

## **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 products using recycled plastics 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**

Plastic wastes contribute significantly to the solid waste in our landfills. Reduce the volume of waste plastics through recycling will both reduce the amount of plastic entering the waste stream and reduce the consumption of non-renewable plastic resources.

## **LABEL OBJECTIVE**

The aim of the environmental criteria developed for “Products Using Recycled Plastics” is to:

- Promote the manufacture of environmental plastic products from plastic wastes.
- Reduce the amount of plastics entering the waste stream.
- Help reducing non-renewable virgin plastic resources.

## **PRODUCT DEFINITION**

This document and all product environmental criteria therein apply to all non-clothing products that made of recycled plastics. Products are considered to be the same if they only differ in size and/or in colour. Non-clothing products include textile which does not directly contact with human skin for prolonged period of time.

**PRODUCT CRITERIA**

The product environmental criteria for the product category of “Non-clothing Products Using Recycled Plastics” (GL-002-005) under the Hong Kong Green Label Scheme (HKGLS) are set out in the ensuing table.

<b>Product Environmental Criteria</b>	<b>Verification Method(s)*</b>
<p>1. The percentage of virgin plastic material(s) in the product shall not be more than 50% of the product’s net weight.</p> <p>The raw materials of the products shall not contain any scrapped and/or defected product resulted directly from the manufacturing process. Source(s) of recycled raw material and the recycled content shall be reported in details.</p>	<p>✓ Inspection of product samples; AND                      ✓ Review of supporting information; AND                      ✓ Performance of on-site factory visit.</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>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: 20 ppm                      Lead: 100 ppm                      Chromium VI: 100 ppm                      Arsenic: 50 ppm                      Mercury: 10 ppm                      Selenium: 20 ppm</p>	<p>✓ Review of laboratory test report(s).</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>3. Production processes shall conform to relevant national or local environmental regulations on preventing air pollution and water contamination.</p>	<p>✓ Review of supporting information.</p> <p>The applicant shall provide a <i>declaration</i> of conformity of the product with the requirements.</p>
<p>4. The product shall not contain organic compounds containing bromine as chemical flame retardant [i.e. Polybrominated biphenyls (PBBs), polybromodiphenyl ethers (PBDEs)].</p>	<p>✓ Review of laboratory test report(s).</p>

**Hong Kong Green Label Scheme**  
**Product Environmental Criteria for**  
**Non-clothing Products Using Recycled Plastics (GL-002-005)**



Product Environmental Criteria	Verification Method(s)*
5. The product shall be marked with an appropriate plastics resin identification code.	✓ Inspection of product samples.
6. Labels/markings/stickers must be made of the same material as the parts to which they are affixed or meet VDI 2243 Part I <sup>1</sup> requirement if they are difficult to separate.	✓ Inspection of product samples; AND ✓ Review of supporting information; AND ✓ Interview with relevant personnel.
7. General packaging requirement 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.

<sup>1</sup> In case synthetic resin is mixed, 'compatibility of thermoplastic resin' for evaluating the recyclability of mixed synthetic resin is as follows. Here, the level which does not cause inconvenience in recycling is set not less than '3'.

Plastic Matrix	Additive of Plastic												
	PE	PVC	PS	PC	PP	PA	POM	SAN	ABS	PBTP	PETP	PMMA	
Plastic Matrix	PE	1	4	4	4	1	4	4	4	4	4	4	4
	PVC	4	1	4	4	4	4	4	1	2	4	4	1
	PS	4	4	1	4	4	4	4	4	4	4	4	4
	PC	4	3	4	1	4	4	4	1	1	1	1	1
	PP	3	4	4	4	1	4	4	4	4	4	4	4
	PA	4	4	3	4	4	1	4	4	4	3	3	4
	POM	4	4	4	4	4	4	1	4	4	3	4	4
	SAN	4	1	4	1	4	4	4	1	1	4	4	1
	ABS	4	2	4	1	4	4	3	4	1	3	3	1
	PBTP	4	4	4	1	4	3	4	4	3	1	4	4
	PETP	4	4	3	1	4	3	4	4	3	4	1	4
	PMMA	4	1	3	1	4	4	3	1	1	4	4	1

Remarks

1 : suitable 2 : limitedly suitable 3 : suitable in small amounts 4 : unsuitable

Data: The Association of German Engineers(VDI: Verein Deutscher Ingenieure) VDI 2243 Part 1