

PLUS 14021

Environmental claims: A guide for industry and advertisers

Developed in partnership with



Competition Bureau
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CSA Special Publication

PLUS 14021
***Environmental claims: A guide for industry
and advertisers***



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Preface

This is the second edition of CSA Special Publication PLUS 14021, *Environmental claims: A guide for industry and advertisers*. It supersedes the previous edition published in 2000, entitled *The CAN/CSA-ISO 14021 Essentials*. The first objective of this Guide is to provide the users of ISO 14021, *Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)*, with a best practice guide to the application of the standard and some practical examples of how the standard could be applied to environmental claims in the Canadian marketplace.

The second objective is to provide assistance to industry and advertisers in complying with certain provisions of the *Competition Act*, the *Consumer Packaging and Labelling Act*, and the *Textile Labelling Act*, administered and enforced by the Competition Bureau, an independent agency that contributes to the prosperity of Canadians by protecting and promoting competitive markets and enabling informed consumer choice. To achieve both of these objectives, the Bureau has partnered with CSA on this edition to ensure it is offered free of charge to the public and will serve both as an aid to interpreting CAN/CSA-ISO 14021 and as a best practice guide to complying with the provisions of the above statutes that prohibit false or misleading representations.

Adherence to the advice contained in this Guide on environmental claims will enhance the provision of meaningful information to consumers and will assist industry by providing “best practices” for self-declared environmental claims. This Guide provides examples of preferred approaches and discouraged approaches to illustrate commonly used environmental claims; shows how to avoid misleading or deceptive claims relating to an implied or expressed environmental benefit; establishes the guidelines for Mobius loop markings; and suggests methodologies for tests that can be used to clarify claims.

This Guide is primarily based on CAN/CSA-ISO 14021 and thus supersedes *Principles and Guidelines for Environmental Labelling and Advertising* (PGELA), published by Industry and Science Canada in 1993. This Guide is not a regulation. The Competition Bureau considers that the guidelines advocated in this document reflect “best practices”. While the Bureau supports the use of voluntary standards, which encourage conformity with the laws and regulations, businesses are free to adopt any business practice they so choose, as long as the claims they are making are not false or misleading. Therefore, while the Competition Bureau will use this Guide as a reference for evaluating environmental claims, deviations from the Guide might not, in and of themselves, represent a contravention of the *Competition Act* and/or the labelling statutes enforced by the Competition Bureau. Environmental claims that raise concerns under these statutes may be examined on a case-by-case basis, and each case will be assessed on its own merits.

If the principles and specific requirements of CAN/CSA-ISO 14021 as recommended in this Guide are complied with, it is unlikely that environmental claims used in the promotion of a product/service or business interest would raise concerns under the statutes administered by the Competition Bureau. The examples of misleading or deceptive claims provided in this Guide are not binding statements of how discretion may be exercised in a particular situation. Guidance may be requested from the Competition Bureau through its Program of Advisory Opinions. Businesses may opt to seek a binding written opinion under this program to determine whether a proposed environmental claim would raise concerns under the *Competition Act*.

June 2008

Notes:

- (1) Use of the singular does not exclude the plural (and vice versa) when the sense allows.
- (2) Although the intended primary application of this Guide is stated in its Introduction, it is important to note that it remains the responsibility of the users of the Guide to judge its suitability for their particular purpose.

- (3) *Regulatory enquiries regarding regulatory compliance should be addressed to the Competition Bureau. Anyone wishing to obtain additional information about the Competition Act, the Consumer Packaging and Labelling Act, and the Textile Labelling Act should contact the Competition Bureau's Information Centre at*

*Information Centre, Competition Bureau Canada
50 Victoria Street,
Gatineau, Québec K1A 0C9
National Capital Region: 819-997-4282
Toll-free: 1-800-348-5358
TDD (hearing impaired): 1-800-642-3844
Fax: 819-997-0324
Email: compbureau@cb-bc.gc.ca
Web site: www.competitionbureau.gc.ca.*

- (4) *All enquiries regarding this publication should be directed to the Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.
Requests for interpretation should*
- (a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
 - (b) provide an explanation of circumstances surrounding the actual field condition; and*
 - (c) be phrased where possible to permit a specific "yes" or "no" answer.*

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PLUS 14021

Environmental claims: A guide for industry and advertisers

1 Introduction

1.1 General

Canadian consumers are becoming increasingly concerned about the environmental performance of products. For example, consumers are concerned about the resources and energy used to produce products, and about the sustainability of the product design (can it be reused or recycled? is it biodegradable? is it made of recycled materials?) among other issues. This has led to an increased demand for environmental information about products from consumers, government, and industry. Industries may choose to communicate environmental benefits through environmental labelling and use advertising vehicles to promote these benefits. There are a wide range of descriptors, logos, vignettes, and other representations used to describe or imply environmental claims for consumer products. This means of communicating environmental claims is often called “green marketing”.

Environmental claims allow consumers to more easily differentiate between products in the market, so consumers can make better purchasing decisions in relation to the environment. In turn, consumers’ purchasing power for such products is a market driver for business to invest in more sustainable environmental practices. Environmental claims, declarations, eco-logos, and other eco-labels have a number of characteristics that allow the receiver to distinguish one kind from another. Eco-labels may be

- self-managed or third-party-managed;
- verified in-house or independently verified and/or certified;
- based on the product life cycle or a single attribute;
- available for single or multiple sectors — product categories; and
- designed to demonstrate environmental leadership, relative performance, or just provide information.

The value of environmental claims rests on the assurance that the information provided is credible, objective, and easily identifiable and understood by consumers. Standards play an important role in providing guidance to ensure responsible claims in industry and advertising. Standards for environmental claims benefit consumers, industry, and advertisers by providing a level playing field and consistency in terms and application. They also provide continual improvement through the maintenance of a standards program that is updated as environmental practices and scientific information evolve. The ISO 14020 Series of Standards on environmental labels and declarations has been developed to help in this regard. This series comprises Type I eco-logo labels (CAN/CSA-ISO 14024), Type II self-declared environmental claims (CAN/CSA-ISO 14021), and Type III environmental profile declarations (CAN/CSA-ISO 14025). Those making claims of conformity with the standards for all three types of labels are required to consider the impact of the life cycle of the product or service on the environment and be able to support the claim with verifiable data.

Type I eco-logo labels, which are independently verified by a third party through a testing process at the request of the manufacturer of the product, give consumers an indication of the environmental preferability of a product (or service) within a product category based on product life cycle considerations (environmental performance according to predefined criteria and/or a set of environmental attributes, e.g., “best 20% in class”). Examples of certification labelling

programs include Canada's "Environmental Choice" program where the eco-logo symbol is awarded to top performers: since 1998, over 2000 products and services have met or exceeded the standards of this program. The eco-logo indicates that a product will, for example, improve energy efficiency, reduce hazardous waste by-products, and make use of recycled materials. The Energy Star logo is another type of eco-logo, which is awarded to top products based on energy efficiency (e.g., energy-efficient appliances, equipment, windows, and doors). The consumer should keep in mind that eco-labelling programs or schemes do not assess the whole range of products available in the marketplace; there could be equally "green" products that have not been tested or certified.

Type II self-declared environmental claims, which are the focus of this Guide, are the kind of claims that are made by manufacturers, importers, distributors, or any person who promotes a product/service or business interest who is likely to benefit from the product's environmental claims. These claims are usually based on a single attribute (e.g., a manufacturer's claim that a product is "biodegradable") without taking into account the environmental impact of a product's entire life cycle, and without independent verification or certification by a third party. However, these claims must be verifiable, accurate, meaningful, and reliable if consumers are to understand the value of the environmental information they represent (e.g., their ability to protect the environment). The credibility of these claims can be increased if companies and organizations are able to support their claims by providing reliable information to purchasers or potential purchasers seeking to make more informed purchasing decisions on products or services. Consumer expectation can be raised by such claims, given the heightened public interest and awareness in the environment. These types of claims can also be made on a product that displays an eco-logo or Type 1 label.

