoxylate
Alkylphenols	Octylphenol
	Nonylphenol

3.1.2.2

Adhesives used for adhesive layer shall not contain organic solvent, or if adhesives are the ecolabeled one based on “Paper Adhesive Tape and Paper Adhesive Sheet (EL103)” of the certification criteria by subject for ecolabel, they shall be considered to meet this requirement.

3.1.2.3

Plastic and rubber used in a product shall meet the following criteria.

a) Lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr⁶⁺) and their compounds and organotin compounds (TBT, TPT) shall not be used as additives.

b) Flame retardants shall not be used specified in <Attached table>, and sum of each content of polybromodiphenyls(PBBs), polybromodiphenyl ethers(PBDEs), tetrabromobisphenol A(TBBPA) and hexabromocyclododecane(HBCD) shall not exceed 100 mg/kg.

Note) If the content of total Br is 30 mg/kg or below, it shall be considered that this criteria is met.

c) If polyvinyl chloride (PVC) is used, the following criteria shall be met.

- ① The content of vinyl chloride monomer shall be 1 mg/kg or below.
- ② Phthalate plasticizers specified in <Attached Table> shall not be used and the sum of the content of phthalate plasticizer contained in a product shall not exceed 0.1 % by weight.

d) If blowing agent is used, its blowing agents shall be substances with ODP of 0 and GWP of 3 000 or below.

e) PAHs contained in materials that use carbon black shall meet the following criteria.

Item [mg/kg]	Toys by user age	
	Less than 36 months	36 months and above
benzo[a]pyrene	0.2 or less	1 or less
PAHs according to <Attached Table>	0.2 or less	10 or less

f) If rubber is used, the content of nitrosamines shall not exceed 0.01 mg/kg and the content of nitrosamine-forming substances shall be 0.1 mg/kg or less. However, any part that a child's mouth cannot come in contact with shall be excluded.

3.1.2.4

Textiles used in a product shall meet the following criteria.

a) Harmful substances of a product (excluding padding material) shall meet the following criteria.

Test Item		Criteria
pH ^{Note1)}		4.0 - 7.5
Formaldehyde [mg/kg]		20 or less
Chlorinated phenol [mg/kg]	PCP (pentachlorophenol)	0.05 or less
	TeCP (tetrachlorophenol) ^{Note2)}	0.05 or less
Harmful elements [mg/kg]	Antimony (Sb)	30.0 or less
	Arsenic (As) ^{Note4)}	0.2 or less
	Lead (Pb)	0.2 or less
	Cadmium (Cd)	0.1 or less
	Total chromium (Cr)	1.0 or less
	Hexavalent chromium (Cr ⁶⁺)	0.5 or less
	Cobalt (Co)	1.0 or less
	Copper (Cu)	25.0 or less
	Nickel (Ni)	1.0 or less
	Mercury (Hg) ^{Note4)}	0.02 or less
Perfluorinated compounds ^{Note3)}	PFOS [$\mu\text{g}/\text{m}^2$]	1.0 or less
	PFOA [mg/kg]	0.1 or less
OPP(o-phenyl phenol) [mg/kg]		50.0 or less
Sum of residual pesticides according to <Attached Table> [mg/kg] ^{Note4)}		0.5 or less
Organotin compounds ^{Note5)} [mg/kg]	TBT (tributyltin)	0.5 or less
	TPT (triphenyltin)	0.5 or less
	DBT (dibutyltin)	1.0 or less
	DOT (dioctyltin)	1.0 or less
Azo dye [mg/kg] ^{Note6)}		20 or less (each)
Chlorinated benzene and chlorinated toluene according to <Attached Table> [mg/kg] ^{Note7)}		1.0 or less
Dimethyl fumarate for leather [mg/kg]		0.1 or less

Note 1) Coating and laminate leather products shall meet the criterion pH 3.5-9.0.

