

Hong Kong Green Label Scheme

Product Environmental Criteria for Windows (GL-008-004)



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 windows 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

The technical life of a window is on average at least 30 years. Energy loss in the product-use stage is the main environmental impact during the life cycle of a window. The thermal insulation capacity of the windows influences the energy consumption of a building. In general, thermal energy loss through windows account for an average of 14% of the total thermal energy loss of housing, commercial premises and public buildings

The production of windows requires such materials as glass, wood, aluminum, steel and plastics, as well as such chemicals as paints, putty, fillers, glue, fittings and sealants. Many of them contain substances that may be harmful to the environment.

LABEL OBJECTIVE

The aim of the environmental criteria developed for windows is to :

- Promote reduction of thermal energy loss of windows; and
- Discourage use of chemicals or other substances that are harmful to the environment;

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to all ordinary windows and window-doors. The windows can be permanently shut or openable. The casements and frames can be made of wood, wood-aluminum, aluminum, plastic, steel or composites.

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PRODUCT ENVIRONMENTAL CRITERIA1

The table below sets out the product environmental criteria for Windows (GL-008-004) under the HKGLS.

Criteria	Verification Method
1. The thermal insulation capacity of the windows (U-value) shall not exceed $1.4\text{W}/\text{m}^2\text{K}$.	A(ISO-8990), C
2. The windows shall not contain chlorinated plastics.	C,D
3. The windows shall not contain additives based on lead, cadmium, chlorinated/brominated paraffines, mercury, arsenic, organic tin compounds, phthalates or polybrominated diphenylethers, and hexavalent chromium.	C,D
4. Criteria on paint (GL-005-003) shall apply to the painted windows whenever appropriate.	C,D
5. Packaging requirements: <ul style="list-style-type: none">• Packaging materials shall not contain chlorine-based plastics and timber treated with biocides or wood preservatives;• 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