

EL762. Waste Reducing Instrument

[EL762-2003/3/2009-72]



1. Scope

The criteria shall apply to expanded synthetic resin reducing instrument and can compressor.

2. Definitions

2.1

“Reduction of volume” shall refer to the operation to store and discharge, reducing the volume of waste primarily discharged in order to improve recyclability of waste.

2.2

“Reduction of mass” shall refer to the operation to discharge finally, reducing the mass of waste primarily discharged in order to make transportation or process easy.

2.3

“Can compressor” shall refer to the instrument to store and discharge after compressing the metal cans discharged, and include the instrument which distinguishes steel can from non-steel can prior to discharge. It shall be classified by the putting method into “apiece type” which puts each can in order and “quantity type” which puts several cans divided in advance at a time.

2.4

“Rated electric power consumed” shall refer to the electric power [kW] consumed on the standard operating condition.

2.5

“Consumption of electricity” shall refer to the amount of electric power [kWh] consumed by the end of reduction of waste when a waste reducing instrument is operated on the certain condition.

2.6

“Standard operating condition” shall refer to the working condition of waste reducing instrument when putting the wastes with typical formation as much as standard amount processed.

2.7

“Standard amount processed” shall refer to the amount of wastes with typical formation which can be processed efficiently and used without trouble using applied waste reducing instrument. Generally it shall be applied as the manufacturer indicates.

2.8

“Standby power” shall refer to the power which the instrument consumes in standby status.

2.9

“Standby status” shall refer to the status to stand ready to operate immediately such as reduction etc.

2.10

“Ozone Depletion Potential (ODP)” shall refer to the relative value of greenhouse gases when the ozone depletion effect of CFC-11 is set 1.

3. Certification Criteria

3.1 Environmental Criteria

3.1.1 Expanded synthetic resin reducing instrument

3.1.1.1

With respect to the energy consumption at the stage of using, it shall satisfy the following requirements.

a) The consumption of electricity per the amount processed shall be not more than 2.0×10^{-1} kWh/kg.

b) The standby power shall be not more than 1.5 kW. However, the product of which standard amount processed is more than 30 kg shall be excluded.

3.1.1.2

With respect to the discharge of pollutant at the stage of using, it shall satisfy the following requirements.

a) It shall not use the organic solvent which causes smell or discharge of Volatile Organic Compounds (VOCs) in the reducing process.

b) It shall provide the function which prevents to overheat according to the following table in order to reduce smell ingredients in the reducing process.

Expanded synthetic resin	Expanded polystyrene	Styrene paper	Expanded polypropylene
Maximum reducing temperature [°C]	≤ 200	≤ 300	≤ 400

c) The noise by the amount processed during operation shall be suited to the following criteria.

Amount processed [kg]	< 30	30~50	≥ 50
Requirement [dB(A)]	≤ 80	≤ 85	≤ 90

3.1.2 Can compressor

3.1.2.1

With respect to the consumption of energy at the stage of using, it shall satisfy the following requirements.

a) The apiece putting type compressor shall be in structure which dose not use the primary cell or external power supply compressing cans. However, in case that the compressor divides, compresses, and stores automatically, the rated electronic power consumed shall be not more than 2.0×10^{-1} kW.

b) The consumption of electricity per the amount processed of the quantity putting type compressor according to the following expression shall be not more than 3.5×10^{-3} kWh/kg.

$$E = \frac{P \times t}{W \times 3600}$$

E: Amount of electric power consumed per the amount processed [kWh/kg]

P: Rated electric power consumed [kW]

W: Amount processed per once [kg/time]

t: an operating time [s/time]

3.2 Quality Criteria

3.2.1

Expanded synthetic resin reducing instrument

3.2.1.1

The quality of products shall satisfy the safety standards of electric alliances according to 「Electric appliance safety administration law」.

3.2.1.2

It shall provide after-sale service in order not to hinder repair and maintenance.

3.2.2

Can compressor

3.2.2.1

The product which is not use the external power shall be easy to compress cans.

