

Environmental Choice^M Program CERTIFICATION CRITERIA DOCUMENT



CCD-079

Product: Business Forms and Other Converted Paper Products

Preamble

Pursuant to paragraph 54 (1)(b) of the *Canadian Environmental Protection Act, 1999*, the Minister of the Environment is pleased to publish the following national guideline on ***business forms and other converted paper products*** under the auspices of the Environmental Choice^M Program.

The Environmental Choice^M 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.

The primary environmental impacts associated with business forms and other converted products come from producing the paper used as the main raw material in business forms, the printing processes and the chemical components of inks, adhesives (hot melts, latex) and other materials used in the manufacture of business forms. Other environmental concerns include the effects of some of these components on the down-stream recyclability of business forms, and effluent discharges from the manufacturing processes.

Based on a review of available, up-to-date life cycle information, product category requirements will produce an environmental benefit through:

- reduction in harmful air emissions;
- reduction in harmful water emissions;
- reduction of waste going for disposal;
- efficient use of fibre; and
- reduction in energy use.

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

Environment Canada anticipates that manufacturers of ***business forms and other converted paper products*** which conform to this guideline will apply to the Environmental Choice Program for verification and subsequent authority to label the qualifying products with the Environmental Choice EcoLogo^M.

Notice

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

The Environmental Choice Program reserves the right to accept equivalent test data for the test methods specified in this guideline.

Interpretation

1. In the following guideline:

“**adhesive**” means a substance capable of holding or bonding materials together by surface attachment with sufficient strength for the objects to behave as one object. Adhesives may or may not be soluble in water. Non-soluble adhesives include pressure-sensitive and hot-melt glues;

“**alcohol**” means organic compounds containing one or more hydroxyl groups attached to carbon atoms, when used as a fountain solution additive for offset lithographic printing (eg. ethanol, n-propanol, and isopropanol);

“**aromatic solvent**” means any organic solvent that has a benzene ring in its molecular structure;

“**biochemical oxygen demand**” or “BOD₅” means the amount of dissolved oxygen required for the biodegradation of the organic matter in water, when tested in accordance with the 5 day test set out in the *Standard Methods for the Examination of Water and Waste Water*, latest edition, Sub-part 5210, jointly published by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation;

“**bound material**” means paper that has some form of binding holding the pages together, and typically has been printed. It includes account books, calendars, diaries, hard bound, spiral or wired books, journals and planners that are used for recording information;

“**business form**” means a document bearing instructions with repetitive information printed in fixed positions to save writing and reference time. It may also refer to any material that has been printed or otherwise prepared in a predetermined format for the primary purpose of facilitating the entry of variable information. It includes: unit sets, continuous forms, cut sheets, mailers, cheques, salesbooks and register forms, pegboard, labels, and tags. While envelopes meet the functional definition of a “business form”, envelopes are not business forms for the purpose of this guideline. Envelopes are addressed in Environmental Choice Program guideline ECP-75;

“**cheque**” means a draft order upon a bank to be drawn on a deposit of funds for payment of a sum of money to the bearer. A cheque uses magnetic ink character recognition for printing. The minimum and maximum dimensions for cheques are 6" x 2 ¾" and 8 ¾" x 3 ⅔" respectively;

“**continuous form**” means a business form manufactured from a continuous web or roll of paper that is not cut into units prior to execution and are used for automatic feed printing which results in continuous flow of work;

“**cut sheets**” means sheets used as statements, ledger sheets, journal sheets, letterheads, timecards, inventory cards, memo pads, etc.;

“**EPA**” means the United States Environmental Protection Agency;

“**exercise pad**” means paper that is bound at the top with adhesive and that may have printed lines on each page. It is used for documenting information;

“**fountain solution**” means a mixture of water, volatile and non-volatile chemicals, and additives that maintains the quality of the printing plate and reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the non-image area so that the ink is maintained within the image areas. Non-volatile additives include mineral salts and hydrophilic gums. Alcohol and alcohol substitutes including isopropyl alcohol, glycol ethers, and ethylene glycol are the most common additives used to reduce the surface tension of the fountain solution;

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

“**kjeldahl nitrogen**” means the sum of organic and ammonia nitrogen, when tested in accordance with the test set out in the *Standard Methods for the Examination of Water and Waste Water*, latest edition, Sub part 4500 jointly published by the American Public Health Association, the American Water Works Association and the Water Pollution Control;

“**labels**” means a form of packaging used to identify ownership, show origins, warn of danger, persuade buyers, acknowledge receipt, describe contents, instruct users, direct shipments, etc.. They can be manufactured in any size desired;

“**mailer**” means a specialized form that incorporates both the message and the envelope in one unit for simultaneous writing and subsequent mailing. There are no standard sizes for mailers;

