



EL605 Industrial Cleaners
[EL605-2001/5/2012-36]

1. Scope

The criteria shall apply to industrial cleaners (hereinafter referred to as ‘cleaners’) used for the washing machines that are manufactured with organic solvents as a main raw material.

2. Definitions

2.1

“Detergent” refers to detergent materials used for industrial washing machines (“detergent for washing machines” hereinafter) and detergent solely used for washing facilities without the help of washing machines (“solely-used detergent” hereinafter). In addition, under this criterion, the same will be classified depending on the composition of the detergents, as follows.

Classification of Detergent		Definition for each Detergent
Water system		Detergents mainly consisting of water and surfactants. Depending on the acidity of liquid (pH), they will be classified as follows; acidity (below pH 3.0), low level acidity (pH 3.0 to 6.0), neutrality (pH6.0 to 8.0), low level alkali (pH 8.0 to 11.0), alkali (pH 11.0 or more).
Semi-water system		This detergent consists of organic solvents, surfactants and water, where organic solvent is emulsified into water in-oil.
Solvent system	Fatty Acid	Detergents mainly consisting of fatty acids, such as animal and plant oils
	Alcohol	Detergents mainly consisting of alcohols, such as Isopropyl alcohol
	Hydrocarbon	Detergents mainly consisting of aliphatic or aromatic hydrocarbon
	Halogen	Detergents mainly consisting of or including

	halogenated hydrocarbons
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2.2

“Ozone depletion potential (ODP)” refers to the value indicating relative impact of ozone depleting substances when the ozone depletion impact of CFC-11 is set to be 1.

2.3

“Global Warming Potential (GWP)” refers to the value of relative effect of greenhouse gases compared to CO₂, of which effect is arbitrary defined as 1.0. Note) GWP, the duration of 100 years, is applied according to the Second Assessment Report Climate Change (1995) of IPCC (International Panel on Climate Change) in the criteria.

2.4

“Waste solvents” refer to both post-consumer waste solvents and pre-consumer waste solvents.

2.5

“Post-consumer waste solvents” refer to the waste solvents after serving their intended end use through the distribution channel.

2.6

“Pre-consumers waste solvents” refer to the waste solvents not used as a complete product and occurred during the manufacturing process. However, exception shall be made to waste solvents generated during a manufacturing process and are used in the same manufacturing process

2.7

“Recyclability of waste solvent” refers to the weight percentage of inputted waste solvents among concerned solvents used for product.

2.8

“Easy biodegradation” refers to the case that the biodegradability by a test method applied is suited to the following data.

Test method of biodegradation	Culturin g days	Biodegradability	Test method of biodegradation	Culturin g days	Biodegradability
KS M 2714	7	≥ 90 %	OECD 301 A	28	≥ 70 %
KS I ISO 9439	28	≥ 60 %	OECD 301 B	28	≥ 60 %
KS I ISO 14593	28	≥ 60 %	OECD 301 C	28	≥ 60 %
KS I ISO 10708	28	≥ 60 %	OECD 301 D	28	≥ 60 %
KS I ISO 9408	28	≥ 60 %	OECD 301 E	28	≥ 70 %
KS I ISO 7827	28	≥ 70 %	OECD 301 F	28	≥ 60 %

3. Certification Criteria

3.1 Environmental Criteria

3.1.1 With respect to resource consumption during the manufacturing process, waste solvent recyclability of Halogen cleaner product shall be 50% or higher.

3.1.2

With respect to emission of hazardous and ozone-depleting substances during the use stage, the following requirement shall be satisfied.

3.1.2.1

The threshold limit value (TLV) of inhaled virulence of 5% or heavier organic solvents used for the product, shall be 70 ppm or more in time weighted average (TWA).

3.1.2.2

Chemicals belonging to the following H code class according to the UN Globally Harmonized System of Classification and Labeling of Chemicals should not be used for detergents used alone.

Note: EU Regulation (EC) No. 1272/2008 Annex VI Part 3, (Harmonized Classification and Labeling Tables) will be tentatively applied to the material list.

