



EL316. Leather Products 【EL316-2014/1/2014-53】

1. Scope

The criteria shall apply to leather fabrics made by processing raw-hide as well as products made mainly of the aforementioned leather fabrics. However, those products classified as recombinant leather or synthetic leather shall not be subject to this criteria.

Note 1) The criteria shall apply to those materials for which the share of non-leather material is over 5% in weight.

Note 2) This criteria is also applied to those identical parts whose Total combined share is over 5% of the Total weight.

2. Definitions

2.1

“Leather Fabric” refers to a leather fabric made of subsidiary materials that were left after producing meat from livestock, as specified in the “Act on Management of Hygiene of Livestock Products,” whereas “Leather Product” refers to those products with a Total share of leather fabrics over 60% of Total product weight.

2.2

“Mulesing” refers to an act of cutting out skin and meat of lamb at the same time to prevent an infection of parasites.

2.3

“Phthalate plasticizer” is a plasticizer used to provide flexibility to synthetic resins, such as polyvinyl chloride resins (PVCs), or used as a solvent for liquid chemical products. It is a compound classified as 1,2-benzenedicarboxylic acid.

2.4

“Nano-materials” are materials defined in KS A ISO TS 27687 (Nanotechnology-Terms and Definitions of Nanomaterials - Nanoparticle, Nanofiber, Nanoplate).

2.5

“Padding materials” refers to a substance inserted into the bedding to make it soft and comfortable or to form the desired shape.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

Leather fabrics that have gone through unethical processing such as mulesing should not be used in the leather product.

3.1.2

With respect to the use of chemical materials or the emission of hazardous substances, the following criteria must be satisfied:

3.1.2.1

Chemical substances in the list shown below should not be added or used during the manufacturing of the product:

3.1.2.1.1

Nano materials used as an additive or a surface treatment agent for processing products

3.1.2.1.2

Allergenic disperse dyes, carcinogenic dyes and other dyes in accordance with the attached Table

3.1.2.1.3

The following substances should not be used as auxiliary substances in the production process.

CAS No.	Compound
68783-78-8	dimethyl ammonium chloride
76723-98-3	distearyl dimethyl ammonium chloride
61789-80-8	dihydrogenated tallow dimethyl ammonium chloride
60-00-4	ethylene diamine tetraacetic acid
139-13-9	Nitrilotriacetic acid
67-43-6	Diethylene thiamine penta acetate

3.1.2.2

Hazardous ingredients in the fabrics (leather, fiber) used for products should satisfy the following criteria.

Test Item		Criteria		
pH ¹⁾		4.0 ~ 7.5		
Formaldehyde [mg/kg]		300		
Chlorinated phenols [mg/kg]	PCP(pentachlorophenol)	0.05		
	TeCP(tetrachlorophenol) ²⁾	0.05		
Hazardous elements [mg/kg]	Antimony (Sb)	10.0		
	Arsenic (As) ³⁾	1.0		
	Lead (Pb)	Fiber	Leather	
		1.0	Not detected	
	Cadmium (Cd)	Fiber	Leather	
		0.1	Not detected	
Total Chromium (Cr)	Fiber	Leather		
	1.0	10.0		

	Hexavalent chromium(Cr ⁶⁺)	Fiber	Leather
		0.5	Not detected
	Cobalt (Co)		1.0
	Copper (Cu)		50.0
	Nickel (Ni)		4.0
	Mercury (Hg) ³⁾		0.02
Perfluorinated Compounds ⁴⁾	PFOS [$\mu\text{g}/\text{m}^2$]		1.0
	PFOA [mg/kg]		0.25
	8:2 FTOH [mg/kg]		0.25
OPP(o-phenyl phenol) [mg/kg]			50.0
Total residual pesticides content according to the attached <Table> [mg/kg] ⁵⁾			1.0
Organic tin compound [mg/kg]	TBT(tributyltin)		0.5
	TPT(triphenyltin)		0.5
	DBT(dibutyltin)		1.0
	DOT(dioctyltin)		1.0
Alkylphenol & Alkylphenol ethoxylates family[Weight %]	NP(nonylphenol)		0.01
	OP(octylphenol)		0.01
	OPEO(octylphenoethoxylate)		0.1
	NPEO(nonylphenoethoxylate)		0.1
Total phthalate plasticizer content according to the attached <Table> (%) ⁷⁾			0.1
Azo dye [mg/kg] ⁵⁾			20 each
DMF(dimethylformamide) in the case of synthetic leather [mg/kg]			10.0
Chlorinated benzene and chlorinated toluene according to the attached <Table> [mg/kg] ⁸⁾			1.0
Dimethyl fumarate [mg/kg] ⁹⁾			0.1

Note: 1) Coated or laminated leather products should satisfy pH 3.5 ~ 9.0.

