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 the consumer paper packaging 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

Though production of consumer paper packaging uses some paper as raw materials, primary paper production relies heavy on forest resources. The use of paper has and continues to be the subject of considerable community concern with respect to its impact upon the environment, particularly the sourcing of wood pulp from virgin or unsustainably managed native forests, use of chemicals, and production emissions. Process effluents can contain high concentrations of natural organic materials which deplete oxygen from receiving water bodies, adversely affecting the ecosystems. These anthropogenic and non-biodegradable chemicals can potentially accumulated and have toxic effects on the environment if discharged in effluents or emitted to the atmosphere.

LABEL OBJECTIVE

The aim of the environmental criteria developed for Consumer Paper Packaging is to:

- Promote the contribution of sustainably managed forests, to reduce destruction of virgin forests and natural habitat.
- Reduce toxicity of process effluent generated from pulp production; minimize the environmental loading of the receiving water bodies.
- Reduce the amount of toxic chemicals entering the consumer waste stream through the glues, inks, and laminates used.
- Include weight and quantity of material usage considerations in order to reduce transportation emissions, over-packaging, and carbon footprint.

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to:

- Consumer Paper Packaging that are supplied to customers upon purchase of consumable goods
- Exclusively the *paper* component and not any other accessories that may accompany the packaging
- Paper packaging that originate from post-consumer recycled fiber or from certified forests

PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the environmental criteria for the product category of Consumer Paper Packaging (GL-005-009) under the HKGLS.

Criteria	Verification Method
PRODUCT PERFORMANCE CRITERIA 1. The fibers source must meet one of the following: • At least 50% recycled fibers [1], including 20% post-consumer[2] content; or • For virgin wood fibers, it shall originate from sustainable source with certification on chain of custody	✓ Inspection of product Samples; AND ✓ Review of supporting information; AND ✓ Performance of on-site factory visit. Note I
2. The paper packaging shall not use water-insoluble glues.	✓ Review of supporting information; AND ✓ The applicant shall provide MSDS of the glues ingredients and provide declaration with authorized signature showing compliance with the requirement.

[1] **Recycled fibers** refer to fibers collected from the conversion and consumer stages. Purchased broke and broke from own production is defined as new fiber (if the raw material is new fiber) and as recycled fiber (if the raw material is recycled).

[2] **Post-Consumer refers to** material generated by households, or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Criteria	Verification Method
3. The glue coverage must not exceed 80% of total surface area of the packaging.	✓ Review of supporting information; AND ✓ Review of product samples.
4. The total content of each heavy metal: lead, cadmium, mercury and chromium should not exceed 100 ppm in the final product.	✓ Review of laboratory test report(s); AND ✓ Review of supporting information. Information shall be provided from the manufacturer. Note II
5. The paper pulp shall be bleached with elemental chlorine free or totally chlorine free agents.	✓ Review of supporting information. The applicant shall *declare* compliance with the requirement.
6. The processing of paper pulp shall contain no more than 30 mg per kg of azo colorants (dyes and pigments) which may cleave to any of the amines listed in Table 1.	✓ Review of laboratory test report(s); AND ✓ Review of supporting information. The applicant shall submit *supporting document and declaration* to prove compliance with the requirement.

Criteria	Verification Method
7. The production process shall conform to relevant environmental regulations and agreements on preventing air pollution, water contamination, noise, odour and emission of hazardous materials.	✓ Review of supporting information; AND ✓ Interview with relevant personnel. The applicant shall *declare* compliance with the requirement together with appropriate documentation (e.g. ISO14001 certificate)
8. The final product should be at least 80% recyclable in recycling facilities.	✓ Inspection of product samples; AND ✓ Review of supporting information;
9. Packaging requirements: General packaging requirements (Refer to criteria for packaging materials: GL-Packaging)	✓ Inspection of product samples; ✓ Review of supporting information; ✓ 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:

I. Sustainable Certificate include: Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC), Canadian Standards Association (CSA) National Standard for Sustainable Forest Management, Sustainable Forestry Initiatives (SFI), Malaysian Timber Certification Council, Pan European Forest Certification Council, Lembaga Ekolabel Indonesia (LEI) and Finnish Forest Certification Scheme.

II. **Test Method:**

Suggested and equivalent methods are acceptable. Test methods include:

Lead and Cadmium: US EPA 3051A/7000B; Mercury: US EPA 3051A/7471B;

Chromium VI: US EPA 3060A/7196A

Table 1

Chemical Substance	CAS No.	Chemical Substance	CAS No.
4-aminobiphenyl	92-67-1	3,3'-dimethylbenzidine	119-93-7
benzidine	92-87-5	3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0
4-chloro-o-toluidine	95-69-2	p-cresidine	120-71-8
2-naphthylamine	91-59-8	4,4'-methylene-bis-(2-chloroaniline)	101-14-4
o-aminoazotoluene	97-56-3	4,4'-oxydianiline	101-80-4
2-amino-4-nitrotoluene	99-55-8	4,4'-thiodianiline	139-65-1
p-chloroaniline	106-47-8	o-toluidine	95-53-4
2,4-diaminoanisole	615-05-4	2,4-diaminotoluene	95-80-7
4,4'-diaminodiphenylmethane	101-77-9	2,4,5-trimethylaniline	137-17-7
3,3'-dichlorobenzidine	91-94-1	4-aminoazobenzene	60-09-3
3,3'-dimethoxybenzidine	119-90-4	o-anisidine	90-04-0

Test Methods:

(Colorants – Test method for the detection and determination of certain listed amines derived from azo colorant in dyestuffs) ISO/AWI 12313; EN 14362-1(2003); GB 17592 (2006)