



**CCD-104 / GS-41**



## **Hand Cleaners / Hand Soaps**

### **Introduction**

Green Seal and the Environmental Choice Program<sup>M</sup> are designed to support a continuing effort to improve and maintain environmental quality by reducing energy and materials consumption and by minimizing the impacts of pollution generated by the production, use and disposal of goods and services.

This set of certification criteria is jointly published by the Environmental Choice Program<sup>M</sup> and by Green Seal. It builds on and replaces the previous Environmental Choice Program<sup>M</sup> Certification Criteria Document (CCD) 104 “*Industrial Hand Cleaners*”.

Hand cleaners are designed to remove both organic and inorganic soil from skin. Industrial products are found in garages, print shops, and other industrial settings. Institutional products are found in public washrooms of restaurants, retail, schools and other public buildings. At present, the standard does not focus on the use of hand cleaners in households, food preparation operations, or medical facilities.

During use these products may have environmental impacts on air quality through volatile ingredients and user safety from irritating ingredients. When disposed the active ingredients are rinsed into sewage systems immediately after use and potentially affect aquatic ecosystems. Container packaging may or may not be recycled and is generally disposed of to landfill. Some containers use less material per unit product and transport emission benefits can be realised by packaging choices.

Certification under Green Seal and the Environmental Choice Program<sup>M</sup> will be awarded to hand cleaners that demonstrate environmental leadership throughout their life-cycle and meet requirements for:

- performance;
- limited toxicity for aquatic and other organisms;
- biodegradability;
- limits on ingredients that are considered likely to contribute to specific environmental and health impacts (e.g., indoor air quality, ground-level ozone-formation); and
- limited waste and resource use.

### **Notice**

Throughout this document, any reference to a standard or guideline means to its latest edition.

The Environmental Choice Program<sup>M</sup> (ECP) reserves the right to accept equivalent test data for the test methods specified in this document.

## Definitions

1. In this set of requirements, please note the following definitions:

**"APEO"** means alkylphenol ethoxylate;

**"antimicrobial"** means substances which can kill or inhibit the growth of microorganisms;

**"antiseptic"** means preventing or arresting the growth of microorganisms;

**"bag in box"** means a flexible bag held inside a rigid outside container (box) that is not removed prior to use of the bag;

**"disinfectant"** means an antimicrobial agent capable of destroying pathogenic and potentially pathogenic microorganisms on inanimate surfaces;

**"EDTA"** means ethylene diaminetetra-acetic acid (also known as ethylene dinitrilotetraacetic acid) or any of its salts;

**"halogenated organic solvents"** means any organic solvent containing halogens including fluorine, chlorine, bromine and iodine;

**"IARC"** means International Agency for Research on Cancer;

**"industrial heavy duty hand cleaners"** means products advertised for heavy duty use to remove oil, grease, ink or other hard to remove soils in industrial settings;

**"ingredient"** means any constituent of a product that is intentionally added or known to be a contaminant that comprises at least 0.01% by weight of the product;

**"institutional hand cleaners"** means products advertised for routine, nonspecialized hand cleaning in office buildings, schools, retail and other public buildings;

**"NTA"** means nitrilotriacetic acid or any of its salts;

**"OECD"** means Organization for Economic Co-operation and Development;

**"readily biodegradable"** is determined using any one of the five test methods described in OECD Guidelines for the Testing of Chemicals, Test Guidelines 301A - 301E;

**"recyclable package"** means the package can be diverted from the waste stream through available processes and programs, and can be collected, processed, and returned to use in the form of raw materials or products;

**"sanitizer"** means a product that reduces the level of microorganisms present to acceptable levels established by federal or provincial health authorities;

**"skin irritant"** means the substances causes erythema or edema of the skin graded at 2 or more as defined by OECD 404;

**"skin sensitizer"** means a substance that causes an immunologically mediated cutaneous reaction, also known as allergic contact dermatitis;

**"standard use"** means the amount of product directed for use and diluted in 1 litre of tap water. If no dose is suggested, 5 ml of liquid hand soap shall be used and 0.9 ml of foam soap shall be used;

**"volatile organic compound"** or **"VOC"** means any organic compound which participates in atmospheric photochemical reactions. It excludes those organic compounds which the ECP and Green Seal designate as having negligible photochemical reactivity. These compounds are taken based on the definition found in U.S Code of Federal Regulations. Title 40 part 51 paragraph s.

### Category Definition

2. This category includes all **hand cleaner / hand soap** products, as further defined in the subcategories in this section. The subcategories are:
  - (a) institutional hand cleaners CCD 104 A/ GS-41 A; and
  - (b) industrial heavy duty hand cleaners CCD 104 B/ GS-41 B.

### General Requirements

3. To be authorized to carry the EcoLogo<sup>M</sup> and Green Seal® the **hand cleaner / hand soap** product must:
  - (a) meet or exceed all applicable governmental and industrial safety and performance standards; and
  - (b) be provided in such a manner that all steps of the process, including the disposal of waste products arising therefrom, will meet the requirements of all applicable governmental acts, by laws and regulations including, for facilities located in Canada, the *Fisheries Act* and the *Canadian Environmental Protection Act* (CEPA).

