

**Hong Kong Green Label Scheme
Product Environmental Criteria for
Building Products Using Perlite (GL-008-011)**



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 building materials made of perlite 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

Currently, there are three types of materials available in the market used to manufacture fire retardant panels including calcium-silicate, cement based and gypsum board. All three boards are not considered to be highly hazardous towards human health and the environment upon usage, however, their derived and long term environmental and health impacts do exist. Significantly, no test result or information indicates that perlite poses any health risk and is therefore regarded as safe for consumer use.

LABEL OBJECTIVE

The aim of the environmental criteria developed for “Building Products using Perlite” is to:

- promote the use of perlite in building products
- reduce the discharge of toxic, hazardous or otherwise polluting substances, including heavy metals and asbestos, into the environment during production and use of the product

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to building materials and auxiliary building materials that are made of perlite.

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PRODUCT CRITERIA

The product environmental criteria for the product category of “Building Products using Perlite” (GL-008-011) under the Hong Kong Green Label Scheme (HKGLS) are set out in the ensuing table.

Criteria	Verification Method
<p>1. The percentage of perlite in the product shall be at least 10% of the product’s net weight.</p> <p>2. Hazardous substances shall not be used as an ingredient of the product (whether as a substance or as part of any preparation). The levels of the following hazardous substances as impurities shall not exceed the following: Cadmium: 10 ppm Lead: 300 ppm Chromium VI: 10 ppm Arsenic: 50 ppm Mercury: 10 ppm Selenium: 20 ppm</p> <p>3. The gamma radiation dose of the product shall not exceed 0.5 micro Sievert per hour.</p> <p>4. The product shall not contain asbestos (white, brown or blue asbestos).</p> <p>5. E-glass and “475” glass fibres shall not be used for reinforcement.</p>	<p>The gross weight of the product shall be specified, along with the components of the products, in weight per cent or in per cent by volume.</p> <p style="text-align: center;">A, C</p> <p>Test report(s) shall be submitted by the applicant to show compliance with the requirement. Suggested test methods include: Lead and Cadmium: USEPA 3051A/7000B Chromium VI: USEPA 3060A/7196A Arsenic: USEPA 3051A/7061A Mercury: USEPA 3051A/7471B Selenium: USEPA 3051A/7741A. Equivalent methods are acceptable.</p> <p>A certificate issued by the manufacturer of the product concerning safety with regard to exposure to radioactivity material shall be submitted. A certificate of test results carried out by a third party shall also be submitted if available.</p> <p>A certificate shall be obtained from the manufacturer that asbestos is not present in the product.</p> <p>The type and percentage of fiberglass materials shall be provided by the applicant in a declaration.</p>

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<p>6. Production processes shall conform to relevant national or local environmental regulations on preventing air pollution and water contamination.</p>	<p>The applicant shall provide a <i>declaration</i> of conformity of the product with the requirements.</p>
<p>7. The durability of the product shall be equivalent to that of conventional products of same function.</p>	<p>Supporting information shall be submitted for review.</p>
<p>8. Instruction manual(s) shall accompany a product concerning its construction, use, disassembling, and preferably also disposal, and recycling.</p>	<p>Manual(s) shall be submitted for review.</p>
<p>9. General packaging requirement (Refer to criteria for packaging materials: GL-Packaging).</p>	<p>B, C, D</p>

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