As this Guide is based on CAN/CSA-ISO 14021, it is worth recalling that it is concerned only with self-declared environmental claims (Type II). This is not to say that other types of environmental claims are not important or do not fall under the laws administered by the Competition Bureau, but their application is outside of the intended scope of this Guide.

Type III environmental data declarations are comprehensive data lists that profile environmental information on a product throughout its life cycle; their level of detail is similar to that provided on nutrition labels on food. As these claims require disclosure of comprehensive data relating to environmental performance, the consumer might not always have the ability to assess such claims in terms of identifying and weighing the environmental risks related to a product or service.

Other labelling standards form part of the CAN/CSA-ISO labelling series. For summaries of these see Annex A of this Guide. ISO 14021, *Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)* was published in 1999. This Standard was reaffirmed in 2004 and is scheduled to be reviewed for the next standards development cycle for a new edition in 2008.

ISO 14021 has been translated into several languages in addition to the official languages of ISO (English, French, and Russian) and is widely used as a voluntary and regulated standard. In 2000, ISO 14021 was adopted by the Canadian Standards Association (CSA) as CAN/CSA-ISO 14021.

1.2 How to use this Guide

Manufacturers, importers, distributors, retailers, or anyone likely to benefit from self-declared environmental claims may make such claims. These claims typically deal with one or more environmental aspects of the product (e.g., recycled material content and biodegradability).

This Guide reflects the most current, internationally accepted, best practice information on the use of environmental claims. Adherence to this Guide by users will

- contribute to a level playing field;
- reduce the risk of communicating misleading environmental claims;
- provide an incentive to improve environmental performance; and
- meet the growing consumer demand for products and packaging to have a reduced environmental impact.

This Guide includes text contained in CAN/CSA-ISO 14021 along with its corresponding ISO clause number. This will help industry to quickly identify the considerations that must be made for developing claims. ISO statements are followed by or introduced with an explanation for clarification where appropriate. Only essential clauses from CAN/CSA-ISO 14021 and other ISO claim and environmental labelling standards are contained in this Guide. Preferred and discouraged statements are provided to illustrate appropriate interpretation of the ISO clause. The preferred examples indicate a best practice approach. General examples are provided to illustrate various ways in which a clause may be applied. In some instances, examples of how an environmental claim might be false, misleading, or deceptive are also provided in order to guide industry as to when they might run afoul of the law.

1.3 The global growth of environmental labelling

The demand for environmental information on consumer products has been growing since the late 1970s. In response, countries developed various schemes and systems for assessing and communicating environmental product information. In 1992, the concept of environmental labelling was endorsed by participating governments at the United Nations Conference on Environment and Development (UNCED) to "encourage expansion of environmental labelling and other environmentally related product information programs designed to assist consumers to make informed choices".

In 1993, ISO established a technical committee to develop international environmental labelling standards. These standards are intended to incorporate requirements for consistency and accuracy, and create fair competition in the marketplace. CAN/CSA-ISO 14021 is one of a family of international environmental labelling standards (see Annex A of this Guide for a complete listing).

Environmental labelling, based on international standards, is recognized as an effective instrument of environmental policy by the World Trade Organization (WTO) secretariat, provided that it does not lead to unfair trade (see WTO Web page on environmental labelling: www.wto.org/english/tratop_e/envir_e/labelling_e.htm).

1.4 History of environmental labelling guidance documents in Canada

In the late 1980s, the federal Competition Bureau examined the issue of environmental labelling and advertising in consultation with industry, consumers, and non-government organizations. This consultation resulted in the formation of a multi-stakeholder working group that developed a guide entitled *Guiding Principles for Environmental Labelling and Advertising* in 1991. This document was subsequently revised and published as the *Principles and Guidelines for Environmental Labelling and Advertising* (PGELA) by the Department of Industry and Science in 1993. PGELA, combined with CSA Z761-93, *Guideline on Environmental Labelling*, provided consumers and industry with guidance on the use of environmental labelling and advertising in Canada.

CSA adopted an internationally harmonized ISO standard in 2000; the adoption was designated CAN/CSA-ISO 14021-00, *Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)*. CSA subsequently developed a companion guidance document entitled *CAN/CSA-ISO 14021 Essentials* in 2000.

In 2001, the Commissioner of Competition, head of the Competition Bureau, requested public comments on a proposal to withdraw PGELA as the document to use for guidance when evaluating environmental claims under the *Competition Act* and the *Consumer Packaging and Labelling Act* and to replace it with CAN/CSA-ISO 14021-00. Following the consultation period, the Competition Bureau requested to partner with CSA to create an updated guidance document, free of charge to the public, that would both serve as an aid to interpreting CAN/CSA-ISO 14021 and provide guidance on how to comply with the provisions of the *Competition Act*, the *Consumer Packaging and Labelling Act*, and the *Textile Labelling Act* that prohibit false and misleading representations.

This document, which is based primarily on CAN/CSA-ISO 14021, is now being recommended as the new guide for industry on self-declared environmental claims. It supersedes PGELA, which has been formally withdrawn from use by the Competition Bureau.

2 Applicable acts

2.1 General

Application of this document will assist industry and advertiser compliance with the *Competition Act*, the *Consumer Packaging and Labelling Act*, and the *Textile Labelling Act*. These laws are administered and enforced by the Competition Bureau. This document is not intended to provide solutions to complex scientific and technological issues related to the environment. Since this Guide is based on CAN/CSA-ISO 14021, it is expected that as the standard is updated and maintained, there will be subsequent periodic reviews and updating of the guidance contained herein, based on technology, marketplace needs, and enhanced awareness of environmental concerns. This periodic review will include further consultation with representatives of a broad range of interests, including consumers, the environment, and industry.

Ultimately, the relevant statutes administered by the Competition Bureau will be applied in assessing the appropriateness of an environmental claim. A comprehensive case-by-case examination of all aspects of representations will form the basis of any enforcement and/or compliance action under the appropriate legislation. This Guide is not a legal interpretation but a best practice guide to promote industry compliance and will be used as reference for evaluating environmental claims in the application of the *Competition Act*, the *Consumer Packaging and Labelling Act*, and the *Textile Labelling Act*. A description of some of these provisions is provided below for information purposes only and should not be taken to be a complete statement of the law.

2.2 *Competition Act*

2.2.1 General

The *Competition Act* is a federal law governing most business conduct in Canada. It contains both criminal and civil provisions aimed at preventing anti-competitive practices in the marketplace. The act contains provisions addressing false or misleading representations and deceptive marketing practices in promoting the supply or use of a product (or service) or any business interest.

2.2.2 Criminal regime — False or misleading representations

[Subsection 52(1)]

This provision prohibits knowingly or recklessly making, or permitting the making, of a representation to the public, in any form whatever, that is false or misleading in a material respect. Proof that any person was deceived or misled is not necessary in order to establish a contravention of this provision. Subsection 52(4) directs that the general impression conveyed by a representation, as well as its literal meaning, be taken into account when determining whether or not the representation is false or misleading in a material respect.

2.2.3 Civil regime

2.2.3.1 False or misleading representations [Paragraph 74.01(1)(a)]

This provision prohibits the making, or the permitting of the making, of a representation to the public, in any form whatever, that is false or misleading in a material respect. Subsection 74.01(6) directs that the general impression conveyed by a representation, as well as its literal meaning, be taken into account when determining whether or not the representation is false or misleading in a material respect.

2.2.3.2 Performance representations not based on an adequate and proper test [Paragraph 74.01(1)(b)]

This provision prohibits the making, or the permitting of the making, of a representation to the public, in any form whatever, about the performance, efficacy, or length of life of a product, which is not based on an adequate and proper test. The onus is on the person making the

representation to prove that the representation is based on an adequate and proper test. Subsection 74.01(6) directs that the general impression conveyed by a representation, as well as its literal meaning, be taken into account when determining whether or not the representation is false or misleading in a material respect.