Note 2) Sum of the contents of 2,3,5,6-tetrachlorophenol (CAS No.935-95-5), 2,3,4,6-tetrachlorophenol (CAS No.58-90-2), and 2,3,4,5-tetrachlorophenol (CAS No.4901-51-3)

Note 3) Apply if water and oil repellent finishing or coating has been applied.

Note 4) Apply if natural fiber has been used.

Note 5) Apply if coating or printing has been applied (Printed products that do not use pigment and resin but only dye are not regarded to have printing).

Note 6) Apply if dyeing has been applied.

Note 7) Apply to dyed synthetic fiber.

b) Padding materials of 1 % or more by weight shall meet the following criteria.

- ① The content of formaldehyde shall be 30 mg/kg or less.
- ② Dyes and pigments shall not be used.
- ③ For products containing polyester fiber, the content of antimony (Sb) shall be 260 mg/kg or less.

c) A product shall not have any unique odor, and in the odor assessment, the grade shall be Grade 3 or below.

3.1.2.5

Cellulose materials used in a product shall meet the following criteria.

a) The following materials shall not be used as preservatives of wood in a product.

- ① In the classification of hazardous preservatives defined by WHO, the preservatives that fall under extremely hazardous (Class 1a) and highly hazardous (Class 1b).
- ② Active materials based on creosote oil.
- ③ Chromium (Cr) or Arsenic (As) compounds.

b) In the production of paper used in a product, chlorinated bleaching agents (hypochlorite, chlorine dioxide, etc.) shall not be used for dissociation or bleaching.

3.1.2.6

Inks used in printing on paper shall be the ecolabeled one based on "Printing Inks and Writing Inks (EL602)" of the certification criteria by subject for ecolabel, or meet the '3.1 Environmental Criteria' of EL602.

3.1.2.7

Nickel emissions of metal materials that can come in contact with skin shall be 0.5 $\mu\text{g}/\text{cm}^2$ per week or less.

3.1.2.8

With regard to the photobiological safety of LED used in a product, the level of luminous radiation exposure in normal use and predictable malfunction shall meet the following criteria.

- a) Any LED with the peak wavelength of maximum radiation of less than 315 nm shall not be used in toys.
- b) Total radiation level in the width of 315 - 400 nm of the spectrum of LED shall meet the criteria specified in “4.3.2 Near-UV Exposure Limit” and “6.1.1 Exceptional Group” of KS C IEC 62471 (Photobiological Safety of Lamps and Lamp Systems).
- c) The blue light hazard exposure limit shall meet the criteria specified in “4.3.4 Blue Light Hazard Exposure Limit” of KS C IEC 62471 (Photobiological Safety of Lamps and Lamp Systems).
- d) If two or more LEDs in a line are used, the emissions of the entire LEDs arranged at intervals of 40 mm or less shall not exceed the criteria specified in b) and c).

3.1.3

With regard to the recycling of products in the process of manufacturing or the recyclability of products in the stage of disuse, packaging materials shall meet the following criteria.

3.1.3.1

Halogenated plastics such as polyvinyl chloride (PVC) shall not be used.

3.1.3.2

For plastics with the area of flat parts of 200 mm² or higher, each part that can be separated shall have the indication of the classification of quality of material so that separation and collection can be easily conducted in disusing them.

3.1.3.3

Packaging space ratio and the number of packaging shall meet the criteria specified in ‘Toys and Dolls’ of [Attached Table 1] of the 「Regulations on the Criteria for Packaging Material and Method of Products」 .

3.2 Quality Criteria

3.2.1

A product shall apply to the criteria for “Toys” of the 「KC Safety Criteria」 according to the 「Quality Management and Safety Control of Industrial Products Act」. However, items related to “3.1 Environmental Criteria” shall be excluded.

3.2.2

Color fastness (rubbing, perspiration, water, and resistance against saliva and perspiration) of a product that uses textile material shall meet the following criteria.