Note:2) Total of each of the following content: 2,3,4,6-tetrachlorophenol(CAS No. 935-95-5), 2,3,4,6-tetrachlorophenol(CAS No. 58-90-2), 2,3,4,5-tetrachlorophenol(CAS No. 4901-51-3)

Note:3) Applicable only to leather and natural fabrics

Note:4) Applicable when water and oil repellent finishing or coating has been applied

Note:5) Applicable only when natural fabrics are used

Note:6) Applicable to coated or printed products or accessories made of soft synthetic resin

Note:7) Applicable only to dyed products

Note:8) Applicable only to dyed synthetic fibers

Note:9) Applicable only to leather

3.1.2.3

No strange odor should be emitted from the product, and the product should be ranked as 3rd grade or lower in the odor assessment.

3.1.2.4

Synthetic resins and rubber used in the product should satisfy the following criteria.

3.1.2.4.1

Lead (Pb), cadmium (Cd), mercury (Hg), Hexavalent chromium(Cr^{6+}) as well as their compounds and organic tin compound (TBT, TPT) should not be used as additives.

3.1.2.4.2

When using polyvinyl chloride (PVC), the following criteria should be met.

- ① The content of vinyl chloride monomer should be 1 mg/kg.
- ② Phthalate plasticizer should not be used, while total plasticizer content in the product should be 0.1 % of the total weight.

3.1.2.5

Padding materials used in the product exceeding 5% of the Total weight should satisfy the following criteria.

3.1.2.5.1

The maximum content of formaldehyde should be 30 mg/kg.

3.1.2.5.2

Dye or pigment should not be used.

3.1.2.5.3

For those products made with polyester fabrics, the maximum content of antimony (Sb) should be 260 mg/kg.

3.1.2.6

The maximum emission of nickel from the metal part of the product that contacts the skin should be $0.5 \mu\text{g}/\text{cm}^2 \cdot \text{week}$.

3.1.2.7

Adhesives used in the product should satisfy the following criteria. However, if a product with a certified eco-label (EL251. Adhesive) is used, it is considered to have satisfied the same criteria.

3.1.2.7.1

Phthalate plasticizer should not be used as a plasticizer.

3.1.2.7.2

The content of chlorinated hydrocarbon should be 0.01% of the Total weight.

Note) The content of "chlorinated hydrocarbon" is calculated by adding up the content of dichloromethane, chloroform, carbon tetrachloride, 1,1,1-trichloroethane, 1,1-dichloroethylene, trichloroethylene, and

tetrachloroethylene.

3.1.2.7.3

The maximum content of volatile organic compounds (VOCs) should be 0.1% of the Total weight.

3.1.3

With respect to the regeneration of products in the manufacturing or disposal stage, the packaging materials should satisfy the following criteria.

3.1.3.1

Halogen family resins including PVC should not be used.

3.1.3.2

Synthetic resins with over 200 mm² of flat surface should have a label in each part of the product to enable disassembly and recycling of the product at the disposal stage.

3.1.3.3

No processing that makes it difficult to retrieve and recycle products (synthetic resin laminating, resin coating or oil impregnation) should be performed. However, resin coating is allowed when the coated resin has alkalic dissociation or alkalic dispersability.

3.2 Quality Criteria

3.2.1

The product should meet the "leather product" criteria in Safety/Quality Labeling in accordance with the "Quality Management and Safety Control of Industrial Products Act." However, items related with "(1) Environmental Criteria" are excluded from this requirement.

3.2.2

The color fastness of fabric materials and leather (resistance to friction, perspiration, water, saliva and perspiration fluid) should satisfy the following criteria.

	Test Item		Criteria
Color Fastness [Grade]	Friction ^{Note)}	Dry	Over 4
	Perspiration	Acid	Over 3 ~ 4
		Alkali	Over 3 ~ 4
	Water		Over 3
	Resistance to saliva and sweat		Should be solid and durable

Note) Dyed products that use pigments should satisfy Grade 3 requirements or higher.

3.2.3

If there is a KS standard in the national standards applicable to the product, the product should satisfy the quality or performance criteria provided in the applicable standard. However, items related with “(1) Environmental Criteria” shall be exempt from this requirement.

3.2.4

If there is no KS standard in the national standards that is applicable to the product, the product should satisfy the quality and performance criteria in the applicable standard shown below. However, items related with “(1) Environmental Criteria” shall be exempt from this requirement; if the Eco label Certification Criteria Setting Committee concludes that the applicable criteria is not reasonable given the product's characteristics, the product should satisfy the adjusted criteria (test item, test method and threshold) provided by the Committee to meet the properties of the applicable product.

3.2.4.1 National standards excluding KS

3.2.4.2

Overseas national standards or international standards applicable to the product

3.2.4.3

The standards of local and overseas organizations referenced by products subject to the current Eco label certification or certification criteria

3.2.4.4

Private standards recognized as equivalent or higher by the industry producing the products concerned.