“**other converted paper products**” means products other than business forms or envelopes that have gone through some form of conversion process, including printing with inks, application of adhesives or bindings, perforation or cutting. It includes exercise pads and other bound materials;

“**pegboard**” means a specific type of one-write system which uses “pegs” on a “board” to hold related documents in registration. One-write systems employ the principle of simultaneous common written entries on two or more related documents so that entries written on the top document are reproduced simultaneously on the document or documents beneath it. Pegboards are available in many shapes, sizes, and materials, and with several methods of securing the forms to the pegs on the board;

“**phosphorus**” means the amount of phosphate when tested in accordance with the test set out in *Standard Methods for the Examination of Water and Waste Water*, latest edition, Sub part 4500 jointly published by the American Public Health Association, the American Water Works Association and Water Pollution Control;

“**recyclable**” describes a product, package or element thereof if it can be diverted from the waste stream and, through existing commercial processes, be processed and returned to use in the form of raw materials or products;

“**recycling**” means a process through which post-use materials are separated from the waste stream, collected and processed for transformation into new products;

“**salesbook and register form**” means a form used to provide multiple copies of sales transactions. They are available in a variety of constructions such as open end, wrap around, full wrap around, wrap around with a fly leaf or a D strip construction;

“**sulfate**” means the amount of sulfate when tested in accordance with the test set out in *Standard Methods for the Examination of Water and Waste Water*, latest edition, Sub part 4500 jointly published by the American Public Health Association, the American Water Works Association and Water Pollution Control;

“**tags**” means a form of packaging which can be used in shipping, production and inventory control systems. Tags are commonly fastened to products and packages with wire or string. Types include simple shear cut, die cut, manifold, and continuous tags;

“**unit set**” means a multiple-part carbon interleaved or carbonless form whose parts are fastened in a common glued stub that provides for easy separation of all parts;

“**volatile organic compound**” or “**VOC**” means any organic compound which participates in atmospheric photochemical reactions. It excludes those organic compounds which the ECP designates as having negligible photochemical reactivity; and

“**wet-strength resins**” means additives in paper products which add strength when the paper product is wet. Wet strength resins increase the difficulty of the recycling process because an insoluble bond forms between the paper fibres and the resin. Examples of wet strength resins are urea formaldehyde and epichlorohydrin resins.

Category Definition

2. This category includes, but is not limited to *business forms and other converted paper products* as further defined in the following subcategories:
 - a) unit sets;
 - b) continuous forms;
 - c) cut sheets;
 - d) mailers;
 - e) cheques;
 - f) salesbook and register forms;
 - g) pegboard;
 - h) labels;
 - i) tags;
 - j) exercise pads; and
 - k) other bound materials.

General Requirements

3. To be authorized to carry the EcoLogo, the *business forms and other converted paper products* 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 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, the *business forms and other converted paper products* must meet the criteria that are applicable to their manufacture.

In the production of the different types of business forms and other converted paper products, environmental impacts may be associated with the following:

- 1) the production of the paper used as a raw material;

- 2) the printing process;
- 3) inks;
- 4) adhesives;
- 5) recyclability; and
- 6) effluent discharges.

4.1 Paper

To be authorized to carry the EcoLogo, **business forms and other converted paper products** must be manufactured from paper that is *certified* by the Environmental Choice Program under the national guideline *ECP-77 Printing and Writing Paper*.

4.2 Printing Processes

To be authorized to carry the EcoLogo, the **business forms and other converted paper products** must be manufactured using printing processes, whether performed on- or off-site, that:

- (a) do not use products formulated or manufactured with benzene;
- (b) do not use products formulated or manufactured with halogenated solvents;
- (c) uses blanket washes having a VOC content (as used) less than or equal to 30%, by weight, as tested in accordance with EPA Test Method 24 or 24A, or as calculated from records of the amount of constituents used to make the product; and
- (d) uses a fountain solution that does not contain alcohol and that has a VOC content at or below 5.0% by weight of the formulation (as used) as calculated from records of the amounts of constituents used to make the product; or that has a VOC content at or below 8.5% by weight of formulation (as used) as calculated from records of the amounts of constituents used to make the product, and refrigerates the fountain solution to 60°F or less.

Note: **Business forms and other converted paper products** that are manufactured using a printing process that is licensed under the Environmental Choice Program guideline for Lithographic Printing Services (ECP-58), will be considered in compliance with section 4.2.