Test Item		Criteria	
Color fastness [Grade]	Rubbing ^{Note)}	Dry	4 or above
	Perspiration	Acid	3 - 4 or above
		Alkaline	3 - 4 or above
	Water		3 or above
	Resistance to saliva and perspiration		Durable

Note) Dyed products using pigment shall be 3 or above.

3.2.3

If the national standards for the relevant product include Korean Standard, it shall meet the criteria for quality or performance of the relevant standard. However, the items related to “3.1 Environmental Criteria” shall be excluded.

3.2.4

If the national standards for the relevant product do not include Korean Standard, the product shall meet the criteria for quality and performance of the standard according to the following order. However, the items related to “3.1 Environmental Criteria” shall be excluded, and if Eco-Label Criteria Establishment Committee decides the criteria to be applied are not reasonable for the characteristics of the product, the product shall meet the criteria (test items, test method, reference values, etc.) modified to suit the characteristics of the product by the committee.

3.2.4.1

National standards other than Korean Standard

3.2.4.2

Foreign standards or international standards for the quality of the relevant product

3.2.4.3

Domestic and foreign groups' standards quoted by the current ecolabel subject products and certification criteria

3.2.4.4

Private-sector standards equivalent to or higher than, national standards in the industrial area of the relevant product

3.3 Information for Consumers : Indication of matters on the certification reasons (reduction in harmful substances, reduced human toxicity) to which the relevant product contributes in the stage of consumption

4. Test Method

Criteria Item			Test and Verification Method
Envir. Criteria	3.1.1		Verification of submitted documents
	3.1.2.1	a)-f)	Verification of submitted documents
		g)	Verification of submitted documents and the GC-MSD ^{Note 1)} analysis
		h)	Verification of submitted documents and the LC-MSD, GC-MSD ^{Note 2)} analysis
	3.1.2.2		Verification of submitted documents or the test report of authorized institute according to "3.1 Environmental Criteria" of "Paper Adhesive Tape and Paper Adhesive Sheet (EL103)"
	3.1.2.3	a)	<ul style="list-style-type: none"> • Verification of submitted documents and • Test report of authorized institute according to applicable KC Safety Criteria or a certificate of equivalent or higher criteria
		b)	Verification of submitted documents and the test report of

Criteria Item			Test and Verification Method
			<p>authorized institute according to the following test method or one equivalent to it.</p> <ul style="list-style-type: none"> ▪ PBBs, PBDEs: KS C IEC 62321 (Procedures for the Determination of Levels of Six Regulated Substances(Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers) in Electrotechnical Products) ▪ TBBPA, HBCD : KS M 1072 (Determination of TBBPA (Tetrabromobisphenol-A) and HBCD (Hexabromocyclododecane) in Polymer Materials) ▪ Total Bromide (Br): KS M 0180 (Standard Test Method for Halogen(F, Cl, Br) and Sulfur Content by Oxidative Pyrohydrolytic Combustion Followed by Ion Chromatography Detection(Combustion Ion Chromatography – CIC))
			<p>c) ① Verification of submitted documents and the test report of authorized institute according to the test method of KS M 0031 (General Rules for Gas Chromatographic Analysis)</p> <p>② Verification of submitted documents and the test report of authorized institute according to KS M 1991 (Determination of Phthalates Contents in Polymer Materials)</p>
			d) Verification of submitted documents
			e) Verification of submitted documents and test report of authorized institute according to '[Attached Table 2] Test Method for the Content of Polycyclic Aromatic Hydrocarbons in Kids' Products' of 「Application of Test Method for Exposure of PCBs and PAHs included in Kid's Products and Guidelines for Management」 of the Enforcement Decree of the 「Environmental Conservation Act 」
			f) Verification of submitted documents and the test report of authorized institute according to 「6. Criteria and Standards for Apparatus, Container and Package」 of Korean Food Standards Index.
	3.1.2.4	a)	<p>Verification of submitted documents and the test report of authorized institute according to the following test method or certificates for equivalent or higher criteria.</p> <ul style="list-style-type: none"> ▪ pH: KS K ISO 3071 (Textiles-Determination of pH of Aqueous Extract) ▪ Formaldehyde: KS K ISO 14184-1 (Textiles - Determination of Formaldehyde - Part 1: Free and Hydrolyzed Formaldehyde (Water Extraction Method))