2.2.3.3 Untrue, misleading, or unauthorized use of tests and testimonials [Section 74.02]

This provision prohibits the unauthorized use of tests and testimonials, or the distortion of authorized tests and testimonials. The provision also prohibits a person from permitting such representations to be made to the public.

2.3 Consumer Packaging and Labelling Act

2.3.1 General

The *Consumer Packaging and Labelling Act* requires that prepackaged consumer products bear accurate and meaningful labelling information to help consumers make informed purchasing decisions. The act prohibits the making of false or misleading representations and sets out specifications for mandatory label information such as the product's name, net quantity, and dealer identity.

2.3.2 Representations relating to prepackaged products [Subsection 7(1)]

This provision prohibits the sale, importation, or advertisement of a prepackaged product that has a label applied to it that contains false or misleading representations relating to, or reasonably regarded as relating to, that product.

2.4 Textile Labelling Act

2.4.1 General

The *Textile Labelling Act* requires that consumer textile articles bear accurate and meaningful labelling information to help consumers make informed purchasing decisions. The act prohibits the making of false or misleading representations and sets out specifications for mandatory label information such as the generic name of each fibre present and the dealer's full name and postal address or a CA identification number.

2.4.2 Representations relating to consumer textile articles [Subsection 5(1)]

This provision prohibits the sale, importation, or advertisement of a consumer textile article that has a label applied to it that contains false or misleading representations relating to, or reasonably regarded as relating to, the article.

3 Overall considerations

3.1 Verification

In self-declared environmental claims, the assurance of reliability is essential. It is important that verification is properly conducted to avoid negative market effects such as trade barriers or unfair competition, which can arise from unreliable and deceptive environmental claims.

CAN/CSA-ISO 14021, Introduction

CAN/CSA-ISO 14021 emphasizes in its introduction that, while self-declared environmental claims do not require third-party verification of supporting data, the data must be available and accurate. The purpose of voluntary standards is to facilitate interprovincial and international trade; therefore, it is essential that environmental claims meeting CAN/CSA-ISO 14021 are verifiable.

3.2 Legislative requirements

This International Standard does not preclude, override, or in any way change, legally required environmental information, claims or labelling, or any other applicable legal requirements.

CAN/CSA-ISO 14021, Clause 1

Legislative requirements and regulations for labelling and marking must be followed, in addition to any environmental claim that a business may select to use. CAN/CSA-ISO 14021 provides guidance on internationally accepted best practices.

3.3 Life cycle analysis

life cycle

consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to final disposal.

[ISO 14040:1997]

CAN/CSA-ISO 14021, Clause 3.1.8

A principle of environmental claims is consideration for the life cycle of the product.

CAN/CSA-ISO 14021 does not require a full life cycle analysis to be carried out to verify an environmental claim, but it does require consideration of the life cycle of the product. For a complete listing of life cycle considerations, see Clause 5.9 of this Guide.

3.4 Environmental improvement

The overall goal of environmental labels and declarations is, through communication of verifiable, accurate information, that is not misleading, on environmental aspects of products, to encourage demand for and supply of those products that cause less stress on the environment, thereby stimulating the potential for market-driven continual environmental improvement.

CAN/CSA-ISO 14021, Clause 4

While it is recognized that the use of self-declared claims will not, in itself, do anything to improve the environment, it is hoped that their use will trigger some market-driven improvement. This will happen only if the information is communicated in a way that is accurate and non-deceptive.

Note: The term "product" refers to any goods or services; "product" normally incorporates the wrapping, container, etc., in which the goods are delivered; however, in the environmental context it is often appropriate to refer separately to the "packaging"; "packaging", then, is taken to mean any material that is used to protect or contain a product during transportation, storage, marketing, or use (ICC International Code of Environmental Advertising, Commission on Marketing, Advertising and Distribution, June 2001).

3.5 Objective of CAN/CSA-ISO 14021

CAN/CSA-ISO 14021 is intended to harmonize the use of terms and symbols that claimants use in making self-declared environmental claims. The anticipated benefits of using CAN/CSA-ISO 14021 are as follows:

- a) accurate and verifiable environmental claims that are not misleading;
- b) increased potential for market forces to stimulate environmental improvements in production, processes and products;
- c) prevention or minimization of unwarranted claims;
- d) reduction in marketplace confusion;
- e) facilitation of international trade; and
- f) increased opportunity for purchasers, potential purchasers and users of the product to make more informed choices.

CAN/CSA-ISO 14021, Clause 4

CAN/CSA-ISO 14021, in conjunction with guidance from Advertising Standards Canada and operating within the framework of the laws administered by the Competition Bureau, is expected to deliver these anticipated benefits in Canada. Use of ISO 14021 when labelling products for export will help deliver the same benefits to other countries that use ISO 14021.

4 General requirements for all claims

4.1 Basic considerations

Any statement or symbol that refers to, or creates the general impression that it reflects, the environmental aspects of any product or service is considered an environmental claim. Environmental claims made about products may take the form of statements, symbols, or graphics on product or package labels, or in product literature, technical bulletins, advertising, publicity, telemarketing, and digital or electronic media such as the Internet.

4.2 Relationship with CAN/CSA-ISO 14020

CAN/CSA-ISO 14020 is a document covering the general principles of all environmental labels and declarations.

In addition to the requirements of this International Standard, the principles set out in ISO 14020 shall apply. Where this International Standard provides more specific requirements than ISO 14020, such specific requirements shall be followed.

CAN/CSA-ISO 14021, Clause 5.2

In most cases, CAN/CSA-ISO 14021 provides more detail than the general explanatory statements supplied in CAN/CSA-ISO 14020, but some areas that have less relevance to a self-declared claim — such as impacts on innovation and creation of trade barriers — are covered in CAN/CSA-ISO 14020. CAN/CSA-ISO 14020 provides useful guidance and general principles to follow for labelling schemes for which international standards have not yet been developed (see Annex B of this Guide).

4.3 Specifics of CAN/CSA-ISO 14021

CAN/CSA-ISO 14021 sets out eighteen specific requirements applicable to self-declared environmental claims, which are listed below.

- a) shall be accurate and not misleading;
- b) shall be substantiated and verified;
- c) shall be relevant to that particular product, and used only in an appropriate context or setting;
- d) shall be presented in a manner that clearly indicates whether the claim applies to the complete product, or only to a product component or packaging, or to an element of a service;
- e) shall be specific as to the environmental aspect or environmental improvement which is claimed;
- f) shall not be restated using different terminology to imply multiple benefits for a single environmental change;
- g) shall be unlikely to result in misinterpretation;
- h) shall be true not only in relation to the final product but also shall take into consideration all relevant aspects of the product life cycle in order to identify the potential for one impact to be increased in the process of decreasing another;
NOTE This does not necessarily mean that a life cycle assessment should be undertaken.
- i) shall be presented in a manner which does not imply that the product is endorsed or certified by an independent third-party organization when it is not;
- j) shall not, either directly or by implication, suggest an environmental improvement which does not exist, nor shall it exaggerate the environmental aspect of the product to which the claim relates;
- k) shall not be made if, despite the claim being literally true, it is likely to be misinterpreted by purchasers or is misleading through the omission of relevant facts;
- l) shall only relate to an environmental aspect that either exists or is likely to be realized, during the life of the product;
- m) shall be presented in a manner that clearly indicates that the environmental claim and explanatory statement should be read together. The explanatory statement shall be of reasonable size and in reasonable proximity to the environmental claim it accompanies;
- n) shall, if a comparative assertion of environmental superiority or improvement is made, be specific and make clear the basis for the comparison. In particular, the environmental claim shall be relevant in terms of how recently any improvement was made;
- o) shall, if based on a pre-existing but previously undisclosed aspect, be presented in a manner that does not lead purchasers, potential purchasers and users of the product to believe that the claim is based on a recent product or process modification;
- p) shall not be made where they are based on the absence of ingredients or features which have never been associated with the product category;

- q) shall be reassessed and updated as necessary to reflect changes in technology, competitive products or other circumstances that could alter the accuracy of the claim; and
- r) shall be relevant to the area where the corresponding environmental impact occurs.
NOTE A process-related claim can be made anywhere, so long as the environmental impact occurs in the area where the production process is located. The size of the area will be determined by the nature of the impact.