3.3 Consumer Information

Labeling of the product's contribution to the Reasons for Certification (reduction of hazardous substances) in the Consumption stage

4. Test Method

Certification Criteria		Test and Verification Method	
Environmental Criteria	3.1.1	Check submitted document	
	3.1.2	3.1.2.1	Check submitted document
		3.1.2.2	Check submitted document and test report by an accredited testing laboratory in accordance with the following test methods ▪ pH : KS K ISO 3071 (Textile-pH measurement of water

			<p>borne extract)</p> <ul style="list-style-type: none"> ▪ Formaldehyde: KS K ISO 14184-1[Textile - Formaldehyde measurement - Part 1 : Glass and hydrolysis formaldehyde (distilled water extraction method)] ▪ Chlorinated phenols : KS K 0733(Measurement of polluted carboic acid (PCP) content in the textile and leather product) ▪ Hazardous elements: KS K 0731(Measurement of eluting heavy metals in the textile products) ▪ PFOS, PFOA : Table 2. EM201. Measurement of perfluorooctane sulfonate(PFOS) and perfluorooctanate (PFOA) content in the product. ▪ OPP, Chlorinate benzene, Chlorinated toluene : MSD(mass spectrometer), ECD(electron capture detector) ▪ Residual pesticide : KS K 0732(Measurement of residual pesticide in textile product) ▪ Organic tin compound : KS K 0737(Measurement of organic tin compound content in the textile product) ▪ Alkylphenol family: GC-MS analysis¹⁾ ▪ Alkylphenol ethoxylates : LC-MS analysis²⁾ ▪ Phthalate plasticizer: KS M 1991(Measurement of phthalate plasticizer in polymeric materials) or KS M 0031(General rules on gas chromatography analysis of mass) ▪ Azo dye : KS K 0147 (Measurement of arylamine in dye or dyed product) or KS K 0734(Measurement of arylamine content in the polyester textile product) ▪ DMF(dimethylformamide) : KS M 0031(General rules on the gas chromatography analysis of mass) ▪ Chlorinated benzene and chlorinate toluene: MS(mass spectrometer), ECD(electron capture detector) ▪ Dimethyl fumarate : Annex 4: Safety Standards on Voluntary Safety Check (Annex 4.B Textile Product for Infants. Measurement of Dimethyl fumarate content) 				
		3.1.2.3	A test report by an accredited testing laboratory in accordance with Test Method (1) and (2)				
	3.1.2.4	3.1.2.4.1	Check submitted document and test report by an accredited testing laboratory in accordance with the applicable Safety & Quality Labeling, or equivalent certificate				
		3.1.2.4.2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">3.1.2.4.2.1</td> <td>Check submitted document or a test report by an accredited testing laboratory in accordance with KS M 0031 (General rules for analyzing gas chromatography graph)</td> </tr> <tr> <td style="width: 10%; text-align: center;">3.1.2.4.2.2</td> <td>Check submitted document or a test report by an accredited testing laboratory in accordance with KS M1991 (Detection of phthalate plasticizer in the synthetic resin)</td> </tr> </table>	3.1.2.4.2.1	Check submitted document or a test report by an accredited testing laboratory in accordance with KS M 0031 (General rules for analyzing gas chromatography graph)	3.1.2.4.2.2	Check submitted document or a test report by an accredited testing laboratory in accordance with KS M1991 (Detection of phthalate plasticizer in the synthetic resin)
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3.1.2.4.2.2	Check submitted document or a test report by an accredited testing laboratory in accordance with KS M1991 (Detection of phthalate plasticizer in the synthetic resin)						
	3.1.2.5	3.1.2.5.1	Check submitted document or KS K ISO 14184-1(Textile-Formaldehyde measurement- Part 1: Glass and hydrolysis formaldehyde (Distilled water extraction method))				

