

EcoLogoCM Program CCD-146

Certification Criteria Document Hardsurface Cleaners

CCD 146I – Cleaning Product with Low Potential for Environmental Illness and Endocrine Disruption

This category applies to cleaners designed to perform on a variety of hard surfaces for household, institutional and/or recreational purposes, that are specifically manufactured to minimize the exposure to chemicals and allergens harmful to environmental illness sufferers and reduce the potential release of endocrine-disruptors into the environment.

Environmental Illness (EI) encompasses a number of related conditions including, inter alia, Sick Building Syndrome, Multiple Chemical Sensitivity (MCS), Chemical Hypersensitivity, and Environmental Sensitivity Disorder. In all cases, EI means an acquired hypersensitivity to chemical and allergenic sources triggered by prolonged exposure to a variety of common consumer/industrial substances including, inter alia, household cleaners, perfumes, photocopy toners and pesticides. Avoidance of the chemical/allergenic source is considered to be crucial to mitigating the health effects of EI.

To be authorized to carry the EcoLogoCM, the cleaning product with low potential for environmental illness and endocrine disruption must:

(a) clean common hard surfaces effectively:

- by demonstrating at least 75% cleaning efficiency as measured by test methods A5 “particulate and oily soil/vinyl tiles” or A6 “oil, carbon, black and clay/white enamel painted stainless-steel panels” in ASTM D4488- 95(2001)e1 01-Jan-1995 “Standard Guide for Testing Cleaning Performance of Products Intended for Use on Resilient Flooring and Washable Walls”; or
- by a method based on CAN/CGSB 2-GP-11, Method 20.3 “Methods of Testing and Analysis of Soaps and Detergents”;

(b) whenever intended to be diluted with water by the consumer prior to use, be labelled with a clear and prominent statement saying that tepid water should be used for dilution;

(c) not utilize ethylene oxide in the manufacture of either the whole formulation nor any component thereof;

(d) not contain volatile organic compounds in excess of 0.05% by weight, for products for which the label specifies dilution with water prior to use, the VOC limit shall apply on the concentrated form (i.e. before any dilution has taken place);

(e) be readily biodegradable under both aerobic and anaerobic conditions as determined by whole formulation testing;



(f) based on the recommended dose, not be toxic to aquatic life as measured by whole formulation short-term sensitive toxicity test performed on all of the following:

- IC50 > 4000 mg/L on an aquatic invertebrates species using one of the following:

- EPA-821-R02-013, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (Ceriodaphnia dubia), US Environmental Protection Agency, 2002; or

- EPA-600-R95-136, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms", US Environmental Protection Agency, 1995; or

- Report OECD/OCDE-211, "Daphnia magna Reproduction Test", Organization for Economic Cooperation and Development, September 1998; or

- Report EPS 1/RM/21, "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran Ceriodaphnia dubia", Environment Canada, 1992; or

- Report EPS 1/RM/27, "Biological Test Method: Fertilization Assay Using Echinoids (Sea Urchins and Sand Dollars)", Environment Canada, 1992.

- IC50 > 2000 mg/L 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 Organization for Standardization.

- IC50 > 1000 mg/L on bacteria using one of the following:

- ASTM D5660-96(2004), "Standard Test Method for Assessing the Microbial Detoxification of Chemically Contaminated Water and Soil Using a Toxicity Test with a Luminescent Marine Bacterium", 2004, or

- ISO 11348-1:2007, "Water quality -- Determination of the inhibitory effect of water samples on the light emission of Vibrio fischeri (Luminescent bacteria test) -- Part 1: Method using freshly prepared bacteria", International Organization for Standardization, 2007, or

- Report EPS 1/RM/24, "Biological Test Method: Toxicity Test Using Luminescent Bacteria Photobacterium phosphoreum", Environment Canada, November 1992.

(g) based on the recommended dose, have a calculated oral rat toxicity LD50 >5,000 mg/kg, where each ingredient has been tested according to OECD Test Guidelines for acute mammalian toxicity testing (methods 401, 420, 423 or 425);



(h) demonstrate a minimal potential for the introduction of endocrine-disrupting by-products into the receiving environment, through a complete absence of detectable recalcitrant metabolites formed during biodegradation tests;

(i) demonstrate low potential for skin irritancy through an appropriate test of either the whole formulation or active ingredients. An acceptable standard would be an irritation index score of <12.0, as determined from the HET-CAM test; and

(j) be listed with a recognized environmental health organization as a product not harmful and/or potentially beneficial to people suffering from, or prone to, environmental illness.