### Product Specific Requirements

4. To be authorized to carry the EcoLogo<sup>M</sup> and Green Seal® the **hand cleaner / hand soap** must:
  - (a) using a fixed, repeatable procedure, demonstrate efficacy against a nationally recognized conventional product showing equivalent or better performance. The testing protocol should include, at a minimum: cleaning ability, lathering/ rinsing, and skin condition after use. A standard soil shall be used and conclusions should be derived from at least six separate samples. All results, a summary of conclusions and a description of how any panelists are chosen shall be submitted;

- (b) not be a skin sensitizer as tested by OECD Guidelines for Testing Chemicals, Section 406, Buehler (1994), or Magnusson and Kligman (1969) or other peer-reviewed or standard test methods. The product shall not be considered a sensitizer under the following scenarios:
- if test data shows that the whole-product is not a skin sensitizer,
  - if test data shows that each ingredient present at or above a concentration of 0.1% is not a skin sensitizer, or
  - if test data shows that any known skin sensitizers are non-sensitizing when present at 0.1% or greater in the product;
- (c) not be a skin irritant as tested by OECD Guidelines for Testing Chemicals, Section 404 or other peer-reviewed or standard test methods. The product shall not be considered a skin irritant under the following scenarios:
- if test data shows that the whole-product is not a skin irritant,
  - if test data shows that each ingredient present at or above a concentration of 5% is not a skin irritant, or
  - if test data shows that any known skin irritants are non irritating when present at 5% or greater in the product;
- (d) be accompanied by detailed instructions for proper use to maximize product performance and minimize waste;
- (e) not be packaged in bag in box packaging;
- (f) be packaged in recyclable packaging. An exception shall be made for lightweight flexible packaging (e.g., pouches or bags) that represents at least 20% reduction in material use when compared with rigid packaging;
- (g) as demonstrated by the due diligence of the manufacturer, efforts have been made to ensure packaging with post-consumer recycled content;
- (h) make no antibacterial, disinfecting, antiseptic or sanitizing product claims;
- (i) not be formulated or manufactured with phosphates;
- (j) not be formulated or manufactured with NTA;
- (k) not be formulated or manufactured with EDTA;
- (l) not be formulated or manufactured with APEOs;
- (m) not be formulated or manufactured with halogenated organic solvents;
- (n) not be formulated or manufactured with butoxy-ethanol;
- (o) declare any fragrances on the product label and on material safety data sheets;
- (p) any fragrances used shall have been produced or handled following the code of practice of the International Fragrance Association;

- (q) if formulated or manufactured with dyes, be formulated with only food grade dyes;
- (r) not contain volatile organic compounds in excess of the limits expressed in the table below as measured by EPA Method 24-24A, 40 C.F.R., Part 60, Appendix A (1991), or Method 18,48 Federal Register 48, no. 202, October 18, 1983, or Method 1400 NIOSH Manual of Analytical Methods, Volume 1, February 1984, or Environmental Protection Agency Method 8240 GC/MS Method for Volatile Organics, September 1986, or California Air Resources Board Method 310; or as demonstrated through calculation from records of the amounts of constituents used to make the product.

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1%	8%

- (s) not be formulated or manufactured with any chemicals that are included in the International Agency for Research on Cancer (IARC) lists for proven (Group 1), probable (Group 2A), or possible (Group 2B) carcinogens;
- (t) be readily biodegradable as determined by whole formulation testing In lieu of such data, evidence on the ready biodegradability of each ingredient will be accepted if consistent tests have been applied for each ingredient; and
- (u) based on standard use of the product, not be toxic to aquatic life defined as  $IC_{50} > 1000$  mg/L as measured by whole formulation short-term sensitive toxicity test performed on the bacteria *Photobacterium phosphoreum*. Aquatic toxicity shall be measured by one of the following test methods: *Biological Test Method: Toxicity Test Using Luminescent Bacteria (Photobacterium phosphoreum)*, Report EPS 1/RM/24, November 1992, Environment Canada, ASTM D5660-96 or ISO 11348.

### Verification

5. To verify a claim that a product meets the criteria listed in this document, the ECP and Green Seal will require access, as is their normal practice, to relevant quality control and production records and the right of access to production facilities on an announced basis.
6. Compliance with requirement 2(b) shall be attested to by a signed statement of the Chief Executive Officer or the equivalent officer of the licensee. The ECP and Green Seal shall be advised in writing immediately by the licensee of any noncompliance which may occur during the term of the license. On the occurrence of any noncompliance, the license may be suspended or terminated as stipulated in the license agreement.

### Conditions for EcoLogo<sup>M</sup> Use / Green Seal<sup>®</sup> Use

7. The EcoLogo<sup>M</sup> and Green Seal<sup>®</sup> may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this document as determined by the Environmental Choice Program or Green Seal.
8. All licensees and authorized users must comply with the ECP's *Guide to Proper Use of the EcoLogo* regarding the format and usage of the EcoLogo and Green Seal's *Rules Governing the Use of the Green Seal Certification Mark*.

9. Any accompanying advertising must conform with the relevant requirements stipulated in this guideline, the license agreement, the ECP's *Guide to Proper Use of the EcoLogo* and Green Seal's *Rules Governing the Use of the Green Seal Certification Mark*.
10. The ECP criteria statement wording for this product type is "institutional hand cleaner" or "industrial hand cleaner". The licensee may propose other wording for the criteria statement, but any such proposed wording must be approved by the Environmental Choice Program<sup>M</sup>.
11. Whenever the Green Seal® certification mark appears on a package, the package shall contain a description of the basis for certification. The description shall be in a location, style, and typeface that are easily readable. Unless otherwise approved in writing by Green Seal, the description shall read as follows:

For products certified under GS-41 A, "This product meets Green Seal's environmental standard for institutional hand cleaners based on its reduced human and aquatic toxicity and reduced smog production potential."

For products certified under GS-41 B, "This product meets Green Seal's environmental standard for industrial hand cleaners based on its reduced human and aquatic toxicity and reduced smog production potential."