- H310 : fatal in contact with skin
- H330 : fatal if inhaled
- H340 : may cause genetic defects
- H350 : may cause cancer
- H350i : may cause cancer when inhalation
- H360D : may damage the unborn child
- H360F : may damage fertility
- H360FD : may damage fertility, may damage the unborn child

3.1.2.3

Solvents that are classified as 'Group 1', 'Group 2 (A)' and 'Group 2 (B)' by IARC (international agency for research on cancer) shall not be used for the product. In the case of a cleaner for machine, however, 'Group 2 (B)' shall not be applied.

3.1.3

At the stage of use and abrogation, in regard to Ozone-depleting substances and the emission of substances involved in global warming, the following conditions should be satisfied.

3.1.3.1. The ODP of organic solvents and aerosol used in the detergents shall be 0.003 or less.

3.1.3.2. The GWP of organic solvents and aerosol used in the detergents shall be 3000 or less.

3.1.3.3. The surfactant used in detergents shall be easily biodegradable.

3.1.4.

In regard to recycling at the stage of manufacturing or abrogation, the packing material of a solely-used detergent should satisfy the following conditions.

3.1.4.1 Halogenated compounds such as PVC shall not be used.

3.1.4.2 The classification of quality shall be marked on the separable component unit of packaging material with more than 25g weight and more than 200 mm² flat part in order to make separation and withdrawal of the product easy in the disposal stage.

3.2 Quality Criteria

3.2.1

It shall be verified that the product retains the level of performance or quality high enough to be recognized by the industries which use it.

3.2.2

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 Environmental Criteria” are excluded.

3.2.3

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 Environmental 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.).

3.2.3.1

National standards other than Korean Industrial Standards.

3.2.3.2

Overseas national standards or international standards regarding the product quality in question.

3.2.3.3

Standards of the organizations at home and abroad that are referred by the current E-mark target product and certification standard.

3.2.3.4

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

3.3.1

Indication of matters contributing to reasons (Low toxicity, recycling of available resources) for the certification of the concerned product at the stage of consumption, and special merits related to the quality and safety of the product

3.3.2

Cautions in use such as method of use and storage, disposal, etc. of product, in case of cleaners

4. Test Methods

Certification Criteria		Test and Verification Methods	
Environmental Criteria	3.1.1~3.1.2	Verification of submitted documents and on-site location	
	3.1.3	3.1.3.1 ~3.1.3.2	Verification of submitted documents
		3.1.3.3	<ul style="list-style-type: none"> ▪ Test report by an accredited testing laboratory in accordance with KS M ISO 7827, KS M ISO 9408, KS M ISO 9439, OECD 301 A, OECD 301B, OECD 301 C, OECD 301 D, OECD 301E, OECD 301F(note1, note2) ▪ 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 ▪ Verification of submitted documents
	3.1.4	Verification of submitted documents	
Quality Criteria	3.2.1	Verification of submitted documents proving the quality level of the product	
	3.2.2~ 3.2.3	Test report by an accredited testing laboratory in accordance with the applicable standards or certificate of equivalent	

Consumer Information	Verification of submitted documents
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Note 1) When verification to meet the standards will be executed with a test report made by Internationally accredited testing agencies, or a test report equivalent to the specified test method, according to the review of the Eco-label certification review committee, it can be considered as having satisfied the criteria. However, if a test report or a certificate defined by the Eco-label certification review committee is requested, it cannot be accepted.

Note2) Related specifications

KS I ISO 7827: Water quality-Evaluation in an aqueous medium of the "ultimate" aerobic biodegradability of organic compounds -Method by analysis of dissolved organic carbon (DOC)

KS I ISO 9408: Water quality-Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium by determination of oxygen demand in closed respirometer

KS I ISO 9439: Water quality - Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium - Carbon dioxide occurrence test method

KS I ISO 10708: Water quality-Evaluation in an aqueous medium of the ultimate aerobic biodegradability of organic compounds -Determination of biochemical oxygen demand in a two-phase closed bottle test

- OECD 301 A : DOC Die-away test ▪ OECD 301 B : CO2 Evolution test
- OECD 301 C : Modified MITI test(|) ▪ OECD 301 D : Closed bottle test
- OECD 301 E : Modified OECD screening test ▪ OECD 301 F : Manometric respirometry test

4.1 General Matters

4.1.1

One test sample for each applied product is required in principle 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

The result of test 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

“Low toxicity, recycling of available resources”(limited to the concerned product)

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.