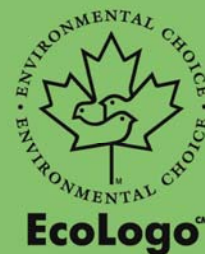


# EcoLogo<sup>CM</sup> Program Certification Criteria Document

CCD-051  
Paint and Varnish Remover



## Introduction

The EcoLogo<sup>CM</sup> Program is designed to support a continuing effort to improve and/or 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.

Based on a review of currently available life cycle information, the product category requirements will produce an environmental benefit through a reduction in toxic emissions to the environment, reduced use of hazardous materials.

Life cycle review is an ongoing process. As information and technology change, the product category requirements will be reviewed and possibly amended.

## Notice

Any reference to a standard means to the latest edition of that standard.

The EcoLogo<sup>CM</sup> Program reserves the right to accept equivalent test data for the test methods specified in this document.

## Interpretation

1. In this criteria document:

**"acutely toxic to aquatic life"** means  $LC_{50}$  or  $EC_{50} > 100$  mg/L as measured by short-term sensitivity testing with a battery of toxicity tests using three different species of divergent taxonomic and ecological ranks. These species should be physiologically and ecologically similar to organisms that reside in North American ecosystems. Listed below are acceptable methods.

- on an aquatic vertebrate species using one of the following:
  - Report EPA-821-R-02-012, "Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms", 2002, U.S. Environment Protection Agency; or
  - ISO 7346/1:1996 – "Water quality - Determination of the acute lethal toxicity of substances to a freshwater fish [*Brachydanio rerio* Hamilton-Buchanan (*Teleostei*, *Cyprinidae*) - Part 1: Static method", International Standardization Organization; or
  - ISO 7346/2:1996 – "Water quality - Determination of the acute lethal toxicity of substances to a freshwater fish [*Brachydanio rerio* Hamilton-Buchanan (*Teleostei*, *Cyprinidae*)] - Part 2: Semi-static method", International Standardization Organization; or
  - ISO 7346/3:1996 – "Water quality - Determination of the acute lethal toxicity of substances to a freshwater fish [*Brachydanio rerio* Hamilton-Buchanan (*Teleostei*,

- *Cyprinidae*] - Part 3: Flow-through method”, International Standardization Organization; or
- Report EPS 1/RM/9, “Biological Test Method: Acute Lethality Test Using Rainbow Trout”, July 1990, Environment Canada.
- on an aquatic invertebrates species using one of the following:
  - Report EPA-821-R-02-012, “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms”, October 2002, U.S. Environment Protection Agency; or
  - Report EPS-1-RM-11, “Biological Test Method: Acute Lethality Test Using *Daphnia* spp.”, July 1990, Environment Canada; or
  - Report OECD/OCDE-202, “*Daphnia* sp. Acute Immobilisation Test”, April 2004, Organization for Economic Cooperation and Development; or
  - ISO 6341:1996, “Water quality - Determination of the Inhibition of the Mobility of *Daphnia magna* Straus (*Cladocera*, *Crustacea*)”, International Standardization Organization.
- on a freshwater microalgae using one of the following:
  - Report EPA-821-R02-013 (section 14), “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms”, October 2002, U.S. Environment Protection Agency or
  - Report EPS-1-RM-25, “Biological Test Method: Growth Inhibition Test Using a Freshwater Algae”, March 2007, Environment Canada; or
  - Freshwater Alga and Cyanobacteria, Growth and Inhibition Test, Report OECD/OCDE-201, March 2006, Organization for Economic Cooperation and Development; or
  - ISO 8692: 2004, “Water quality – Freshwater algal growth inhibition test with unicellular green algae”, International Standardization Organization;

**"readily biodegradable"** means as determined by whole formulation testing using one of the six test methods described in *OECD Guidelines for the Testing of Chemicals*, 301A-301F, provided that all the measurements and calculations are based on the carbon content of the mixture and its degradation. For example, the dissolved organic carbon (DOC) removal in methods 301A or 301E; the CO<sub>2</sub> evolution in method 301B; or the oxygen consumption in the presence of an inhibitor of nitrogen metabolism in methods 301C, 301D or 301F;

**"volatile organic compounds"** or VOCs means any oxygen compound that participates in atmospheric photochemical reactions. It excludes those organic compounds which the EcoLogo<sup>CM</sup> Program designates as having negligible photochemical reactivity (see Appendix 1). VOC content can be measured by one of the following:

- EPA Method 24-24A, 40 C.F.R., Part 60, Appendix A (1991),
- Method 18,48 Federal Register 48, no. 202, October 18, 1983,
- Method 1400 NIOSH Manual of Analytical Methods, Volume 1, February 1984,

- Environmental Protection Agency Method 8240 GC/MS Method for Organics, September 1986, or
- calculations from records of the amounts of constituents used to make each product.

### Category Definition

2. This category includes all paint and varnish removers.

### General Requirements

3. To be authorized to carry the EcoLogo<sup>CM</sup>, the paint and varnish remover must:
  - (a) meet or exceed all applicable governmental and industrial safety and performance standards; and
  - (b) be manufactured and transported 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.