Criteria Item			Test and Verification Method
			<ul style="list-style-type: none"> ▪ Chlorinated phenols (PCP, TeCP): KS K 0733 (Test Method for Determination of the Pentachlorophenol Content in Textiles and/or Leathers) ▪ Harmful elements: KS K 0731 (Test Method for the Determination of Extractable Heavy Metals in Textiles) ▪ Perfluorinated compounds <ul style="list-style-type: none"> - PFOS, PFOA: 'EM201. Test Method for the Determination of PFOS and PFOA in Articles' ▪ OPP, chlorinated benzene and chlorinated toluene: MSD (mass spectrometer), ECD (electron capture detector) ▪ Residual pesticide: KS K 0732 (Test Method for the Determination of Pesticides in Textiles) ▪ Organotin compounds (TBT, TPT, DBT, DOT): KS K 0737 (Test Method for the Determination of Selected Organotin Compounds in Textiles) ▪ Azo dyes: KS K 0147 (Test Method for Determination of Aryl Amine Level on the Dyestuff and Dyed Products) or KS K 0734 (Test Method for the Determination of the Content of Aryl Amine of Polyester) ▪ Dimethyl fumarate: ANNEX 4.B (Test for the Determination of the Content of Dimethyl Fumarate) of requirements for 'Fiber Products for Kids' in 「KC Safety Criteria」
		b)	① Verification of submitted documents and test report of authorized institute according to KS K ISO 14184-1 [Textiles - Determination of Formaldehyde - Part 1: Free and Hydrolyzed Formaldehyde (Water Extraction Method)]
	② Verification of submitted documents		
	③ Test report of authorized institute according to KS K 0731 (Test Method for the Determination of Extractable Heavy Metals in Textiles)		
		c)	Test report of authorized institute according to "3.1 and 3.2 Test Method"
	3.1.2.5	a)	①~ ③ Verification of submitted documents
		b)	Verification of submitted documents and the site
	3.1.2.6		Verification of submitted documents and the test report of authorized institute according to "3.1 Environmental Criteria" of "Printing Inks and Writing Inks (EL602)"
	3.1.2.7		Verification of submitted documents and test report of

Criteria Item			Test and Verification Method
	3.1.2.8		authorized institute according to KS K 0853 (Test Method for Determination of Nickel Release from Products intended to come into Direct and Prolonged Contact with the Skin: Alternate Exposure) ^{Note 3)} or equivalent or higher criteria
		a)	Verification of submitted documents
		b)~d)	Verification of submitted documents and test report of authorized institute according to “4.3.2 Near-UV Exposure Limit” and “4.3.4 Blue Light Hazard Exposure Limit” of KS C IEC 62471 (Photobiological Safety of Lamps and Lamp Systems)
	3.1.3		Verification of submitted documents
Quality Criteria	3.2.1		Test report of authorized institute according to the relevant KC Safety Criteria or a certificate for equivalent or higher standard
	3.2.2	Color Fastness	<p>Test report of authorized institute according to the following test method or equivalent one</p> <ul style="list-style-type: none"> ▪ Rubbing: KS K 0650 (Test Method for Color Fastness to Rubbing: Crock Meter Method), KS K ISO 105-A01 (Textiles – Tests for Color Fastness – Part A01: General Principles of Testing) ▪ Perspiration: KS K ISO 105-E04 (Textiles – Tests for Color Fastness – Part E04: Color Fastness to Perspiration) and KS K ISO 105-A01 (Textiles – Tests for Color Fastness – Part A01: General Principles of Testing) ▪ Water: KS K ISO 105-E01 (Textiles – Tests for Color Fastness – Part E01: Color Fastness to Water) and KS K ISO 105-A01 (Textiles – Tests for Color Fastness – Part A01: General Principles of Testing) ▪ Resistance to saliva and perspiration: KS K 0112 (Test Method for Resistance of Infant Products to Saliva and Perspiration)
	3.2.3~4		Test report of authorized institute according to the relevant standards or a certificate for equivalent or higher standard
Consumer Information			Verification of submitted documents

