

Hong Kong Green Label Scheme
Product Environmental Criteria for
Printed Matter (GL-004-005)



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 printed matter 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 criteria and product characteristics.

POTENTIAL ENVIRONMENTAL IMPACTS

Printing process impact the environmental throughout the entire printing cycle stages, including the consumption of films, the production of chemical wastes, and other components, the production to a final product, the use of products, the transport and maintenance services, and finally the waste disposal.

LABEL OBJECTIVE

The aim of the environmental criteria developed for printed matter is to:

- Reduce the material types and the use of the environmentally harmful substances;
- Reduce energy consumption and promote energy-saving printing plates;
- Promote improved durability and recyclability of printing plates; and
- Minimize waste production by reducing the amount of chemical wastes and promotion its reusability and/or recyclability.

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PRODUCT DEFINITION

This document and all product environmental criteria therein apply to printed matter. Separate system components such as films, chemical solvent, and other accessories located outside the system units are not included in this product category. The product criteria do not apply to printing ink, for which there are separate criteria

The table below sets out the product environmental criteria for printed matter (GL-004-005) under the HKGLS.

Product Environmental Criteria	Verification Method(s)*
<p>1. The use of printing inks, dyes, toners, overprinting varnishes, varnishes, adhesives, washing agents or damping solutions should not be classified with the following risk phrases in accordance with the Directive 1999/45/EC1 and its amendments:</p> <ul style="list-style-type: none"> • R50 (very toxic to aquatic organism) • R50-53 (very toxic to aquatic organism and may cause long term adverse effects in the aquatic environment) • R51-53 (toxic to aquatic organism and may cause long term adverse effects in the aquatic environment) • R45 (may cause cancer) • R46 (may cause heritable genetic damage) • R60 (may impair fertility) • R61 (may cause harm to the unborn child) • R62 (possible risk of impaired fertility) • R63 (possible risk of harm to the unborn child) <p>The total amount of ingredients of R50, R50-53, R51-53, R61, R62 and R63 risk phrases in accordance with Directive 67/548/EEC and its amendments, in each product should not exceed 2.5% by weight.</p>	<p>✓ Review of supporting information.</p> <p><i>Declaration and composition list</i> shall be provided from the manufacturer that the listed substances are not present in the product. Copies of the material safety data sheets for all ingredients shall also be provided.</p>
<p>2. The following substances shall not be formulated or added to cleaning/preservative gum, inks or other cleaning chemicals:</p> <ul style="list-style-type: none"> • Phthalates (esters of 1,2 benzenedicarboxylic acid) • Alkyl phenol ethoxylates and their derivatives • Halogenated solvents or preparations 	<p>✓ Review of supporting information.</p> <p><i>Declaration and composition list</i> shall be provided from the manufacturer that the listed substances are not present in the product. Copies of the material safety data sheets for all ingredients shall also be provided.</p>

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Product Environmental Criteria	Verification Method(s)*
3. Washing agents used for cleaning in printing process that contain aromatic hydrocarbon should not exceed 0.1 w/w-%.	✓ Review of laboratory test report(s) ⁱ ; AND ✓ Review of supporting information. Information shall be provided from the manufacturer.
4. The total content of the heavy metals lead, cadmium, mercury and chromium should not exceed 100 ppm in printing inks, toners, inks, foils and laminates.	✓ Review of laboratory test report(s) ⁱⁱ ; AND ✓ Review of supporting information. Information shall be provided from the manufacturer.
5. Aluminum plates should be sent to recycling.	✓ Review of supporting information; AND ✓ Interview with relevant personnel. Information shall be provided from the manufacturer
6. Rinsing water from film processing and plate production containing silver and photo chemicals shall not be discharged to the sewage.	✓ Review of supporting information. Information shall be provided from the manufacturer
7. Packaging requirements: <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). 	✓ Inspection of product samples; AND ✓ Review of supporting information; AND ✓ Interview with relevant personnel. Information shall be provided from the manufacturer.

*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.

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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 Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labeling of dangerous preparations.

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- i **Test Method:**
ASTM D3257 Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography or equivalent method
- ii **Test Method:**
ASTM D3718 (Standard Test Method for Low Concentrations of Chromium in Paint by Atomic Absorption Spectroscopy) or equivalent method.
ASTM D3335 (Standard Test Method for Low Concentrations of Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy) or equivalent method.
ASTM D3624 (Standard Test Method for Low Concentrations of Mercury in Paint by Atomic Absorption Spectroscopy) or equivalent method.