CAN/CSA-ISO 14021, Clause 5.7

The implementation of these requirements are addressed in Clause 5 of this Guide.

4.4 Vague and non-specific claims

An environmental claim that is vague or non-specific or which broadly implies that a product is environmentally beneficial or environmentally benign shall not be used.

CAN/CSA-ISO 14021, Clause 5.3

The purpose of being clear and specific is to protect consumers from deception. Environmental benefits need to be specific so there will be no misunderstanding. An environmental claim that is vague or non-specific or which broadly implies that a product is environmentally beneficial or environmentally benign shall not be used unless it is accompanied by a statement that provides support for the claim. Claims that are vague or of a general nature, such as “safe for the environment” or “non-polluting” are likely to require more comprehensive test results than fact-specific claims, such as “contains no chlorine”. Claims under this category may also constitute representations as to the performance or efficacy of a product; by law, such claims should be based on adequate and proper tests (for further details on evaluation and claim verification requirements, see Clauses 8.1 and 8.2 of this Guide). Claims relating to the environmental performance of a product or its features that are not supported by adequate and proper tests or that are false or misleading in a material respect are prohibited in Canada. The general impression conveyed by such a claim, as well as its literal meaning, shall be taken into account when determining whether an environmental claim is false or misleading in a material respect under Canadian law.

Claims such as “environmentally friendly”, “ecological (eco)”, and “green” are examples of vague claims and should be reserved for products/services whose life cycles have been thoroughly examined and verified. For example, labelling a consumer product as “environmentally friendly” or “environmentally safe” implies that a product is environmentally benign or is environmentally beneficial. Without greater specificity with respect to the reduced environmental impact, the environmental feature, or the benefit that the claim refers to, such far-reaching claims could be misleading or deceptive, as every product made is consumable and has an impact on the environment.

If vague claims relating to the environment are used as slogans and are not based on real environmental protection and/or benefit, they could be considered false or misleading. Such claims must be based on adequate and proper tests undertaken prior to making such representations to the public, if they relate or refer to the environmental performance or efficacy of a product.

Environmental claims that are vague, non-specific, incomplete, or irrelevant and that cannot be supported through verifiable test methods should not be used.

Example:*Preferred*

This product uses 20% less electricity in normal use than our previous model.

Discouraged

This new and improved product is better for the environment.

This product uses green electricity.

Example:*Preferred*

This product has replaced its aerosol ingredients with an alternative that does less harm to the ozone layer.

Discouraged

This product is ozone-friendly.

Note: While the replacement chemicals in aerosols can be less damaging to the ozone layer, such chemicals should not be labelled "ozone-friendly" if they can harm the atmosphere (either the upper ozone layer or the air at the ground level). Such a label could be false or misleading.

Example:

The packaging on a fire log claims the log to be "non-toxic". With no supporting statement as to why it is not toxic, this claim could be inappropriate and misleading since fire logs or wood-burning products are likely to generate smoke and particulates in the air, which are pollutants.

4.5 Claims of "...free"

An environmental claim of "... free" shall only be made when the level of the specified substance is no more than that which would be found as an acknowledged trace contaminant or background level.

CAN/CSA-ISO 14021, Clause 5.4

Note: "Trace contaminant" and "background level" are not precise terms. "Trace contaminant" primarily refers to manufacturing impurity, whereas "background level" is typically used in the context of naturally occurring substances. Claims often need to be based on a specific substance-by-substance assessment to demonstrate the level is below that causing harm. Also, the exact definition of "trace contaminants" may depend on the product area concerned. (Adapted from ICC International Code of Environmental Advertising, Commission on Marketing, Advertising and Distribution, June 2001.)

Claims of "... free" must not be made based on the absence of ingredients that were never in a product category or which were only ever present at a background level. It is permissible to make a claim of "...free" where trace amounts of an element exist because the element is ubiquitous in the environment but NOT when any trace amount of the element has been added to the formulation.

Note: Exporters should check local legislation that sometimes does not allow claims of "... free".

Example:*Preferred*

“Lead free” for claims for solder in electronics. (Lead was often used in electronics products, and many manufacturers no longer use lead in their electronics products.)

Discouraged

“Pesticides free” for claims on organic products where pesticides were never used in the first place in that product category.

Note: *Many consumers today are interested in knowing not only the ingredients contained in a product but also the ingredients that are absent or no longer present. It is therefore recognized that “substance-free” claims can provide useful information to consumers when making purchasing decisions. At the same time, it should be noted that while these claims can be literally true, businesses and advertisers should ensure that the general impression conveyed by such claims is not false or misleading.*

Example:

A product is labelled “Free of HCFCs”. This claim implies that the product contains no HCFCs (hydrochlorofluorocarbons) and is safe for the entire atmosphere (HCFCs cause harm to the ozone layer). This claim could be considered deceptive if it did not reveal that the product instead contained volatile organic compounds (VOCs), as these contribute to the formation of ground-level ozone or smog and therefore are not safe for the atmosphere. The potential deception is rooted in the non-disclosure of information, and this claim could be material to the consumer if it influenced a purchasing decision. This example would also not meet the requirements outlined in Clause 5.12 of this Guide.

Example:

It could be potentially false or misleading to claim that a brand of paint is “odourless” or “free of odours” when there may be different levels of odour in the paint that could still be detected by human senses.

Regarding “substance-free” claims, see also Clauses 5.12, 5.16, and 5.17 of this Guide.

4.6 Claims of sustainability

The concepts involved in sustainability are highly complex and still under study. At this time there are no definitive methods for measuring sustainability or confirming its accomplishment. Therefore, no claim of achieving sustainability shall be made.

CAN/CSA-ISO 14021, Clause 5.5

Sustainability can be measurable only over a very long period. It is therefore very difficult to make a verifiable claim of sustainability at one point in time. Claims that refer to specific, registered management systems are sometimes acceptable provided that they can be verified.

Example:*Preferred*

This wood comes from a forest that was certified to a sustainable forest management standard [i.e., a sustainable forest management standard published by CSA, Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC), or the Programme for the Endorsement of Forest Certification schemes (PEFC)].

Discouraged

This wood is sustainable.

A claim about a product's sustainability requires life cycle analysis and cannot be based on a single attribute of the product such as how it was managed and extracted. Hence, claims need to be linked to the achievement. If the wood for a product came from a forest that was certified to a sustainable forest management standard, it is not necessarily true that the entire wood product is sustainable.

4.7 Use of explanatory statements

Self-declared environmental claims shall be accompanied by an explanatory statement if the claim alone is likely to result in misunderstanding. An environmental claim shall only be made without an explanatory statement if it is valid in all foreseeable circumstances with no qualifications.

CAN/CSA-ISO 14021, Clause 5.6

Most self-declared claims will require an explanatory statement, as it can be very difficult to ensure that a claim is valid in all foreseeable circumstances, unless the market for that product is very small and very firmly defined. Any broad claim that is made for a product is unlikely to conform to CAN/CSA-ISO 14021 without a qualifying statement.

Example:*Preferred*

This product has been designed to use less raw material than the model we produced last year.

Discouraged

Less material was used in this product.