Note 1) Sample extraction [Soxhlet Extraction – EPA 3540C]

Note 2) Alkylphenol ethoxylates: Extraction of test piece according to ISO/TC 38/SC N2701 method and LC-MSD analysis

Alkylphenols: Extraction of test piece through methanol and GC-MSD analysis

Note 3) If painted, pretreatment shall be carried out according to EN 12472 (Method for the Simulation

Criteria Item	Test and Verification Method
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of Wear and Corrosion for the Detection of Nickel Release from Coated Items) before conducting test.

4.1 General Matters

4.1.1

In principle, the number of test samples shall be one per product, unless more than one test sample is required.

4.1.2

For test samples, consigned ecolabel certification institute shall conduct a random sampling of products on the market or ones stored in production fields.

4.1.3

Rounding-off of test results shall be conducted according to KS Q 5002 (Statistical Data Analysis Method – Part 1: Statistical Description of Data).

4.2 Odor Test Method

Note) This method is the one modified and arranged so as to apply the Swiss national standards SNV 195 651 (Textiles: Determination du Degagement d'odeurs par des Finissages) to this certification criteria.

4.2.1 Selection and Training of Panel

4.2.1.1

Panel shall be composed of six odor analysis agents equivalent to the criteria for the qualification of judges specified in “Odor Process Test Method” of “「Offensive Odor Control Law」”.

4.2.1.2

The report shall include the list of the members of the panel and the details on the training given to the panel.

4.2.2 Preparation of Test Pieces

4.2.2.1

Cut a plane test piece into a round with a diameter of 13 cm or a square (12 cm x 12 cm). The weight of the test piece shall be (40 ± 2) g.

4.2.2.2

Loosen the cut sample or put it in the form of thread.

4.2.3 Mounting of Test Pieces

4.2.3.1

Test pieces shall be piled on a ceramic or glass saucer naturally so that they do not stick together. At this time, if the test piece is a square-shaped one, fold its edge upward.

4.2.3.2

Put 300 mL of saturated solution of sodium hydrogen carbonate into the bottom of the drier or in a ceramic bowl, and put the test piece specified in "4.2.3.1" into the drier of the following standard.

Internal diameter [cm]	Internal height [cm]	Tank capacity [mL]	Air capacity [L]
14	10	300	1.7

Note) If a drier that does not meet the defined standards is used, the drier shall have the capacity of 40mL per 1 g of sample.

4.2.3.3

Seal up the drier and put it in a thermo-hygrostat that can maintain the temperature (37 ± 2) °C and the relative humidity 90 %.

4.2.4 Assessment

4.2.4.1

Take the drier out of the thermo-hygrostat after 15 hours and open the cover and conduct odor assessment with the test piece in the drier.

4.2.4.2

If you test multiple test pieces consecutively, you need to rest your nose with fresh air at least for 15 minutes between assessing the odor of each test piece.

4.2.4.3

General Conditions

- a) Judgment of odors shall be conducted in a place at (20 ± 2) °C without a draft and possibly without other odors.
- b) The panel shall stay in a place without any odor for at least 30 minutes before commencing the assessment of odor. At this time, the panel shall avoid any action that may affect their odor assessment, such as smoking.

4.2.5 Evaluation and Judgment

4.2.5.1

Test for Unusual Odor

- a) If you can smell any unusual odor, choose "Odor", and if not, choose "No Odor".

