

Hong Kong Green Label Scheme
Product Environmental Criteria for
Lubricating Oil/Grease (GL-005-004)



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 Lubricating oil/grease 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

Considerable amounts of lubricating oil/grease of various types are used in different industrial processes in Hong Kong. Some lubricating oils may find their way into the soil and water due to unintentional leakage. This poses risk to both human health and the environment because of poor biodegradation rate and the presence of hazardous substances. People may come into direct contact with lubricating oil during activities such as car repairs and various industrial processes that create health hazard.

LABEL OBJECTIVE

The aim of the environmental criteria developed for lubricating oil/grease is to:

- Reduce potential hazard to the environment or health
- Promote the importance of recycling used oil and the use of renewable resources

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to lubricating oil, which have the function of lubricating and pressure transferring effect. It comprises chain oil, mould oil, hydraulic oil, 2-cycle engine oil, lubricating grease, metal-cutting fluid and transmission oil.

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PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the environmental criteria for lubricating oil/grease (GL-005-004) under the HKGLS.

| Product Environmental Criteria | Verification Method(s)* |
|--|--|
| <p>1. The product shall as a minimum contain the below mentioned quantities of renewable oil (animal, marine biological or vegetable origin):</p> <ul style="list-style-type: none"> • Chain oil – min 85% • Mould oil – min 85% • Hydraulic oil – min 65% • Lubricating grease – min 65% • 2-cycle engine oil – min 50% • Metal-cutting fluid – min 65% • Transmission oil – min 65% | <ul style="list-style-type: none"> ✓ Review of supporting information; AND ✓ Interview with relevant personnel |
| <p>2. The use of re-refined base oil is an alternative to the minimum content of renewable raw materials required in Criteria 1. As an alternative the product shall as a minimum contain the following quantities of re-refined oil:</p> <ul style="list-style-type: none"> • Metal-cutting fluid – min 65% • Transmission oil – min 65% | <ul style="list-style-type: none"> ✓ Review of supporting information; AND ✓ Interview with relevant personnel |
| <p>3. The base oil of the product shall be degradable at least by 60% or more within 28 days.</p> | <ul style="list-style-type: none"> ✓ Review of laboratory test report(s).¹ |
| <p>4. EDTA (Ethylenediamine tetraacetic acid) and Surfactant containing nonylphenol analogues shall not be used.</p> | <ul style="list-style-type: none"> ✓ Review of supporting information; AND ✓ Interview with relevant personnel <p>A <i>declaration</i> of compliance shall be provided together with full ingredient list of ink used.</p> |

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| Product Environmental Criteria | Verification Method(s)* |
|---|---|
| 5. General packaging requirement (Refer to criteria for packaging materials: GL-Packaging). | <ul style="list-style-type: none"> ✓ 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. One of the following test method or equivalent:
 - OECD (Organization for Economic Cooperation and Development) Chemical Product Test Guidelines
 - 301B (CO₂ Evolution)
 - 301C (Modified MITI(I))
 - 301F (Manometric Respirometry)
 - ASTM(American Material Test Association)
 - D 5864 (Standard test method determining aerobic biodegradability of lubricating oil and lubricating oil components)
 - D 6731 (Standard test method determining aerobic biodegradability of lubricating oil or lubricating oil components sealed in the respirometer in water.)