4.3 Inks

To be authorized to carry the EcoLogo, the **business forms and other converted paper products** must be manufactured with inks that:

- (a) have a VOC content (as used) less than or equal to 10%, by weight, as tested in accordance with EPA Test Method 24, or as calculated from records of the amounts of constituents used to make the product;
- (b) are not manufactured or formulated with a total concentration greater than 100 ppm of lead, cadmium, and mercury or their compounds, and hexavalent chromium;

Note: *Business forms and other converted paper products* that are manufactured using inks licensed under the Environmental Choice Program guideline for Printing Inks (ECP-48), will be considered in compliance with section 4.3.

4.4 Adhesives

To be authorized to carry the EcoLogo, the ***business forms and other converted paper products*** must be manufactured only using water soluble adhesives that:

- (a) are not formulated or manufactured with aromatic solvents, halogenated solvents, borax, or formaldehyde; and
- (b) do not contain volatile organic compounds in excess of 5% by weight 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 as demonstrated through calculation from records of the amounts of constituents used to make the product.

4.5 Recyclability

To be authorized to carry the EcoLogo, the ***business forms and other converted paper products*** must:

- (a) not be manufactured with wet strength resins;
- (b) be manufactured in a manner which will render the final post-consumer product recyclable.

4.6 Discharges

To be authorized to carry the EcoLogo, the ***business forms and other converted paper products*** must be manufactured at a facility that operates in a manner such that liquid chemical effluent is in compliance with applicable local sewer use by-laws or, in the absence of such by-laws, the following minimum criteria:

- (a) biochemical oxygen demand ≤ 300 mg\L;
- (b) total Kjeldahl Nitrogen ≤ 100 mg\L;
- (c) sulphate ≤ 1500 mg\L; and
- (d) total phosphorus ≤ 10 mg\L.

Discharge agreements may be accepted in lieu of this criterion, at the discretion of the Environmental Choice Program.

Verification

5. To verify a claim that a product meets the criteria listed in the guideline, the Environmental Choice 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 service. The Environmental Choice Program 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 service meets the requirements in this guideline.
8. It is recommended that a criteria statement appear with the EcoLogo whenever the EcoLogo is used in association with the ***business forms and other converted paper product(s)***. 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 criteria statement must either be “*Business Forms*” or be specific to the product’s sub-category. For sub-category 2(a), the recommended criteria statement is “*Unit Sets*”; for sub-category 2(b), the recommended criteria statement is “*Continuous Forms*”; for sub-category 2(c), the recommended criteria statement is “*Cut Sheets*”; for sub-category 2(d), the recommended criteria statement is “*Mailers*”; for sub-category 2(e), the recommended criteria statement is “*Cheques*”; for sub-category 2(f), the recommended criteria statement is either “*Salesbook*,” or “*Register Forms*,” as appropriate; for sub-category 2(g), the recommended criteria statement is “*Pegboard*”; for sub-category 2(h), the recommended criteria statement is “*Labels*”; for sub-category 2(i), the recommended criteria statement is “*Tags*”; for sub-category 2(j), the recommended criteria statement is “*Exercise Pads*”; and for sub-category 2(k), the recommended criteria statement is “*Bound Materials*”.

9. All licensees and authorized users must comply with the Environmental Choice Program's *Guide to Proper Use of the EcoLogo^M* regarding the format and usage of the EcoLogo.
10. Any accompanying advertising must conform with the relevant requirements stipulated in this guideline, the license agreement and the Environmental Choice Program's *Guide to Proper Use of the EcoLogo^M*.

***For additional copies of this guideline or for more information about the Environmental Choice Program, please contact: TerraChoice Environmental Services Inc.,
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EcoLogo^{CM} Program Interpretation Document

VOC and Petroleum Distillate Content Printing Inks



Interpretation:

The EcoLogo^{CM} certification criteria documents for Printing Inks (CCD-040) currently states that, for heatset web offset inks, the total VOC content must not exceed 25% by weight and the ink must not be formulated or manufactured with a combined total of more than 25% by weight of petroleum distillates.

Until the next full review of CCD-040, the EcoLogo^{CM} Program will accept heatset web offset inks with a maximum total VOC content of 40% by weight and a maximum combined total petroleum distillate content of 40% by weight.

Basis for Interpretation:

The current standard for Printing Inks (CCD-040) cannot be met by any heatset web offset inks currently on the market because the requirements for VOC content and petroleum distillate content are too restrictive. After consultation with experts from the printing ink industry and an environmental assistance center for printers, it was concluded that the VOC and petroleum distillate limits for heatset web offset inks should be changed to:

- maximum total VOC content: 40% by weight
- maximum combined total petroleum distillate content: 40% by weight

Affected EcoLogo^{CM} Criteria Documents:

CCD-040 "Printing Inks"
CCD-079 "Business Forms"
CCD-080 "Envelopes"
CCD-156 "Business Directories"

Additional Notes:

A copy of the above certification criteria documents can be found at www.ecologo.org

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