Note) "Unusual odor" means any odor that usually does not occur from fiber products. For example, moldy odors, petroleum-based solvent odors and insect repellent odors are unusual odors.

- b) For judgment, if four or more judges choose "No Odor" in the result of independent assessment of the six judges, the product shall be judged to have no unusual odor.

4.2.5.2

Odor Level Test

- a) For odor levels, the evaluation shall be conducted according to the following odor level table.

Odor level	Description
1	No odor
2	Odor is recognized but not identified
3	Odor is identified but is usually found in fiber products
4	Strong odor
5	Unbearable odor

b) Judgment shall be based on the odor level determined by adding standard error to the average of the odor levels assessed independently by six judges.

5. Certification Reasons:

“Reduction in Harmful Substances, Reduced Human Toxicity”

<Attached Table> List of Chemical Materials

(related to '3.1 Environmental Criteria' of "3. Certification Criteria")

1. Dyestuffs classified as allergenic

CAS No.	Substance	CAS No.	Substance
2475-45-8	C.I. Disperse Blue 1	12223-33-5	C.I. Disperse Orange 37
2475-46-9	C.I. Disperse Blue 3	13301-61-6	C.I. Disperse Orange 76
3179-90-6	C.I. Disperse Blue 7	2872-52-8	C.I. Disperse Red 1
3860-63-7	C.I. Disperse Blue 26	2872-48-2	C.I. Disperse Red 11
12222-75-2	C.I. Disperse Blue 35	3179-89-3	C.I. Disperse Red 17
12222-97-8	C.I. Disperse Blue 102	119-15-3	C.I. Disperse Yellow 1
12223-01-7	C.I. Disperse Blue 106	2832-40-8	C.I. Disperse Yellow 3
61951-51-7	C.I. Disperse Blue 124	6373-73-5	C.I. Disperse Yellow 9
23355-64-8	C.I. Disperse Brown 1	12236-29-2	C.I. Disperse Yellow 39
2581-69-3	C.I. Disperse Orange 1	54824-37-2	C.I. Disperse Yellow 49
730-40-5	C.I. Disperse Orange 3		

2. Dyestuffs classified as carcinogenic

CAS No.	Substance	CAS No.	Substance
3761-53-3	C.I. Acid Red 26	573-58-0	C.I. Direct Red 28
569-61-9	C.I. Basic Red 9	2475-45-8	C.I. Disperse Blue 1
632-99-5	C.I. Basic Violet 14	82-28-0	C.I. Disperse Orange 11
1937-37-7	C.I. Direct Black 38	2832-40-8	C.I. Disperse Yellow 3
2602-46-2	C.I. Direct Blue 6		

3. Other banned dyestuffs

CAS No.	Substance	CAS No.	Substance
85136-74-9	C.I. Disperse Orange 149	6250-23-3	C.I. Disperse Yellow 23

4. Azo dyestuffs

Note) Dyes that have azo group (-N=N-) as chromophores, which are the compounds that can be degraded into the following amines.

CAS No.	Substance	CAS No.	Substance
92-67-1	4-aminodiphenyl	95-69-2	4-chloro-o-toluidine
92-87-5	benzidine	91-59-8	2-naphthylamine
97-56-3	o-aminoazotoluene	101-14-4	4,4-methylene-bis-(2-chloroanilene)
99-55-8	2-amino-4-nitrotoluene	101-80-4	4,4-oxideaniline
106-47-8	p-chloroaniline	139-65-1	4,4-thiodianiline
615-05-4	2,4-diaminoanisole	95-53-4	o-toluidine
101-77-9	4,4-diaminodiphenylmethane	95-80-7	2,4-toluylenediamine
91-94-1	3,3-dichlorobenzidine	137-17-7	2,4,5-trimethylaniline
119-90-4	3,3-dimethoxybenzidine	90-04-0	o-anisidine
119-93-7	3,3-dimethylbenzidine	95-68-1	2,4-xylidine
838-88-0	3,3-dimethyl-4,4'-diaminodiphenylmethane	87-62-7	2,6-xylidine
120-71-8	p-cresidine	60-09-3	4-aminoazobenzene