5 Specific requirements

5.1

All self-declared claims and all explanatory statements are subject to all the requirements of Clause 5.7 of CAN/CSA-ISO 14021 (see Clause 4.3 of this Guide). The eighteen specific requirements are critical to the proper application of CAN/CSA-ISO 14021.

5.2

Self-declared environmental claims and any explanatory statements

shall be accurate and not misleading;

CAN/CSA-ISO 14021, Clause 5.7 a)

Self-declared environmental claims must refer specifically to the product or service to which they are applied. The accuracy of any claim can be challenged, and data may be requested to support the claim.

5.3

Self-declared environmental claims, including any explanatory statement,

shall be substantiated and verified;
CAN/CSA-ISO 14021, Clause 5.7 b)

CAN/CSA-ISO 14021 includes verification methodologies for the specific claims defined in the standard. For other self-declared claims, a hierarchy of test methods is identified in CAN/CSA-ISO 14020. It is also important that all verification be conducted in good faith and meet the requirements of good laboratory practice, be scientifically sound or based on generally accepted accounting principles, and be documented. Where feasible, verification material shall be publicly disclosed or made available to both the purchaser and a potential purchaser, as such material can affect purchasing decisions. It is not necessary to have all data produced or verified by a third party, but the data must be accurate and available in a readily understood form.

Note: *While it is sometimes necessary to make verification via a third party, it is not always feasible to release verification material if it is based on confidential business information. If verification material is not voluntarily disclosed because of the proprietary nature of the information used to support or validate an environmental claim, it should be made available to regulatory authorities upon request. Third-party access to information for verification purposes should also be considered in order to allow market participants to verify and validate such claims.*

5.4

Self-declared environmental claims, including any explanatory statement,

shall be relevant to that particular product, and used only in an appropriate context or setting;
CAN/CSA-ISO 14021, Clause 5.7 c)

Self-declared environmental claims must refer specifically to the product or service to which they are applied. Any environmental claim that does not relate directly to the product or service should not be used as a claim. For example, it is not appropriate to use a declaration of compliance with CAN/CSA-ISO 14001 as an environmental claim. Use of environmental claims related to CAN/CSA-ISO 14001 registration should be confirmed with the registrar and/or the Standards Council of Canada.

For more information on CAN/CSA-ISO 14001 registration, check the ISO Web site at www.iso.org/iso/iso_catalogue/management_standards/certification/publicizing_your_certification.htm.

The context or setting for the claim shall be relevant to the particular product (for example, the reduction in the consumption of water associated with the use of a product performing the function for which it was conceived when compared with the amount of water used by other products performing an equivalent function). This claim should relate to the use of the product and should not include reduction of water in manufacturing processes. Furthermore, this claim is comparative by nature and should fulfill the requirements for such claims (see Clause 9 of this Guide).

Example:

Use of the logo of an environmental association such as an animal or wildlife fund is sometimes not consistent in meaning from product to product. These labels or logos offer no environmental benefits other than signifying a relationship between the association and the business or a monetary contribution to the association.

5.5

Self-declared environmental claims, including any explanatory statement,

shall be presented in a manner that clearly indicates whether the claim applies to the complete product, or only to a product component or packaging, or to an element of a service;

CAN/CSA-ISO 14021, Clause 5.7 d)

It is valid to make an environmental claim for a component of a product, but if that claim is not relevant to the whole product or the product and the package, the claim must clearly identify which parts of the product, package, or service it refers to.

Example:

If a box of cereal is labelled "XX% recycled package" and the package consists of a paperboard box with a wax paper bag inside holding the cereal, the claim "XX% recycled package" must apply to both the box and the bag. If the claim refers only to the box, it should be stated as such.

Example:

An aluminum soft drink can is labelled "XX% recycled". No qualification for this claim is necessary because it is obvious to consumers that the can is recycled — not the contents in the can.

5.6

Self-declared environmental claims, including any explanatory statement,

shall be specific as to the environmental aspect or environmental improvement which is claimed;

CAN/CSA-ISO 14021, Clause 5.7 e)

It is not sufficient to make vague claims of environmental improvement or implying environmental improvement, such as: "green", "environmentally friendly", "forest friendly", "nature's friend", "earth smart", "ozone friendly", "environmentally safe", "eco safe", etc. Any claim must detail the environmental benefit in such a way that it can be verified (see also Clause 4.4 of this Guide regarding vague and non-specific claims). The environmental benefit or feature might relate to certain attributes of the product or product components, packaging, manufacturing process, or product life cycle considerations. For further details, check the requirements for comparative claims in Clause 9 of this Guide.

Example:*Preferred*

By incorporating XX% of recycled material into the design of our product, we have reduced waste at the production phase, compared with our last model (all resource use claims require a comparative statement to qualify the statement, as in the preceding examples).

Discouraged

By incorporating recycled material into our product, we have reduced waste.

Example:*Preferred*

This product was not tested on animals.

Discouraged

A symbol displaying a rabbit is portrayed on a product label with no qualifying statement. The significance of this symbol is not known and the consumer can interpret or assume, wrongfully, that the product is not harmful to the environment. Without the use of an explanatory statement, the symbol can actually be misleading or deceptive.

5.7

Self-declared environmental claims, including any explanatory statement,

shall not be restated using different terminology to imply multiple benefits for a single environmental change;

CAN/CSA-ISO 14021, Clause 5.7 f)

It is inappropriate for a claim to overstate the environmental benefits of one environmental change. The claim and the explanatory statement need to be precise about any additional benefits and how they relate to the single environmental change. Further, the terminology used should be consistent.

Example:*Preferred:*

By using 65% recycled content, we are reducing waste at the production phase compared with our last model.

Discouraged:

By using 65% recycled content, we are reducing waste at the production phase. Trees are being saved by the use of recycled wood fibres and therefore the air we breathe is cleaner.

5.8

Self-declared environmental claims, including any explanatory statement,

shall be unlikely to result in misinterpretation;

CAN/CSA-ISO 14021, Clause 5.7 g)

It is important that a claimant, in making a claim, avoid possible misinterpretation. External review of a proposed claim is sometimes advisable to ensure that this requirement is met. It will not be possible to avoid all cases of misinterpretation, but any likely or obvious ambiguities should be avoided. Consideration should also be given to literacy levels in the countries where the product is being sold.

5.9

Self-declared environmental claims, including any explanatory statement,

shall be true not only in relation to the final product but also shall take into consideration all relevant aspects of the product life cycle in order to identify the potential for one impact to be increased in the process of decreasing another;

CAN/CSA-ISO 14021, Clause 5.7 h)

All environmental claims should consider the entire life cycle of the product to ensure that there is a net environmental benefit, although it is not necessary to complete a full life cycle analysis for self-declared claims.

The CAN/CSA-ISO 14040 Series of Standards details environmental impact considerations from the "cradle-to-grave" of a product or service (see Clause 3.3 of this Guide).

Such considerations include

- design of the product;
- extraction of any raw materials used in the product or process;
- materials (including energy) used in the production process;
- emissions created during production (air, water, solid waste, etc.);
- toxicity of these materials and emissions;
- environmental impacts of the distribution system (including packaging and transportation);
- environmental impacts that occur during use of the product or service;
- durability, reusability, and recyclability of the product;
- consumer packaging and its disposal; and
- final disposal of the product.

It is not permissible to shift the environmental burden from one stage of a product's life to another and then make a claim concerning the improved stage without considering whether there is, in fact, a net overall environmental benefit. Environmental claims should be based on the best available information in each life cycle phase of the product to assess the net environmental benefit associated with a claim.

Example:

The use of non-ozone-depleting gas for refrigeration can have a negative impact on the energy efficiency of refrigerators. If a claim is made with regards to the use of non-ozone-depleting gas, either the net benefit must be verified or the reduction in efficiency must also be clearly stated.