### Product Specific Requirements

4. To be authorized to carry the EcoLogo<sup>CM</sup> the paint and varnish remover must:
  - (a) not be manufactured or formulated with methylene chloride;
  - (b) perform effectively as measured by an industry-accepted test method;
  - (c) be accompanied by detailed instructions for proper use to maximize product performance;
  - (d) be accompanied by information describing proper disposal methods;
  - (e) not contain volatile organic compounds in excess of 250 g/L;
  - (f) be readily biodegradable as determined by whole formulation or single ingredient testing; and
  - (g) not be acutely toxic to aquatic life as determined by whole formulation or single ingredient testing.

## Verification

5. To verify a claim that a product meets the criteria listed in the guideline, the EcoLogo<sup>CM</sup> Program will require access, as is its normal practice, to relevant quality control and production records and the right of access to production facilities on an announced basis.
6. Compliance with section 3(b) shall be attested to by a signed statement of the Chief Executive Officer or the equivalent officer of the manufacturer. The EcoLogo<sup>CM</sup> Program shall be advised in writing immediately by the licensee of any non-compliance which may occur during the term of the license. On the occurrence of any non-compliance, the license may be suspended or terminated as stipulated in the license agreement.

## Conditions for EcoLogo<sup>CM</sup> Use

7. The EcoLogo<sup>CM</sup> may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this document.
8. It is recommended that a criteria statement appear with the EcoLogo<sup>CM</sup> whenever the EcoLogo<sup>CM</sup> is used in association with the paint or varnish remover product. The intent of this statement is to provide clarification as to why the product was certified and to indicate constraints to which the certification is limited. This is to ensure no ambiguity over, or misrepresentation of, the reason(s) for certification.

The suggested criteria statement wording for this product type is “*paint or varnish remover*”. The licensee may propose other wording for the criteria statement, but any such proposed wording must be approved by the EcoLogo<sup>CM</sup> Program.

9. All licensees and authorized users must comply with the Program's *Guide to Proper Use of the EcoLogo<sup>CM</sup>* regarding the format and usage of the EcoLogo<sup>CM</sup>.
10. Any accompanying advertising must conform with the relevant requirements stipulated in this document, the license agreement and the Program's *Guide to Proper Use of the EcoLogo<sup>CM</sup>*.

**For additional copies of this criteria document or for more information about the  
EcoLogo<sup>CM</sup> Program, please contact:  
TerraChoice Environmental Marketing Inc.  
Toll free: 1-800-478-0399, Telephone: (613) 247-1900, Email: [ecoinfo@terrachoice.com](mailto:ecoinfo@terrachoice.com)**

## Appendix 1: Volatile Organic Compounds with Negligible Photochemical Reactivity

The list of volatile organic compounds (VOCs) designated by the EcoLogo<sup>CM</sup> Program as having negligible photochemical reactivity has been taken from the following two documents:

1. State of California Air Resources Board, Regulation for Reducing Volatile Organic Compound Emissions from Consumer Products, Appendix.
2. U.S. EPA VOC Definition, Federal Register, Volume 57, No. 22, 3 February 1992, Rules and Regulations, pg. 3945, sec.51.100.

This EcoLogo<sup>CM</sup> designated list includes the following compounds:

- |     |   |      |  |
|-----|---|------|--|
| (a) | acetone   | (aa) | tetrafluoroethane (HFC-134a)   |
| (b) | ammonium carbonate  | (bb) | 1,1,1-trifluoroethane (HFC-143a)   |
| (c) | carbon monoxide   | (cc) | 1,1-difluoroethane HFC-152a)   |
| (d) | carbonic acid   | (dd) | 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)   |
| (e) | ethane  | (ee) | 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)   |
| (f) | metallic carbides or carbonates                             | (ff) | perfluorocarbons (classes of):   |
| (g) | methane   | (A)  | cyclic, branched, or linear, completely fluorinated alkanes  |
| (h) | methylene chloride (dichloromethane)                        | (B)  | cyclic, branched, or linear, completely fluorinated ethers with no unsaturations                           |
| (i) | cyclic, branched, or linear completely methylated siloxanes | (C)  | cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations                  |
| (j) | parachlorobenzotrifluoride (PCBTF)                          | (D)  | sulfur-containing perfluorocarbons with no unsaturations with the sulfur bonds only to carbon and fluorine |
| (k) | perchloroethylene (tetrachloroethylene)                     |      |  |
| (l) | 1,1,1-trichloroethane                                       |      |  |
| (m) | trichlorofluoromethane (CFC-11)                             |      |  |
| (n) | dichlorodifluoromethane (CFC-12)                            |      |  |
| (o) | trichlorotrifluoroethane (CFC-113)                          |      |  |
| (p) | dichlorotetrafluoroethane (CFC-114)                         |      |  |
| (q) | chloropentafluoroethane (CFC-115)                           |      |  |
| (r) | chlorodifluoromethane (HCFC-22)                             |      |  |
| (s) | dichlorotrifluoroethane (HCFC-123)                          |      |  |
| (t) | dichlorofluoroethane (HCFC-141b)                            |      |  |
| (u) | chlorodifluoroethane (HCFC-142b)                            |      |  |
| (v) | 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)               |      |  |
| (w) | trifluoromethane (HFC-23)                                   |      |  |
| (x) | 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee)        |      |  |
| (y) | pentafluoroethane (HFC-125)                                 |      |  |
| (z) | 1,1,2,2-tetrafluoroethane (HFC-134)                         |      |  |