5. Flame retardants

CAS No.	Substance	CAS No.	Substance
59536-65-1	PBBs: polybrominated biphenyls	25637-99-4	HBCD: hexabromocyclododecane
126-72-7	TRIS: tri-(2,3-dibromopropyl)- phosphate	85535-84-8	short chain chlorinated paraffins (C10 ~ C13)
545-55-1	TEPA: tris-(aziridiny)-phosphin oxide	115-96-8	TCEP: tris(2-chloroethyl)- phosphate
32534-81-9 32536-52-0 1163-19-5	PBDEs: polybromodiphenyl ethers	79-94-7	TBBPA: tetrabromobisphenol A

6. Phthalates

CAS No.	Substance	CAS No.	Substance
28553-12-0 68515-48-0	DINP: di-iso-nonylphthalate	84-69-5	DIBP:di-iso- butylphthalate
117-84-0	DNOP: di-n-octylphthalate	71888-89-6	DIHP:Di-C6-8-branched alkylphthalates
117-81-7	DEHP:di-(2-ethylhexyl) phthalate	68515-42-4	DHNUP:Di-C7-11-branched alkylphthalates
26761-40-0 68515-49-1	DIDP: di-iso-decylphthalate	84-75-3	DHP:Di-n-hexylphthalate
85-68-7	BBP: butyl benzylphthalate	117-82-8	DMEP:Di-(2-methoxyethyl)- phthalate
84-74-2	DBP: di-butylphthalate		

7. Residual pesticides

CAS No.	Substance	CAS No.	Substance
93-76-5	2,4,5-T	51630-58-1	fenvalerate
94-75-7	2,4-D	76-44-8	heptachlor
86-50-0	azinophosmethyl	1024-57-3	heptachlorepoxyde
2642-71-9	azinophosethyl	118-74-1	hexachlorbenzene
309-00-2	aldrin	319-84-6	hexachlorcyclohexane, α -
4824-78-6	bromophos-ethyl	319-85-7	hexachlorcyclohexane, β -
2425-06-1	captafol	319-86-8	hexachlorcyclohexane, δ -
63-25-2	carbaryl	465-73-6	isodrine
57-74-9	chlordane	4234-79-1	kelevane
6164-98-3	chlordimeform	143-50-0	kepone
470-90-6	chlorfenvinphos	58-89-9	lindan
56-72-4	coumaphos	121-75-5	malathion
68359-37-5	cyfluthrin	94-74-6	MCPA
91465-08-6	cyhalothrin	94-81-5	MCPB
52315-07-8	cypermethrin	93-65-2	mecoprop
78-48-8	DEF	10265-92-6	metamidophos
52918-63-5	deltamethrin	72-43-5	methoxychlor
53-19-0 72-54-8	DDD's	2385-85-5	mirex

CAS No.	Substance	CAS No.	Substance
3424-82-6 72-55-9	DDEs	6923-22-4	monocrotophos
50-29-3 789-02-6	DDTs	56-38-2	parathion
333-41-5	diazinon	298-00-0	parathion-methyl
120-36-2	dichlorprop	72-56-0	perthane
141-66-2	dicrotophos	7786-34-7	phosdrin/mevinphos
60-57-1	dieldrin	31218-83-4	propethamphos
60-51-5	dimethoate	41198-08-7	profenophos
88-85-7	dinoseb and salts	13593-03-8	quinalphos
959-98-8	endosulfan, α -	8001-50-1	strobane
33213-65-9	endosulfan, β -	297-78-9	telodrine
72-20-8	endrin	8001-35-2	toxaphene
66230-04-4	esfenvalerate	1582-09-8	trifluralin

