

Environmental Choice^M Program

CERTIFICATION CRITERIA DOCUMENT

CCD-145



Product: Food Containers

Preamble

Environment Canada's Environmental Choice^M Program is pleased to publish the following national guideline on **food containers**.

The Environmental Choice 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 available to Canadians.

A significant amount of the waste currently going to Canadian landfills consists of packaging and containers designed for temporary, one-use food containment. Users of such packaging includes, *inter alia*, restaurants that offer take-out or delivery service options (including "fast-food" outlets), catering services, mobile canteens, and arena/stadium concession stands. Once in landfill, these materials break down very slowly, thus creating a significant waste disposal impact.

Additionally, this packaging may be made from either virgin materials (e.g., cardboard or papers from virgin pulp) or materials (recycled or not) ultimately derived from non-renewable resources (e.g., petrochemically-derived polystyrene). Conventional food packaging may also feature plastics, inks or other materials that release toxic compounds upon decomposition.

Based on a review of currently available life cycle information, the product category requirements will produce an environmental benefit through:

- a potential reduction in landfill burdens;
- a potential reduction in toxic emissions to the environment; and
- a potential reduction in the use of non-renewable resources.

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

Environment Canada anticipates that **food containers** conforming to this certification criteria document will apply to the Environmental Choice Program for verification and subsequent authority to label the qualifying services with the EcoLogo^M.

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.

Notice of Intent

At the time of publication, the ECP had yet to establish the existence of a nationally and/or internationally accepted measure or test method to evaluate the ability of food containers to maintain their contents at an acceptable temperature over time. Future revisions of this Certification Criteria Document may incorporate such a requirement, if such a standard is developed.

Interpretation

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

“acid-resistance” means the ability of a food container to resist discolouration, distortion and leakage after at least 2 hours exposure to an acidic food simulant (e.g., acetic acid, or vinegar), under appropriate test conditions;

“agricultural waste” means solid residues arising from the harvesting and processing of agricultural crops that might otherwise be sent to landfill and/or incinerated. Such waste may include, *inter alia*: straw, chaff, corn cobs, bean residues, and dried stalks of harvested grain, but does not include materials for which other diversion methods are a viable alternative (e.g., amending of, or otherwise re-incorporation into, soil, farm land applications, horticultural applications)

“EPA” means the United States Environmental Protection Agency;

“fold resistance” means the ability of a food container with a hinged lid to withstand at least 15 rigorous open/closing cycles without appreciable damage, under appropriate test conditions;

“food container” means a container designed to be used by restaurants for the purpose of supplying menu items to customers via “take-out”, “take-away” and/or “delivery” service options. Such containers include, *inter alia*, trays, plates, open dishes, open boxes and dishes or boxes with attached (i.e., hinged) lids;

“food simulant” means a discrete, reproducible fluid or other substance used in the testing of food containers for the purpose of simulating authentic menu items. Such simulants include, *inter alia*, deionized or distilled water, dilute acetic acid, dilute ethanol and cooking oil;

“halogenated organic compounds” means any organic compound containing halogens including fluorine, chlorine, bromine and iodine;

“high temperature resistance” means the ability of a food container to withstand at least 30 minutes exposure to typical oven-generated temperatures (i.e., up to 230° C) without breakage or other significant degeneration, under appropriate test conditions;

“HKEPD” means Hong Kong Environmental Protection Department;

“injurious”, as referenced in the *Food and Drug Regulations, Part B, Section 23*, means that the substance referred to either:

- (i) contains detectable levels of coliform bacteria;
- (ii) contains detectable levels of moulds or yeasts; or
- (iii) exceeds 10 mg/litre in appropriate food simulants, as determined by *HKEPD HS 1002: Overall Migration Test (Article Filling)*;

“low temperature resistance” means the ability of a food container to withstand at least 4 hours exposure

to very low temperature (i.e., down to -25°C) without breakage or other significant degeneration, under appropriate test conditions;

“**microwave radiation resistance**” means the ability of a food container to withstand at least 30 minutes exposure to typical 1000 W microwave oven radiation levels without breakage or other significant degeneration, under appropriate test conditions;

“**OECD**” means the Organization for Economic Co-operation and Development;

“**oil-resistance**” means the ability of a food container to resist discolouration, distortion or other defects, after at least 30 minutes containment of hot (i.e., $95 \pm 5^\circ\text{C}$) cooking oil, under appropriate test conditions;

“**readily biodegradable**” for the purposes of this Certification Criteria Document, means material(s) that are readily biodegradable within a compost pile or other appropriate disposal environment. This is determined using any of the following test methods:

- *OECD Guidelines for Testing of Chemicals*, either 301-B, -C, -D or -F or 302-C;
- *HKEPD Testing guideline on the Degradability and Food Safety of Containers*,: HS 2001: Biodegradability Test; or
- another test method acceptable to the Environmental Choice Program

“**sound environmental management practices**” means those practices and goals used to manage forest and/or agricultural products within a sound environmental management system, as defined in the definitions section of this criteria document, that have the objectives of maintaining environmental values of the surrounding ecosystem. At a minimum, these practices must address *inter alia*:

- species selection;
- soil structure, temperature and fertility;
- soil composition rates, compaction and conservation;
- erosion control;
- hauling distance from the harvesting site to the combustion/generation site;
- silvicultural practices and techniques;
- harvesting practices including techniques, rates and waste minimization;
- crop regeneration;
- road/trail construction and maintenance;
- protection of biodiversity, wildlife and rare, threatened and endangered species;
- water quality and quantity;
- watershed conservation; and
- prior land use.

