

Hong Kong Green Label Scheme

Product Environmental Criteria for Laundry Detergents (GL-003-001)



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 laundry detergent 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

Laundry detergents are consumed in large quantity in Hong Kong every day. These detergents contain various chemical substances such as surfactants, softeners, bleaches, preservatives, dyes, perfumes corrosion inhibitors, enzymes and so forth. The discharge of the laundry detergents and/or their prepared solution presents a significant burden on our environment in terms of wastewater loading and subsequent treatment, resource consumption and disposal of packaging materials.

LABEL OBJECTIVE

The aim of the environmental criteria developed for laundry detergents is to:

- Reduce the toxicity of wastewater arising from the use of laundry detergents, and to help reduce the environmental loading of sewage treatment facilities and the receiving water bodies; and
- Minimize waste production by reducing the amount of primary packaging and promoting its reusability and/or recyclability.

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to all detergents in powdered, liquid or other forms intended for washing with textiles in washing machines and by hand. The document does not cover separate detergent components (e.g. softeners, whiteners etc) and specific products for carpet washing and/or commercial, industrial washing of textiles.

Hong Kong Green Label Scheme
Product Environmental Criteria for
Laundry Detergents (GL-003-001)



PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the product environmental criteria for Laundry Detergents (GL-003-001) under the HKGLS.

The product criteria refer to a functional wash. One functional wash is defined as 3.5 kg of normally soiled laundry in water. Individual criteria are given accordingly in gram of detergent per washing (g/wash).

Product Environmental Criteria	Verification Method(s)*
1. The detergent shall be easily biodegradable ¹ .	<ul style="list-style-type: none"> ✓ Review of laboratory test report(s)^{1a-1b}; AND ✓ Review of supporting information.
2. The pH of the laundry detergent solution prepared in accordance with the dosing quantity specified on the package shall not exceed 11.0.	<ul style="list-style-type: none"> ✓ Review of laboratory test report(s); AND ✓ Review of supporting information.
3. The detergent shall not contain the following substances: <ul style="list-style-type: none"> • EDTA (Ethylene diamine tetra-acetic acid); • APEO (alkyl phenol ethoxylate); • Chlorine bleaching agents; • NTA (Nitrilotri acetic acid); • Phosphate; and • Whitening agents 	<ul style="list-style-type: none"> ✓ Review of laboratory test report(s).² ✓ Review of supporting information.
4. Colouring matters / dyes / pigments in the product must be approved for use in foodstuffs or cosmetics by relevant national or local environmental regulations.	<ul style="list-style-type: none"> ✓ Review of supporting information.³
5. Phosphonates in the product shall not exceed 1.0g/wash.	<ul style="list-style-type: none"> ✓ Review of laboratory test report(s).⁴
6. Packaging Requirements: <ul style="list-style-type: none"> • Maximum packaging limit: 18g per 100g of product in use. • General packaging requirements (refer to criteria for packaging materials: GL-Packaging). 	<ul style="list-style-type: none"> ✓ Inspection of product samples; AND ✓ Review of supporting information⁵; AND ✓ Interview with relevant

**Hong Kong Green Label Scheme
Product Environmental Criteria for
Laundry Detergents (GL-003-001)**



Product Environmental Criteria	Verification Method(s)*
	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:

- 1a Appropriate *test* results, showing that the surfactants used are aerobically biodegradable shall be provided.
Test method include: USEPA 40CFR 796.3240 or any of the six test methods described in Organization for Economic Co-operation and Development (OECD) Guidelines for Testing of Chemicals, 301A-301F; or CNS4984 (Method of Test for Biodegradability of Synthetic Detergent) or Other equivalent testing method

- 1b Ingredients will be considered readily biodegradable if the level of biodegradability measured is at least 60% within 28 days.

2. The applicant shall provide copies of the material safety data sheets for all ingredients, declaration from authorized person showing compliance to the criteria and laboratory test report
Test method:
EDTA: *ASTM D1767 or Titration method in APHA 2340C or other equivalent method*
APEO: *ASTM D2357 or NMR-H or Screening test using GC/MS or other equivalent*
Chlorine bleaching agents: *ASTM D2022 or APHA 20e 4500-Cl B or other equivalent*
NTA: *ASTM D4954 or APHA 2340C or other equivalent*
Phosphate: *APHA 4500 P B & C or other equivalent*
Whitening Agent: *By declaration and product ingredients list.*

3. List of permitted colorants in food is stated in Schedule 1 of Cap 132 H of Colouring Matter in Food Regulations.

4. *Test method:*
Phosphonates: *ISO 10695 or other equivalent*

5. A description of the materials used in packaging and labels and an empty package shall be provided, together with a declaration that the packaging materials do not contain chlorine-based plastics.