		3.1.2.5.2	Check submitted document
		3.1.2.5.3	A test report by an accredited test laboratory in accordance with AAS and ICP Test Method
		3.1.2.6	Check submitted document or a test report by an accredited testing laboratory in accordance with KS K 0853 (test method to measure nickle emitted from a product that contacts the skin: substitution exposure method), or equivalent certificate
		3.1.2.7.1	Check submitted document
		3.1.2.7.2	A test report by an accredited test laboratory in accordance with KS M 0027(General rules on gas chromatography mass analysis), KS M 0031(General rules on gas chromatography analysis), KS M 0033(General rules on analysis methods based on high-speed gas chromatography)
		3.1.2.7.3	A test report by an accredited test laboratory in accordance with KS M ISO 11890-1(Paint and varnish-Measurement of volatile organic compounds-Part 1: Other methods) or KS M ISO 11890-2(Paint and varnish-Measurement of volatile organic compounds-Part 2: Gas chromatography)
	3.1.3	3.1.3.1~3.1.3.2	Check submitted document
		3.1.3.3	Check submitted document or a test report by an accredited test laboratory in accordance with “EL606. (1) and (2) Test Method of packaging materials”
Quality Criteria		3.2.1	A test report by an accredited test laboratory in accordance with the applicable safety & quality labeling, or equivalent certificate.
	3.2.2	Color fastness	A test report by an accredited test laboratory in accordance with the following test method, or equivalent certificate. <ul style="list-style-type: none"> ▪ Friction : KS K 0650(Test method for friction fastness of dyed material: crockmeter method), KS K 0903 (General rules on color fastness test method) ▪ Perspiration : KS K ISO 105-E04(Textile - Color fastness test - Part E04 : Perspiration fastness), KS K 0903 (General rules on color fastness test method) ▪ Water : KS K ISO 105-E01(Textile - Color fastness test - Part E01: Water fastness), KS K 0903 (General rules on color fastness test method) ▪ Resistance to saliva or perspiration fluid: KS K 0112(Method to test the resistance to saliva and perspiration fluid of the product for infants)
		3.2.3~3.2.4	A test report by an accredited test laboratory in accordance with the applicable specifications, or equivalent certificate.
Consumer Information			Check submitted document

Note1) Alkylphenol family: GC-MS analysis by extracting a test specimen with methanol

Note2) Alkylphenol ethoxylates : LC-MS analysis by extracting a test specimen in accordance with ISO/TC 38/SC N2701

4.1 General

4.1.1

Make it a principle to take one test sample per product under application. Where one or more test samples are required, however, this shall not be applicable.

4.1.2

Environmental labeling certification institutions shall conduct random sampling of test samples among the products commercially available or kept in production locations.

4.1.3

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

5. Reasons for Certification : “Reduction of Hazardous Substances”

<Appendix Table > List of Chemical Substances (Related 3.1)

1. Dyestuffs Classified as Allergenic

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

4. Azodyestuffs

Note) Compound which are decomposed to the following amines, as dyestuffs which have azo group(-N=N-) with chromophore.

CAS No.	Name of Substances	CAS No.	Name of Substances
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-chloroaniline)
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. Phthalates

CAS No.	Name of Substances	CAS No.	Name of Substances
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)		

6. Residual Pesticides

CAS No.	Name of Substances	CAS No.	Name of Substances
93-76-5	2,4,5-T	51630-58-1	fenvaterate
94-75-7	2,4-D	76-44-8	heptachlor
86-50-0	azinophosmethyl	1024-57-3	heptachlorepoide
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, ϵ -
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	DDDs	2385-85-5	mirex
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

[Common Criteria]

1. The candidate products for Korea Eco-Label shall comply with the following regulations with regard to the appropriate processing of environmental contaminants that occur in the process of manufacturing or service operation, including air contaminants, water contaminants, waste and harmful chemical substances.
 - 1.1 A person who violates any environment-related law or agreement applicable in the region where his or her factory or operating establishment is located within one year prior to the date of application may not apply for Korea Eco-Label certification. For violations other than the ones subject to penalties, however, a person may apply for the certification after completion of any action for the violation.
 - 1.2 A person who has obtained Korea Eco-Label certification must comply with the environment-related laws and agreements applicable in the region where the factory or operating establishment is located during the certification period. If any violation against penal provisions is found during the certification period, however, the certification may be canceled, and for violations other than the ones against penal provisions, the certification may be suspended until the relevant action is completed.
2. In principle, the “consumer information” specified in the certification standards by product shall be marked in a way not to be removed easily on the surface of the product. If it is impossible or undesirable to mark it on the surface of a product, the information shall be marked on another appropriate part of a product where consumers will notice it, including product packaging, a guidebook, an instruction or etc. For services, however, the consumer information shall be, in principle, marked on the internal and external areas of a building where the service is provided. If it is impossible or undesirable to mark it on the internal or external area of a building, however, it shall be marked on an appropriate part where consumers can notice it, including a contract, statement of delivery, letter of guarantee or brochure.
3. A person who has applied for, or obtained approval for, use of Korea Eco-Label on a product shall comply with the Fair Labeling and Advertising Act in order to establish fair trade order and protect consumers, and if they violate the law, their application for certification may be rejected or their certification may be canceled.

4. Unless otherwise specified, the various specifications cited in the certification criteria by product shall be the latest ones at the time of application for certification.

5. If application of the standards for quality in accordance with the certification criteria by product is deemed as inappropriate, the President of Korea Environmental Industry & Technology Institute (hereinafter referred to as KEITI president) may establish and operate the quality criteria for the product after deliberation committee review or expert consultation.