5.10

Self-declared environmental claims, including any explanatory statement,

shall be presented in a manner which does not imply that the product is endorsed or certified by an independent third-party organization when it is not;

CAN/CSA-ISO 14021, Clause 5.7 i)

It is common practice for companies or products to receive endorsement from groups, including environmental organizations, in exchange for donations. Such endorsements are related neither to the environmental performance of the company nor the environmental impacts of the product. Care must be taken when displaying such endorsement symbols that their format and/or proximity to an environmental claim does not imply approval of the environmental claim.

5.11

Self-declared environmental claims, including any explanatory statement,

shall not, either directly or by implication, suggest an environmental improvement which does not exist, nor shall it exaggerate the environmental aspect of the product to which the claim relates;

CAN/CSA-ISO 14021, Clause 5.7 j)

The size of the environmental improvement to any one product, measured in terms of its impact, must be considered when making claims in order to avoid exaggeration (also see Clause 5.7 of this Guide).

Example:

A product from a company that has reduced its greenhouse gas emissions should not claim to be solving the problem of global climate change, nor should a recyclable package claim to be solving the problem of waste disposal.

5.12

Self-declared environmental claims, including any explanatory statement,

shall not be made if, despite the claim being literally true, it is likely to be misinterpreted by purchasers or is misleading through the omission of relevant facts;

CAN/CSA-ISO 14021, Clause 5.7 k)

Example:

Paper, in most cases, may be disposed of in composting systems. However, to label a paper product as compostable without an explanatory statement regarding the conditions under which paper can be added to compost could be misleading.

5.13

Self-declared environmental claims, including any explanatory statement,

shall only relate to an environmental aspect that either exists or is likely to be realized, during the life of the product;

CAN/CSA-ISO 14021, Clause 5.7 l)

This requirement is particularly relevant when making claims about design for disassembly or compostability of products that require community-composting systems for adequate degradation (see Clauses 10.2 and 10.4 of this Guide).

Example:

Brown bags for garden waste are technically compostable in community systems, but if no city in the vicinity where these bags are sold has, or is planning, collection of garden waste and community composting, the claim should not be made as it is unlikely that such collection and composting sites would be established before the current stock of bags is sold.

Example:

Many electronic products that are imported from Asia are designed to be disassembled. However, the systems are not in place in Canada to either take back the products or deal with the waste from consumers' disassembling of the product. The claim "designed to be disassembled" should not be made unless it is known that those facilities are likely to be established before the end of the product's useful life.

The following example is related to the "reasonableness" of recycling a particular material.

Example:

Non-packaging-related plastics or "engineered plastics" that are part of a product are typically either land-filled or burnt at the end of a product's life because they are expensive to separate, ship, and sort into the different plastic material types. Making a recycling claim for these materials would not be appropriate unless it became feasible in the marketplace to recycle them.

5.14

Self-declared environmental claims, including any explanatory statement,

shall be presented in a manner that clearly indicates that the environmental claim and explanatory statement should be read together. The explanatory statement shall be of reasonable size and in reasonable proximity to the environmental claim it accompanies;

CAN/CSA-ISO 14021, Clause 5.7 m)

It is unacceptable, when following CAN/CSA-ISO 14021, to make a claim and put the explanatory statement in a different location on the product or package. Both the claim and explanation must be of a reasonable size to be easily readable. Colour differences, both in print and in background, should also be designed in such a way as to ensure that the claim and the explanatory statement are clearly connected when read by the purchaser or potential purchaser.

Example:

If a carton has a claim on the front panel that requires an explanatory statement, the explanatory statement should not be on the side or back of the package, even with an asterisk to guide the reader to the other location. The statement should be with the claim.

Note: For small products or containers, other ways of communicating explanatory statements, such as links to supporting information, providing 1-800 numbers, or Web site information, can be acceptable.

5.15

Self-declared environmental claims, including any explanatory statement,

shall, if a comparative assertion of environmental superiority or improvement is made, be specific and make clear the basis for the comparison. In particular, the environmental claim shall be relevant in terms of how recently any improvement was made;

CAN/CSA-ISO 14021, Clause 5.7 n)

Comparative assertions make a factual statement that one product is environmentally superior to another. CAN/CSA-ISO 14021 provides detailed instructions on how to make such assertions and supply the data that will be required for verification. When making a claim not defined in CAN/CSA-ISO 14021, one must consider that comparisons must always be accurate and verifiable. Older and current versions of the same product can be compared, but considerations must be made for the relevance of this claim (see Clause 9 of this Guide).

Example:

Preferred

This product uses more recycled material than the same model produced in 2006.

Discouraged

More recycled content.

5.16

Self-declared environmental claims, including any explanatory statement,

shall, if based on a pre-existing but previously undisclosed aspect, be presented in a manner that does not lead purchasers, potential purchasers and users of the product to believe that the claim is based on a recent product or process modification;

CAN/CSA-ISO 14021, Clause 5.7 o)

When new scientific proof reveals that ingredients in some products are harmful and other products in that product category range have never used those ingredients, it is tempting to make an environmental claim based on the absence of those ingredients. Such a claim must always make it clear that this ingredient has never been present in this product and must not imply that this is a recent response to the exposure of the harmful aspects of that component.

Example:

Negative environmental impacts have been associated with phosphates contained in many types of household soap. If soaps used for dishes have never contained phosphate, a simple "phosphate-free" claim attached to the dish soap is inappropriate. The claim should make it clear that the dish soap has never contained this ingredient. Further, it should not imply that the phosphate was removed to address the negative environmental impact.

Preferred

Phosphate-free as always

As always, chlorine-free

Note: *If a business has recently changed its product composition or production process(es) and thereby eliminated the use of a potentially environmentally harmful ingredient (and no new ingredient has been added to the product or used in the modified production process(es) that could cause harm to the environment), then a claim of substance-free for an initial period of one year would be acceptable.*

Example:

Preferred

New phosphate-free formula

With our new production process, this product is now free of chlorine.

Our new fabrication process no longer uses substance X.

Discouraged

Phosphate-free

After the initial one-year period following the change in product composition or production process, an unqualified substance-free claim would be acceptable as long as the claim does not convey the general impression that it is the result of a recent change.

5.17

Self-declared environmental claims, including any explanatory statement,

shall not be made where they are based on the absence of ingredients or features which have never been associated with the product category;

CAN/CSA-ISO 14021, Clause 5.7 p)

This requirement addresses the use of a claim where a feature or ingredient now identified as harmful is not and never has been used in a product or any of its competitor products in that product category. The requirement differs from the restriction discussed in Clause 5.16 of this Guide in that it deals with claims for ingredients and features not normally used in any similar type of product.

Note: *Many consumers today are interested in knowing not only the ingredients contained in a product but also the ingredients that are absent or no longer present. It is therefore recognized that “substance-free” claims can provide useful information to consumers when making purchasing decisions. At the same time, it should be noted that while these claims can be literally true, business and advertisers should ensure that the general impression conveyed by such claims is not false or misleading.*

Example:

Preferred

Like all similar products in its category, this product has always been chlorine-free.

Like all similar products, always chlorine-free.

This product has been painted with lead-free paint.

Discouraged

Chlorine-free

5.18

Self-declared environmental claims, including any explanatory statement,

shall be reassessed and updated as necessary to reflect changes in technology, competitive products or other circumstances that could alter the accuracy of the claim;

CAN/CSA-ISO 14021, Clause 5.7 q)

The application of CAN/CSA-ISO 14021 results in many comparative claims. Comparative claims must convey accurate and verifiable information based on the most recent data available (see Clause 9 of this Guide).

5.19

Self-declared environmental claims, including any explanatory statement,

shall be relevant to the area where the corresponding environmental impact occurs.

CAN/CSA-ISO 14021, Clause 5.7 r)

This clause requires that life cycle impacts of the product be considered in the area in which the impact will occur. The requirement is particularly important when producing products for export. For example, process-related claims and resulting environmental impacts must be made in relation to the areas in which the production facility is located. Claims that concern the "use" or "final disposal" phase of the product life cycle must be made in relation to the areas in which the product will be sold.

