

Hong Kong Green Label Scheme
Product Environmental Criteria for
Air Conditioners (GL-007-006)



BACKGROUND

The Hong Kong Green Label Scheme (HKGLS) is an independent and voluntary scheme, which aims to identify products that are, based on life cycle analysis consideration, more environmentally preferable than other similar products with the same function. The Scheme is organized by the Green Council (GC) with contributions from the HKGLS Advisory Committee and a number of supporting organizations.

The prime objectives of HKGLS are:

- For Consumers: assist in making purchases of products that are less harmful to the environment;
- For Industry: stimulate development and production of environmentally preferable alternatives.

This specification sets out the requirements that air conditioners will be required to meet in order to be licensed to use the HKGLS label. The requirements include environmental criteria and product characteristics. The specification also defines the testing and other means to be used to verify conformance with the environmental criteria and product characteristics.

POTENTIAL ENVIRONMENTAL IMPACTS

Energy consumption is the key environmental impact for air conditioners at all stages of the product life cycle. Other environmental impacts include the use of chemicals in production, noise emission and use of chemicals (e.g. refrigerant/coolant) in product use, the disposal of worn-out air conditioners and/or used coolant agents.

LABEL OBJECTIVE

The aim of the environmental criteria developed for air conditioners is to:

- Reduce energy consumption and promote energy-saving air conditioners;
- Reduce noise emission and the use of the environmentally harmful substances;
- Promote improved durability of air conditioners; and
- Minimize waste production by reducing the amount of primary packaging and promoting its reusability and/or recyclability.

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to residential non-ducted air conditioners powered by a single-phase electric current. The product can be either single unit or split system with a rated cooling capacity not exceeding 10kW, and does not apply to fan-coil and water-cooled air conditioning systems.

Industrial and central air conditioning systems are not included in the product category.

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PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the product environmental criteria for air conditioners (GL-007-006) under the HKGLS.

Criteria	Verification Method
<p>1. Energy Efficiency Index, ECI (%):</p> <p>The ECI of the product determined under the test conditions and methods defined by EMSD Energy Efficiency Labelling Scheme shall be lower than 105 for both Window and Split Type air conditioners.</p>	A (ISO 5151), C
<p>2. Noise Emission:</p> <ul style="list-style-type: none"> • For cooling capacity less than 2240 kcal/h: • ≤ 50 dBA (indoor) and ≤ 53 dBA (outdoor) • For cooling capacity between 2500 and 3500 kcal/h: • ≤ 53 dBA (indoor) and ≤ 57 dBA (outdoor) • For cooling capacity above 4000 kcal/h: • ≤ 58 dBA (indoor) and ≤ 62 dBA (outdoor) 	A (CNS 3615), C
<p>3. Coating material used on the product shall not contain mercury, mercury compounds or mixed with dyes stuff containing lead, cadmium, hexavalent chromium and their oxides.</p>	A,C
<p>4. Refrigerants made of ozone-depleting substance as specified in Annex of the Montreal Protocol or chemicals of ozone depleting potential higher than 0.2 are prohibited.</p>	C,D
<p>5. Packing requirements :</p> <ul style="list-style-type: none"> • Packaging materials shall not contain chlorine-based plastics; • General packaging requirements (refer to criteria for packaging materials: GL-Packaging). 	B,C,D

Legend :

A – Analytical testing shall be performed by laboratories that meet the requirement laid out in the EN45001 standards or any equivalent systems (e.g. HOKLAS, IEC/ISO 17025).

B - Inspection of product samples

C – Review of supporting information as required by the GC

D – Interviews with relevant personnel and/or site visits to relevant facilities