

# Hong Kong Green Label Scheme

## Product Environmental Criteria for Paint (GL-008-010)



### 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 paint products 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

Paints are manufactured from a wide range of organic and inorganic materials. The significant environmental impacts in the life cycle of paint relates to the release of solvents, heavy metals and other toxic substances in their manufacture and during their application.

### LABEL OBJECTIVE

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

- Reduce the entry of organic solvents into the atmosphere and reduce the toxicity of its components which can impact adversely on the environment at different stages of the product life cycle.
- Minimize waste production by reducing the amount of primary packaging and promoting its reusability and/or recyclability.

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**PRODUCT DEFINITION**

This document and all product environmental criteria therein apply to all paints which have water as the primary solvent / diluent and all paints which have an organic solvent as the primary volatile component.

The table below sets out the environmental criteria for the product category of Paint (GL-008-010) under the HKGLS.

<b>Product Environmental Criteria</b>	<b>Verification Method(s)*</b>
<p>1. The paint shall not contain volatile organic compounds (VOCs) in excess of:</p> <ul style="list-style-type: none"> <li>• 50g per litre (g/L) of the water-based coatings for indoor application;</li> <li>• 150g per litre (g/L) of the water-based coatings for outdoor application; and</li> <li>• 250g per litre (g/L) of the solvent-based coatings of paint.</li> </ul>	<p>✓ Review of laboratory test report(s)<sup>1</sup>; AND</p> <p>✓ Performance of an on-site factory visit; AND</p> <p>✓ Interview with relevant personnel.</p>
<p>2. The paint shall contain no more than 0.01% by wet weight or 100mg/L of the halogenated solvents (including DCM and 1,1,1-Trichloroethane).</p>	<p>✓ Review of laboratory test report(s)<sup>2</sup>.</p>
<p>3. The paint shall not be formulated or manufactured with mercury or their compounds, or be tinted with pigment of cadmium, chromium VI, lead or mercury. The levels of the above hazardous elements as impurities shall not exceed:</p> <p>Cadmium: 100 ppm Chromium VI: 200 ppm Lead: 200 ppm Mercury: 200 ppm</p>	<p>✓ Review of laboratory test report(s)<sup>3</sup>.</p>
<p>4. The paint shall contain no more than 0.01% by wet weight of formaldehyde.</p>	<p>✓ Review of laboratory test report(s)<sup>4</sup>.</p>
<p>5. The paint shall contain no more than 0.01% by wet weight of the sum total of aromatic compounds, which must include benzene, toluene, xylenes, and ethylbenzene</p>	<p>✓ Review of laboratory test report(s)<sup>5</sup>.</p>

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Product Environmental Criteria	Verification Method(s)*
<p>6. Packaging requirements :</p> <ul style="list-style-type: none"> <li>• The packaging of the product shall not contain PVC or chlorine-based plastics;</li> <li>• For metal cans, material must comply with RoHS standards. <ul style="list-style-type: none"> <li>Pb &lt; 1000 ppm</li> <li>Cd &lt; 100 ppm</li> <li>Hg &lt; 1000 ppm</li> <li>Cr<sup>6+</sup> &lt; 1000 ppm</li> <li>PBB &lt; 1000 ppm</li> <li>PBDE &lt; 1000 ppm</li> </ul> </li> <li>• General packaging requirement (Refer to criteria for packaging materials: GL-Packaging).</li> </ul>	<ul style="list-style-type: none"> <li>✓ Inspection of product samples on site;</li> <li>✓ Review of supporting information; AND</li> <li>✓ Interview with relevant personnel.</li> </ul>

\*Analytical testing should be accredited and performed by laboratories that meet the requirement laid out in the IEC/ISO 17025 or EN45001 standards or any equivalent systems e.g. HOKLAS, CNAS. Under special situation and with the approval from GC, test can be performed by in-house method by the accredited laboratory or manufacturer.

*Notes on Test Methods:*

1. VOC: USEPA Method 24
2. Halogenated Solvents: USEPA Method 311
3. Lead and Cadmium: USEPA 3051A/7000B  
Chromium VI: USEPA 7196A  
Mercury: USEPA 3051A/7471B
4. ASTM D5910-05 (2012)
5. USEPA Method 311
6. Lead and Cadmium: USEPA 3051A  
Mercury: USEPA 3051A/7471B  
Chromium VI: USEPA 7196A  
PBB & PBDE: US EPA 3540C/8081A/8082A/8270D

\*\*Any relevant national or international test methods pertinent for the test parameter are acceptable.