“**sound environmental management system**” means a system, including *inter alia* the ISO 14000 series of standards, used to manage forest and/or agricultural products that incorporates sound environmental management practices. At a minimum, system elements must include:

- (a) planning elements such as: identifying forest and/or agricultural resources; identifying environmental aspects; assessing environmental impacts; identifying environmental legislative and regulatory requirements; and defining and committing to environmental policies, objectives and targets;
- (b) operational elements such as: defining roles and assigning responsibilities; providing adequate staff

training; communicating environmental aspects and policies both internally and externally; implementing an environmental management program based on identified environmental aspects and impacts; documenting all policies, goals and procedures; periodically reviewing and, where necessary, revising the system; performing public consultation and/or outreach; and establishing an environmental emergency preparedness and response plan; and

- (c) monitoring and measurement elements such as: monitoring and measuring key aspects of the system; evaluating and mitigating negative environmental impacts; correcting non-conformance with the management system; performing internal reviews; and having third party audits performed;

“static loading” means the ability of a food container to deformation after being subjected to a force equivalent to 5 times the container’s weight for at least 1 minute, under appropriate test conditions;

“thermal insulation” means the ability of a food container to maintain the initial temperature of a food simulant, under appropriate test conditions; and

“water resistance” the ability of a food container to resist discolouration, distortion or other defects, after at least 30 minutes containment of hot (i.e., $95 \pm 5^{\circ}\text{C}$) water, under appropriate test conditions.

Category Definition

- 2. This category includes all **food containers** as further defined in the subcategories in this section.
 - (a) **food containers** produced from agricultural waste.

Note: Other sub-categories may be added at a later date. The ECP reserves the right to determine which sub-category will be assigned to a particular applicant.

General Requirements

- 3. To be authorized to carry the EcoLogo^M, the **food container** 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^M, the **food container** must:
 - (a) provide comparable performance to that of conventional take-out food containers, as determined by measurements of the product’s:
 - i) static loading,
 - ii) fold resistance,
 - iii) low temperature resistance,

- iv) high-temperature resistance,
- v) microwave radiation resistance,
- vi) water-resistance,
- vii) oil-resistance, and
- viii) acid-resistance.

Such determinations must be made in accordance with ***HKEPD Testing guideline on the Degradability and Food Safety of Containers*** or another test method acceptable to the Environmental Choice Program (see Appendix A);

- (b) meet the requirements of the *Food and Drug Regulations, Part B, Section 23* in that it may not yield any “injurious” substance to the health of a consumer”;
 - (c) not contain or be manufactured with:
 - i) residues from pesticides or fungicides, chemical fertilizers or other synthetic agricultural or horticultural inputs;
 - ii) halogenated organic compounds,
 - iii) compounds containing mercury, lead, cadmium, arsenic or hexavalent chromium or
 - iv) any chemicals that are included in the International Agency for Research on Cancer (IARC) lists for proven (Group 1), or probable (Group 2A) carcinogens;
 - (d) be readily biodegradable;
 - (e) only display or otherwise utilize the EcoLogo in association with a criteria statement, in accordance with the requirements outlined in Section 11; and
 - (f) be accompanied by detailed instructions, which inform both primary (i.e. restaurateurs) and final (i.e., restaurant customers) users about the product’s biodegradability and potential for disposal in compost. Instructions may include reference to potential disposal in paper recycling waste streams, but only in jurisdictions where this is allowed.
5. To be authorized to carry the EcoLogo, the ***food container*** must also meet criteria specific to its subcategory.
- 5.1 ***Food containers*** produced from agricultural waste must:
- a) be completely derived from agricultural waste;
 - b) not be derived from crops dedicated exclusively as a base material for the ***food containers***; and
 - c) be manufactured in such a manner that either:
 - i) where the ***food container*** producer and agricultural waste source share common ownership, agricultural wastes are exclusively sourced from operations that have implemented a sound environmental management system and are adhering to

- sound environmental management practices; or
- ii) where the **food container** producer and agricultural waste source **do not** share common ownership, a concerted effort is made to source from operations that have implemented a sound environmental management system and are adhering to sound environmental management practices.

Verification

6. 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.
7. Compliance with requirement 3(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^M Use

8. The EcoLogo^M may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this document.
9. 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^M.
10. 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*.
11. A criteria statement must appear with the EcoLogo^M whenever the EcoLogo^M is used in association with the **food container**. 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, which, in this particular case expressly includes clarification that only the **food container**, and not the container's contents, are ECP-certified.

The ECP suggested criteria statement wording for this product type is "*Food Container*". 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 Services Inc.,
1280 Old Innes Road, Suite 801, Ottawa, Ontario, K1B 5M7
Telephone: (613) 247-1900, Facsimile: (613) 247-2228, Email: ecoinfo@terrachoice.ca***

Appendix 1: Acceptable Test Methods for Determining Performance of Food Containers

At the time of publication, the ECP had yet to confirm the existence of one, single, internationally and/or nationally accepted test method available to evaluate the performance of **food containers**. The ECP will thus accept performance test data that indicate the product is able to: i) contain food safely and effectively and ii) withstand appropriate physical and environmental stresses, either when compared to an accepted test standard's criteria, or when compared to the performance of at least one functionally equivalent product.

Whatever method is employed, efficacy testing must comply with the following general conditions:

- Testing must to be performed by a third party accredited laboratory;
- Testing must be carried out under controlled, replicable conditions; in situ or anecdotal data is not acceptable for ECP certification;
- Generated test data must be objective and quantified in recognized metric units; subjective observations are not generally acceptable for ECP certification, unless accompanied by at least one independent objective measure;
- All control conditions must be specified;
- a complete copy of the testing protocol and final report must be made available to the ECP.

Appropriate examples of established testing protocols include:

- *HKEPD Testing guideline on the Degradability and Food Safety of Containers.*