Disposal claims such as "recyclable" and "refillable" require facilities to be available in the area where the product is to be sold. Collaboration between the manufacturer and distributor to ensure such services exist will help limit inappropriate claims (see Clauses 10.7 and 10.12 of this Guide).

6 Symbols**6.1 General**

When a self-declared environmental claim is made, the use of a symbol is optional.

Symbols used to make an environmental claim should be simple, easily reproducible and capable of being positioned and sized to suit the product to which the symbol is likely to be applied.

CAN/CSA-ISO 14021, Clauses 5.8.1 and 5.8.2

CAN/CSA-ISO 14021 considers the general use of symbols with environmental claims. The use of symbols with environmental claims is optional, but if they are used, they must not impede the ability of a claim to meet all the requirements outlined in Clause 5 of this Guide. In addition to the

general requirements discussed in Clause 5, there are some specific instructions for the use of symbols. The only specific symbol addressed in CAN/CSA-ISO 14021 is the Mobius loop (see Clause 7 of this Guide).

6.2 Use of symbols for different environmental claims

Symbols used for one type of environmental claim should be easily distinguishable from other symbols, including symbols for other environmental claims.

CAN/CSA-ISO 14021, Clause 5.8.3

A symbol used with any self-declared claim must refer only to one claim. If more than one environmental claim is made using symbols, each claim (including its respective symbol) must be clearly separated. If both claims use symbols, these symbols shall be clearly distinguishable from each other. This applies to all symbols intended to give an environmental message, whether it be the Mobius loop, a new symbol widely used in a country, or a specifically designed symbol for a product.

There is one exception to this principle of one claim per symbol: the use of the Mobius loop for claims of “recyclable” and “recycled content”. See Section 7 of this Guide.

6.3 Symbol for implementation of an environmental management system

A symbol used to express implementation of an environmental management system shall not be used in such a way that it could be misunderstood as an environmental symbol indicating the environmental aspects of a product.

CAN/CSA-ISO 14021, Clause 5.8.4

This requirement is also addressed in Clause 5.4 of this Guide. Some registrars award a symbol to companies that are registered to CAN/CSA-ISO 14001. If a registrar awards a symbol for CAN/CSA-ISO 14001, it cannot be used as an environmental claim. Always check with either your registrar and/or the Standards Council of Canada for use of CAN/CSA-ISO 14001 registrations in any public communication.

Details on the use of management system registration/certification can be found on the ISO Web site at www.iso.org/iso/publicizing2005-en.pdf (see Clause 4.6 of this Guide regarding sustainability).

6.4 Use of natural objects in symbols

Natural objects shall be used only if there is a direct and verifiable link between the object and the benefit claimed.

CAN/CSA-ISO 14021, Clause 5.8.5

Natural objects such as fish and trees have frequently been used as symbols to accompany vague environmental claims such as "earth-friendly". CAN/CSA-ISO 14021 prohibits that type of usage. There needs to be a clear connection between the product and the symbol.

Example:

Preferred

A tree symbol is acceptable for a wood product claiming to be made from wood derived from a forest that was certified to a sustainable management forest standard (i.e., CSA, SFI, FSC, PEFC).

Discouraged

A fish symbol on a can of lead-free paint. In this example, there is no direct link between the removal of lead from paint and the marine environment.

6.5 Other information or claims

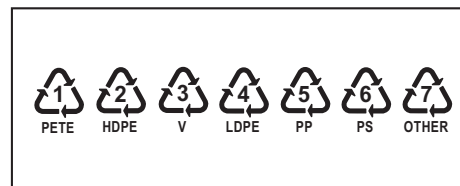
Words, numbers or symbols may be used in addition to environmental symbols to communicate information such as material identification, disposal instructions or hazard warnings.

CAN/CSA-ISO 14021, Clause 5.9.1

Use of an environmental claim does not preclude the necessity to identify any hazardous materials or to identify materials according to their recycling systems. The difference between the environmental claims and material identification symbols shall be made obvious to the purchaser.

Plastic resin identification symbols are examples of material identification symbols. The plastic resin identification coding system uses symbols to identify the various resins found in plastic bottles and rigid containers. These symbols are used for the purpose of sorting materials in collection and recycling markets in Canada. They consist of a triangular-shaped symbol of arrows that encloses a code number in the centre of the symbol. The number is used to designate the plastic material equivalent. The code number and material equivalents used in this coding system are as follows:

- 1 = PETE (polyethylene terephthalate) (PET);
- 2 = HDPE (high-density polyethylene);
- 3 = V (vinyl/polyvinyl chloride) (PVC);
- 4 = LDPE (low-density polyethylene);
- 5 = PP (polypropylene);
- 6 = PS (polystyrene); and
- 7 = other.



These resin code symbols are usually embossed or engraved on the bottom of containers (or as near as possible to the bottom), as recommended by the Society of the Plastics Industry (SPI). The coding is intended to sort homogeneous streams of plastics in sufficient volumes to allow for the highest value of recyclable material for use in end products. For more information about the differentiation of resins and packaging applications, visit www.cpia.ca/files/files/resincode.pdf.

Words, numbers or symbols used for non-environmental claim purposes shall not be used in a manner that is likely to be misunderstood as making an environmental claim.

CAN/CSA-ISO 14021, Clause 5.9.2

CAN/CSA-ISO 14021 requires that symbols and codes used for purposes other than environmental claims (such as environmental codes or symbols for sorting materials or for material identification) should not be used to imply any environmental benefit. The environmental claim should be made obvious and should be distinguished from any other codes or symbols. (See Clause 7 of this Guide.)

In order to avoid confusion with the Mobius loop, the plastic resin identification symbol should not be prominently displayed on the product.

Example:

A nationally marketed yogurt container displays the plastic resin identification symbol on the front label of the container, near the product name and logo. In this case, the manufacturer's prominent use of the code could be mistaken for a claim of recyclability. However, if the code were placed in a less visible location it would not be mistaken for a claim.

7 The Mobius loop

The selection of specific symbols for this International Standard is based on their existing wide use or recognition. This should not be taken to imply that environmental claims represented by these symbols are superior to other environmental claims. Only the Mobius loop is included at present. Other specific symbols which are not provided for in this International Standard will be introduced at an appropriate time.

CAN/CSA-ISO 14021, Clause 5.10.1

CAN/CSA-ISO 14021 based the selection of specific symbols on those that are currently widely used and recognized. During the development of CAN/CSA-ISO 14021, the only widely recognized symbol was the Mobius loop, and most consumers understand this symbol only as having "something to do with recycling". For this reason, CAN/CSA-ISO 14021 deals specifically with only the Mobius loop. As new symbols are used, they will be considered in the regular reviews of CAN/CSA-ISO 14021.

There are many advantages to using the same symbol to identify the same environmental aspect on competing products, and it is hoped that manufacturers will adopt a consistent approach and not discourage the use of the same symbol. However, care must be taken not to infringe on intellectual rights by the use of a registered design.

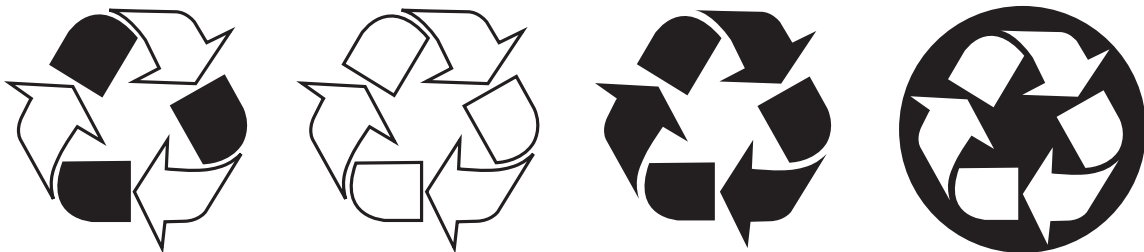


Figure 1 — Examples of the Mobius loop

The Mobius loop is a symbol in the shape of three twisted chasing arrows forming a triangle. Whenever it is used to make an environmental claim, the design shall meet the graphical requirements for ISO 7000, Symbol No. 1135. There should, however, be enough contrast so that the symbol is clear and distinguishable. Some examples of the form of the Mobius loop are provided in Figure 1. Clause 7 provides detailed requirements concerning the use and applicability of the Mobius loop.