3.2.2.2

The product which has the function to divide, compress, and store cans automatically shall satisfy the following requirements.

a) In case of putting the container which shall not be compressed such as glass bottles, it shall stop working.

b) It shall provide after-sale service in order not to hinder repair and maintenance.

3.3 Consumer Information

3.3.1

Information on the use of the instrument and after-sale service

3.3.2

The standard or maximum amount processed

3.3.3

Indications which the instrument contributes to the reason for certification (Less wastes, Readily recyclable) at the stage of consumption

4. Test Methods

Certification Criteria				Test and Verification Methods
Environmental Criteria	3.1.1	3.1.1.1	a)	Test report by an accredited testing laboratory in accordance with 'the test methods of 4.1 and 4.2'
			b)	Test report by an accredited testing laboratory in accordance with 'the test methods of 4.1 and 4.3'
	3.1.1.2	a) - b)	Verification of submitted documents	
		c)	Test report by an accredited testing laboratory in accordance with 'the test methods of 4.1 and 4.4'	
	3.1.2	3.1.2.1	a) – b)	Verification of submitted documents ^{note)}
		3.1.2.1		Verification of submitted documents
Quality Criteria	3.2.1	3.2.1.1	Test report by an accredited testing laboratory in accordance to the safety standards of electric appliances or the equivalent certificates	
		3.2.1.2	Verification of submitted documents	
	3.2.2	Verification of submitted documents		
Consumer Information				Verification of submitted documents

Note) In case that the eco-label deliberation commission requires to verify the submitted documents, the rated electric power consumed or the consumption of electricity of the products sampled randomly by the entrusted institution of eco-label certification shall be inspected according to 'the test methods of 4.1 and 4.2.'

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 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).

4.1.4

The test results shall be expressed numerically according to KS A 3251-1(Statistical interpretation of data Part 1: Statistical presentation of data).

4.2 Measuring methods of the rated electric power consumed and the consumption of electricity

4.2.1

The measurement shall be the mean value of twice repeatedly measured values.

4.2.2

The power measuring gauge shall be used to measure the electric power consumed to verify the rated electric power consumed, which determine the electric power consumed when operating on the standard working condition suggested by a manufacturer.

4.2.3

The watt-hour meter shall be used to measure the consumption of electricity, which determines the consumption of electricity by the end of the process of wastes when operating repeatedly on the standard working condition suggested by a manufacturer.

Note 1) In case of indicating the maximum amount processed on a product, the standard amount processed shall be 1/2 of the maximum amount. However, the standard amount processed of can compressor shall be the maximum amount.

4.3 Test method of standby power of expanded synthetic resin reducing instrument

4.3.1

The measurement shall be the mean value of twice repeatedly measured values.

4.3.2

The instrument shall operate the expanded synthetic resin reduction etc. immediately after installed in the normal status.

4.3.3

In this status, measure the input electric power consumed, which is to be the standby power.

4.4 Test method of noise during operation of the expanded synthetic resin reducing instrument

4.4.1

Noise should be measured with the following conditions, according to KS I ISO 1996-1 (Acoustics - Description, measurement and assessment of acoustics - Description, measurement and assessment of environment noise - Part 1: Basic quantities and assessment procedures). The sound level meter shall be used the one provided in KS C 1502(Sound level meters), which determine in accordance with A characteristic of compensating circuit for subjective evaluation.

4.4.2

It shall be measured on the location which is 1 m away from the surface and side of center of the product by the sound level meter and indicate the mean value of three times repeatedly measured value.

4.4.3

Put the standard amount processed in the instrument and measure to operate repeatedly in the standard operating condition suggested by a manufacturer.

4.4.4

Without the absolute dead room, the distance between a tested product and a wall shall be more than as much as 2 m in order not to create reflected sound, and the difference between background noise and measured noise shall be more than 10 dB(A).

5. Reasons for certification

"Less wastes, Readily recyclable"

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.