8. Chlorinated benzenes and toluene

CAS No.	Substance	CAS No.	Substance
-	dichlorobenzenes	-	trichlorobenzenes
-	tetrachlorobenzenes	-	pentachlorobenzenes
-	hexachlorobenzenes	-	chlorotoluenes
-	dichlorotoluenes	-	trichlorotoluenes
-	tetrachlorotoluenes	-	pentachlorotoluenes

9. Polycyclic aromatic hydrocarbons; PAHs

CAS No.	Substance	CAS No.	Substance
83-32-9	acenaphtene	218-01-9	chrysene
208-96-8	acenaphthylene	53-70-3	dibenz[a,h]anthracene
120-12-7	anthracene	206-44-0	fluoranthene
56-55-3	benzo[a]anthracene	86-73-7	fluorene
50-32-8	benzo[a]pyrene	193-39-5	indeno[1,2,3-c,d]pyrene
205-99-2	benzo[b]fluoranthene	91-20-3	naphthalene
191-24-2	benzo[g,h,i]perylene	85-01-8	phenanthrene
207-08-9	benzo[k]fluoranthene	129-00-0	pyrene
205-82-3	benzo[j]fluoranthene	192-97-2	benzo[e]pyrene

[ANNEX] Products Not Included in the Category of Toys

1. Kid's tricycles, strollers, baby walkers
2. Sling shot
3. Darts with a metal end
4. Public playground apparatuses
5. Air rifles and air pistols using compressed air and gas
6. Kites (Completed kites are not included in toys but kite-making products for kids comprising materials for making a kite are considered to be a toy.)
7. Model assembly, hobby items and craft items. Completed products mainly have the purpose other than play.
8. Sporting apparatuses and equipment, camp apparatus, sports goods, musical instruments and furniture. However, their imitations are regarded to be toys. For example, a clear difference between musical instruments or sports goods and their imitation toys is recognized. Whether the product is an imitation toy or not shall be determined by considering normal use, reasonably predictable misuse and the intention of manufacturer or seller.
9. Airplane models, rocket models, boat models and car models that are propelled by a combustion engine. However, their imitations are regarded to be toys.
10. Collectibles that are not for kids aged less than 14 (folk dolls, decorative dolls and other similar products)
11. Holiday decorations (ex: Christmas decorations)
12. Gear used for kids to float on water or learn swimming, such as waterside excursion gear for deep water, swimming chair and swimming aid
13. Toys installed for commercial purposes in public places (such as arcades and shopping centers)
14. Puzzles with 500 or more pieces for experts or puzzles without a picture
15. Fireworks products containing a percussion primer that is not especially designed for toys.
16. Products with the element of heating that are designed to be used as educational material under adult supervision
17. Steam engines
18. Video toys that operate at nominal voltage exceeding 24V and are able to be connected to a video screen
19. Pacifier
20. Fire extinguisher reproduction
21. Electric ovens, irons or other functional products working at nominal voltage exceeding 24V
22. Archery bows that are spread over 120cm
23. Fashion jewelry items that kids can wear (necklace, bracelet, earring, ring and anklet)

24. Radio-control model products for adults (cars, airplanes, helicopters, boats, yachts and motorcycles) that can be fixed or improved by user as their parts can be purchased separately
25. Cosmetic products or similar ones according to Cosmetics Act, which can be used on human skin (Products to decorate or beautify dolls and toys are also included.)
26. Kids' books (Books with play function are included in the category of toys.)
27. Kickboards (However, kickboard without a bearing on its wheels is included in the category of toys.)
28. Helmets, swimming goggles, sunglasses and other eye protectors
29. Transformers for toys
30. Software and storage media such as CDs for leisure and entertainment such as computer games.
31. Electronic equipment such as personal computers and related peripheral devices designed for kids
32. Toys that can come into contact with food

Common Criteria

1. Ecolabelled 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 during 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 ecolabelling 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 appropriate parts 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 appropriate parts 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 protect consumer, the applicant for ecolabel and the holder of ecolabel 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 to 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.