Hong Kong Green Label Scheme
Product Environmental Criteria for
Automotive Oil Filters (GL-010-001)

GREEN COUNCIL 環保促進會

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 Automotive Oil Filters 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 product performance and environmental criteria.

POTENTIAL ENVIRONMENTAL IMPACTS

Filters are used in all automotive engines, whether gasoline or diesel, for motor oil which lubricates the internal parts of the engine. If soot, rust particles and other solid contaminants that enter the oil are not filtered out, they will act as abrasives when the oil recirculates, causing excessive wear in the engine. This will lead to increased smoke emissions. Although diesels usually constitute a relatively small percentage of road vehicles, they are often found to contribute significantly to particulate matter in urban areas. In addition, the deposition of airborne diesel particles on the surfaces of buildings causes damage and soiling.

Good oil filters which filter efficiently the engine oil increases the interval of oil change out, prolong useful life of the oil, thereby resulting in less waste oil to the waste stream.

This standard covers the performance and environmental requirements for lubricating oil filters for installation on gasoline or diesel automotive engines.

LABEL OBJECTIVE

The aim of the environmental criteria developed for Automotive Oil Filters is to:

- By efficiently filtering lubricating motor oil, increase the interval of engine oil change out, prolong useful life of the oil, thereby resulting in less waste oil to the waste stream.
- Reduce wear of automotive engines and thereby reducing smoke emissions.

PRODUCT DEFINITATION

This document and all product environmental criteria therein apply to all full flow oil filters which form the vast majority of oil filters used in automobiles. With this type of system, all of the oil is filtered before it passes into the engine. Unlike the full-flow filter, a bypass or secondary filter is situated outside the main line of oil circulation, and takes a small portion of the normal oil flow at any one time.

PRODUCT CRITERIA

The product performance and environmental criteria for the product category of Automotive Oil Filters (GL-010-001) under the Hong Kong Green Label Scheme (HKGLS) are set out in this criteria document in the ensuing table.

Product Environmental Criteria	Verification Methods*
Product Performance Criteria	
1 Hydrostatic burst shall not be less than 200 p.s.i. (or 1.4 Mpa) **OR**	✓ Review of laboratory test report(s) The filter has to be tested in accordance with the procedures described in SAE (Society of Automotive Engineers) HS-806/2001 or equivalent methods to prove that they comply with the requirement.
2 Collapse pressure shall not be less than 75 p.s.i. (or 0.5 Mpa)	✓ Review of laboratory test report(s) The filter has to be tested in accordance with the procedures described in SAE (Society of Automotive Engineers) HS-806/2001 or equivalent methods to prove their compliance with the requirement.
3 Impulse fatigue : The shall be no leaks or cracks at a minimum of 25,000 cycles.	✓ Review of laboratory test report(s) The filter has to be subjected to pressure impulse fatigue testing in accordance with the procedures described in SAE (Society of Automotive Engineers) HS-806/2001 or equivalent methods can be used to prove compliance.

Product Environmental Criteria	Verification Methods*
Product Environmental Criteria	
4 The filter media materials shall be of a type and quality that will increase efficiency and service life and shall meet the following requirements : 4.1 Materials are to be uniform in quality and free from defects with would affect the performance of the filters and elements. 4.2 The filter element shall not contain abrasives of any type and shall be so secured that it cannot be discharges into the lubricating system of the engine. 4.3 Neither the filters nor the elements shall contain any materials that disintegrate or dissolve in engine oil lubricating systems. 4.4 The filter element shall be compatible with engine lubricating oil additives.	✓ Review of supporting information; AND ✓ Interview with relevant personnel. The applicant shall indicate clearly the type of filter media used, submit relevant documentation from the manufacturer, and declare compliance with the requirements 4.1 to 4.4.
5 Single pass efficiency shall not be less than 75% over the life of the filter.	✓ Review of laboratory test report(s) Single Pass Efficiency has to be measured in a test specified by SAE HS-06 (2001) or Equivalent methods can be used to show compliance.
6 Capacity shall not be less than 10 grams. (Reporting of this parameter is optional)	✓ Review of laboratory test report(s) It can be checked by Single Pass Test in accordance with the procedures described in SAE (Society of Automotive Engineers) HS-806/2001 or equivalent methods, to prove the requirement is met.
7 The filter shall extend oil life and significantly increase the “oil change interval”.	✓ Review of supporting information The applicant shall declare compliance with the requirement, and submit supporting documentation from the manufacturer.

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Product Environmental Criteria	Verification Methods*
8 The product shall be accompanied by detailed instructions for proper use and installation to maximize product performance, preferably also with information on proper disposal of waste.	✓ Review of supporting information

*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.