

EL509. Windshield Washers for Automobiles

[EL509-2006/1/2006-210]



1. Scope

The criteria shall apply to windshield washers for automobiles used for the operation of wiper to secure views through front and back windshields (hereinafter referred to as “windshield washers”).

2. Definitions

2.1

“Concentrated liquid” refers to materials taken out from the container of windshield washer.

2.2

“Ethanol equivalent concentration” refers to the concentration converted to weight % of ethanol by multiplying weight % of each alcohol (not diols or triols) in the concentrated liquid with the factor considering inhaled virulence, and its formula is as follows:

$$\text{* Ethanol equivalent concentration [\%]} = \sum [\text{weight \% of alcohol (not diols or triols) in concentrated liquid} \times \text{factor}]$$

NOTE) The factors of monovalent alcohol which are used to calculate the ‘ethanol equivalent concentration’, are as the following table, and the factors of monovalent alcohol which are not shown in the table shall be separately indicated by ‘Deliberation Committee for the Certification of Environmental Label’.

Types	methanol	ethanol	isopropanol	tert-butanol
Applicable factor to calculate ‘ethanol equivalent concentration’	5	1	2.5	10

3. Certification Criteria

3.1 Environmental Criteria

3.1.1

With respect to use in chemicals during the manufacturing stage, the product shall comply with the following requirements

3.1.1.1

Alkyl phenol ethoxylates (APEOs), Alkyl phenols, quaternary ammonium salts, formaldehyde, ethylene glycol, butyl carbitol, nitromusks and polycyclic musks shall not be used in product.

3.1.1.2

Biodegradability of the surfactant used in the product shall 90% or higher.

3.1.2

With respect to hazardous materials in use and emission during the manufacturing and use stage, the product shall comply with the following requirements.

3.1.2.1

The freezing point of the product Concentrated liquid shall comply with the following requirements.

Class	For spring/summer/fall	For winter	For severely cold area
Freezing point of concentrated liquid [°C]	≥ - 10	≤ - 20	≤ - 25

3.1.2.2

The content of monovalent alcohol of product Concentrated liquid shall meet the following requirements as a 'ethanol equivalent concentration'.

Class	For spring/summer/fall	For winter	For severely cold area
Ethanol equivalent concentration	≤ 10%	≤ 50%	≤ 70 %

3.1.3

Halogenated compounds such as PVC shall not be used for product container and the attached label.

3.2 Quality Criteria

3.2.1

The product shall be homogeneous liquid that is transparent or colored with a coloring agent and does not have any deposit or floating matters. And it shall not smell

unpleasant.

3.2.2

The quality of the product shall comply with the '2. Quality' of the KS M 2163 (Windshield washers). However, 'freezing point' shall be excluded.

3.3 Information for Consumers

3.3.1

Using condition of windshield washers: 'for use in spring, summer and fall', 'for use in winter', 'for use in severely cold area')

3.3.2

Cautions in use

4. Test Methods

Certification Criteria		Test and Verification Methods	
Environmental Criteria	3.1.1	3.1.1.1	Verification of submitted documents
		3.1.1.2	Test report by an accredited testing laboratory in accordance with the KS M 2714 (Testing method for biodegradability of synthetic detergent) or verification of submitted documents
	3.1.2	3.1.2.1	Test report by an accredited testing laboratory in accordance with the KS M 2163 (Windshield washers)
		3.1.2.2	Test report by an accredited testing laboratory in accordance with the KS M 0027 (General rules for analytical methods in gas chromatography mass spectrometry), KS M 0033 (General rules for analytical methods in high performance liquid chromatography) or verification of submitted documents
	3.1.3	Verification of submitted documents	
	Qualify Criteria	3.2.1	Verification of the product with eyes and its fragrances
3.2.2		Test report by an accredited testing laboratory in accordance with the KS M 2163 (Windshield washers) or certificate of equivalent	
Consumer Information		Verification of submitted documents	

Note) The products 'for spring, summer and fall' and 'for winter' shall be tested and verified at the same time. However, the products are made from those 'for winter' by diluting with water at fixed rate and then marked as 'for spring, summer and fall' on the containers which are excluded.

4.1 General Matters

4.1.1

As a general, one test sample is required for each applied product with the exception that more than one test sample is necessary.

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).

5. Reasons for Certification

“Reduced harmful substances”

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.