

Environmental Choice^M Program

CERTIFICATION CRITERIA DOCUMENT

CCD-167



Product: Mosaic Tiles

Introduction

Environment Canada's Environmental Choice^M Program is pleased to publish the following certification criteria document on *Mosaic Tiles*.

The Environmental Choice Program is 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 available to Canadians.

Mosaic tiles are square or rectangular groupings of smaller component materials, typically ceramic, stone or glass, in a mosaic pattern. They are connected by a flexible backing and are held in place with mortar and filled in with grout. Mosaic tiles are sold pre-formed and used as flooring, wall coverings, and trims or architectural accents.

The extraction and manufacturing of materials used in mosaic tiles is significant and energy intensive. Most materials are quarried and then further processed. Marble and granite are quarried then cut and milled and polished. Ceramic is quarried as clay, then heated. Silica used in glass is quarried as sand or reclaimed glass cullet, followed by heating at high temperature. Engineered stone is a mix of quarried quartz sand and polymer resin manufactured with heat and pressure. River / beach stone is taken from water edges without a need for milling and cutting or further manufacture.

Most mosaic material is imported from Europe or Asia and transportation impacts are also potentially significant. Additional impacts occur during installation as tiles are installed onto floor or walls with a mortar and later grouted. Mosaic tiles are durable with expected lifetimes of 50 years and more. Products can be broken down and reused or recycled but the majority is disposed to landfill.

Beach and river stones have clear environmental benefits over other mosaic materials. There are minimal energy requirements to extract and manufacture the stones, and the lack of a high temperature manufacturing process as used for glass, ceramic and engineered stone avoids air and water emissions. Similar benefits are possible for minimally processed stones reclaimed from larger pieces of quarried marble / granite. Transportation, use and disposal impacts are similar across mosaic materials.

Certification under the Environmental Choice Program will be awarded to *Mosaic Tiles* that demonstrate environmental leadership throughout their life-cycle and meet requirements **for reduced energy use, reduced resource use and reduced water and air emissions.**

As information and technology change, the product category requirements will be reviewed and possibly amended.

It is anticipated that **Mosaic Tiles** that conform to this criteria document will apply to the Environmental Choice Program for verification and subsequent authority to label the qualifying product with the Environmental Choice EcoLogo[™].

Notice

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

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

Interpretation

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

"beach or river stone mosaic tiles" means mosaic tiles made of stones collected from beaches or river beds. The stones may be granite, marble, basalt, quartz or other and multiple sizes and shapes;

"fair labour practices" means, at minimum, avoiding use of child labour, avoiding forced labour, providing a safe working environment, freedom of employees to associate and bargain, providing a safe working environment, avoiding of discrimination, and providing wages and working hours in accordance with local law. Further details and examples can be found in the United Nations Global Compact (Principles 3, 4, 5 and 6) at www.unglobalcompact.org;

"mosaic tiles" means square or rectangular groupings of smaller component materials, typically ceramic, stone or glass, in a mosaic pattern. They are connected by a flexible backing and are held in place with mortar and filled in with grout. Mosaic tiles are sold pre-formed and used as flooring, wall coverings, and trims or architectural accents; and

"reclaimed stone mosaic tiles" means mosaic tiles made of stone reclaimed from offcuts of larger stone cut for a separate purpose (e.g., from dimensional marble) or from reclaimed building materials (e.g, terracotta roof tiles).

General Requirements

2. To be authorized to carry the EcoLogo[™], the **Mosaic Tile** must satisfy the following:

- (a) meet or exceed all applicable governmental and industrial safety and performance standards; and
- (b) be manufactured 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).

Category Definition

3. This category includes all **mosaic tile** products, as further defined in the subcategories in this section. The subcategories are:

- (a) beach or river stone mosaic tiles; and
- (b) reclaimed stone mosaic tiles.

Product Specific Requirements

4. To be authorized to carry the EcoLogo^M, the **Mosaic Tile** must satisfy the following:
 - (a) be manufactured with either beach stones, river stones or reclaimed stone;
 - (b) have a coefficient of friction of at least 0.6 when wet and tested according to ASTM C1028;
 - (c) have a maximum water absorption of 3% when tested according to ASTM C 373;
 - (d) have a breaking strength of at least 250lbs (110 kg) when tested according to ASTM C648;
 - (e) have an abrasion resistance rating of at least 4 (heavy duty floors) when tested according ASTM C448 or equivalent test method of the Porcelain Enamel Institute;
 - (f) have a minimum tensile strength of 0.35 Mega Pascals (Mpa) when tested according to ASTM C648;
 - (g) no individual stone in the mosaic tile can protrude more than 3 mm above other stones;
 - (h) if sold with flexible mesh backing, employ quality control procedures to ensure that stones remain fixed to mesh backing upon delivery to contractors;
 - (i) be sold with detailed installation instructions on preparing substrate, on application of adhesive / mortar, application of grout, and application of finishing sealers; and
 - (j) the manufacturer shall have adopted a fair labour statement, addressing at minimum fair labour practices and good community relations;
- 4.1 To be authorized to carry the EcoLogo^M, the **beach or river stone mosaic tile** must satisfy the following:
 - (a) use stones that are hand harvested; and
 - (b) provide proof that the potential for erosion and disturbance of wildlife habitat during extraction of stones has been addressed. Evidence includes but is not limited to documents that are part of an Environmental Assessment, studies conducted by an independent organisation, or conditions of a license from government authorities.
- 4.2 To be authorized to carry the EcoLogo^M, the **reclaimed stone mosaic tile** must:
 - (a) use stones taken from offcuts of stone cut for a separate use or reclaimed from stone used in building materials; and
 - (b) use non-uniform sized stones in the mosaic tiles to minimise further cutting and processing of reclaimed stones.

Verification

5. To verify a claim that a product meets the criteria listed in this document, the ECP will require access, as is its normal practice, to relevant purchasing records, 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 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 Use

7. The EcoLogo may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this document.
8. All licensees and authorized users must comply with the ECP's *Guide to Proper Use of the EcoLogo^M* regarding the format and usage of the EcoLogo.
9. Any accompanying advertising must conform with the relevant requirements stipulated in this guideline, the license agreement and the ECP's *Guide to Proper Use of the EcoLogo^M*.
10. A criteria statement appears with the EcoLogo whenever the EcoLogo is used in association with the Mosaic Tile. 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 ECP suggested criteria statement wording for this product type is “CCD – 167 Mosaic Tiles”. The licensee may propose other wording for the criteria statement, but any such proposed wording must be approved by the Environmental Choice Program.

***For additional copies of this guideline or for more information about the Environmental Choice Program, please contact: TerraChoice Environmental Marketing Inc.,
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