

# Hong Kong Green Label Scheme

## Product Environmental Criteria for

### Water Heaters (GL-007-001)



#### **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 water heaters 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 water heaters in product use stage. Other environmental impacts include air and noise emissions, and the use of environmentally harmful substances. The worn-out water heaters and the packaging materials of water heaters burden our environment through the generation of solid waste.

#### **LABEL OBJECTIVE**

The aim of the environmental criteria developed for water heaters is to:

- Reduce energy consumption and promote energy-saving water heaters;
- Reduce air and noise emission, and the use of the environmentally harmful substances;  
and
- Minimize waste production by reducing the amount of primary packaging and promotion its reusability and/or recyclability.

#### **PRODUCT DEFINITION**

This document and all product environmental criteria therein apply to water heaters driven by either by electricity or gas fuel with the exhaust gas discharged via an over-roof exhaust gas system.

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**PRODUCT ENVIRONMENTAL CRITERIA**

The table below sets out the product environmental criteria for water heaters (GL-007-001) under the HKGLS.

Product Environmental Criteria	Verification Method(s)*
1. Minimum energy factor <ul style="list-style-type: none"> <li>• Electrically-powered heaters – 0.95</li> <li>• Gas-fired heaters – 0.65</li> </ul>	✓ Review of laboratory test report(s). <sup>1</sup>
2. The product and its manufacturing process shall not contain or use substances controlled by the Montreal Protocol.	✓ Review of supporting information <sup>2</sup>
3. Air emissions from gas-fired heaters: <ul style="list-style-type: none"> <li>• Nitrogen Oxides (NO<sub>x</sub>) – not more than 60mg/kWh (34 ppm)</li> <li>• Carbon Monoxide (CO) – not more than 60mg/kWh (56 ppm)</li> </ul>	✓ Review of laboratory test report(s). <sup>3</sup>
4. General packaging requirements (refer to criteria for packaging materials: GL-Packaging)	✓ Inspection of product samples; AND ✓ Review of supporting information; AND ✓ Interview with relevant personnel.

\*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.

Note

1. **Test Method:** CSA-C745 or equivalent
2. A declaration with authorized person signature showing complies with the requirement with list of chemical used in the product and its manufacturing process shall be submitted.
3. **Test Method:** EN676 or equivalent