The Mobius loop may apply to the product or the packaging. If there is any potential for confusion about whether it applies to the product or the packaging, the symbol shall be accompanied by an explanatory statement.

If a symbol is used for claims of recyclable or recycled content, then that symbol shall be the Mobius loop subject to the requirements of 7.7 and 7.8.

The Mobius loop shall only be used for claims of recycled content and recyclable, as described in 7.7 and 7.8.

CAN/CSA-ISO 14021, Clause 5.10.2

Any of the four versions of the Mobius loop shown above can be used to mean either recycled content or recyclability of the product, provided all the specifications of those two claims are met, as described in Clause 5 of this Guide.

When using the Mobius loop to make the claim of "recycled content", it is necessary to identify the percentage of recycled content in order to avoid the impression that the symbol refers to the recyclability of a product.

An explanatory statement specifying recyclability or recycled content would provide clarification of the meaning of the symbol for consumers.

If an explanatory statement is used with the Mobius loop symbol, it must be positioned near the symbol to show that the statement and symbol should be read together. ISO 7000, which deals with graphical symbols, contains specifications for the Mobius loop (Symbol No. 1135).

The Mobius loop shall only be used for claims of recycled content and recyclable, as described in 7.7 and 7.8.

CAN/CSA-ISO 14021, Clause 5.10.2.4

According to CAN/CSA-ISO 14021, the Mobius loop symbol is to be used only for two specific claims: "recyclable" or "recycled content". These claims are defined in detail in Clauses 7.7 and 7.8 of CAN/CSA-ISO 14021 and in Clauses 10.7 and 10.8 of this Guide.

Note: *Export products should comply with any additional regional requirements in their intended market.*

The Mobius loop has been widely used in a variety of ways. Some uses of the symbol (e.g., simply to denote participation in an environmental program such as campus recycling or to discourage littering) are considered inappropriate. Placement of a specific number inside the Mobius loop without a percentage sign is also inappropriate, as it is likely to be misunderstood by the public (e.g., the number "1" can be mistakenly assumed to mean 100% recycled content or confused with the plastic resin identification code given the similarity of the symbols).

When using the Mobius loop symbol to designate both recyclability and recycled content simultaneously, the symbol must be accompanied by an explanatory statement supporting both claims in order to provide clarification to consumers as to the dual meaning of the symbol. In this situation, it is necessary for the percentage of recycled content to be accompanied by a statement of recycled content, even if the percentage number appears inside or next to the symbol.

Example:



This product is made of 30% recycled content and is recyclable.

Note: *The material-identifying code symbols for sorting plastic resins in the recycling process is an important part of the recycling system. The use of the plastic resin identification symbol alone does not denote that the product is recyclable or made of recycled content. Therefore the use of the Mobius loop in conjunction with a material identification symbol, such as the plastic resin identification symbol, is recommended. For example, both symbols would be necessary to denote that “this type of plastic container is recyclable in facilities across Canada”.*

The Mobius loop should not be used to denote that packaging is degradable or compostable if the packaging is not recyclable. Alternatively, if a package is both recyclable and compostable/degradable, a statement clarifying its compostable/degradable characteristics should accompany the Mobius loop. For example, “this packaging is both recyclable and compostable”.

Example:

On biodegradable packaging that is not recyclable, the Mobius loop should not be used. However, a claim of degradability may be appropriate if the packaging meets the requirements of Clause 10.3 of this Guide.

8 Evaluations and claim verification

8.1 Responsibilities of the claimant

The claimant shall be responsible for evaluation and provision of data necessary for the verification of self-declared environmental claims.

CAN/CSA-ISO 14021, Clause 6.1

The intended purpose of self-declared environmental claims is to allow organizations to make claims without the requirement to hire a third party to award a seal or logo. However, this does not lessen the responsibility of the manufacturer, distributor, dealer, retailer, importer, or anyone in the supply chain making the claim to be able to support it with accurate data.

Because the claims covered by CAN/CSA-ISO 14021 are self-declared, it is the sole responsibility of the claimant to produce and provide the data necessary to support the claim being made. While not a requirement, the claimant may choose to have outside agencies (e.g., a recognized laboratory, independent expert, testing facility, etc.) produce or verify this data.

Prior to making the claim, evaluation measures shall be implemented to achieve reliable and reproducible results necessary to verify the claim.

CAN/CSA-ISO 14021, Clause 6.2.1

Although claimants are responsible for producing their own supporting data, the data must be produced using accepted test methods to enable verification of the claim. (See Section 5.3 of this Guide.) Tests should be properly conducted, use appropriate testing methodology, or be based on scientific standards. Evaluation measures undertaken to support a self-declared environmental claim must be concluded prior to making the claim. Claims purporting or relating to an environmental benefit can be false or misleading if they do not properly convey the actual test results or if they are based on poorly designed test methodologies. Moreover, claims should not only be proven under laboratory conditions but also under the conditions of the product's normal, everyday use. A claim should be based on supporting data from adequate and proper tests.

Example:

"This hybrid product achieves 30% better gas mileage than our standard model". Such claims should not be made where the user tests have not been adequate to substantiate the claim. Claims of increased yield should come from careful testing of the product and be of some significance.

8.2 Selection of evaluation and claim verification methods

Methods for evaluation and claim verification shall follow, in order of preference, International Standards, recognized standards that have international acceptability (these may include regional or national standards) or industry or trade methods which have been subjected to peer review. If there are no methods already in existence, a claimant may develop a method, provided it meets the other requirements of clause 6 and is available for peer review.

CAN/CSA-ISO 14021, Clause 6.4

The testing or evaluation methods used shall meet industry standards that are recognized or that are nationally or internationally accepted in an industry or trade. The bibliography of CAN/CSA-ISO 14021 lists works that are helpful in meeting this requirement (this bibliography is appended as Annex D of this Guide). It lists several widely acceptable tests for verifying some of the claims defined in CAN/CSA-ISO 14021. In the absence of such standards or other definitive criteria, a claimant may develop a method of evaluation and verification, provided it meets the evaluation and claim verification requirements under CAN/CSA-ISO 14021.

Some of the selected claims that are defined in CAN/CSA-ISO 14021 cannot be supported by scientific testing and require detailed inventory data to verify their accuracy.

8.3 Access to information

A self-declared environmental claim shall only be considered verifiable if such verification can be made without access to confidential business information. Claims shall not be used if they can only be verified by confidential business information.

CAN/CSA-ISO 14021, Clause 6.5.1

A claim that depends on confidential information for its verification will require third-party audits to confirm that the data presented supports its validity. Claimants should look at other avenues or mechanisms involving a self-regulatory process for verification, allowing third-party access of verification information to purchasers or potential buyers seeking information regarding the validity of such claims.

CAN/CSA-ISO 14021 details the minimum information that is required to document a claim:

- a) identification of the standard or method used;
- b) documentary evidence, if verification of the claim cannot be made by testing the finished product;
- c) test results, where these are necessary for claim verification;
- d) if testing is carried out by an independent party, the name and address of the independent party;
- e) evidence that the claim conforms to the requirements of 5.7 h) and 5.7 r);
- f) if the self-declared environmental claim involves a comparison with other products, then a description of the method used, the results of any tests of those products, and any assumptions made shall be clearly stated;
- g) evidence that the claimant's evaluation gives assurance of the continuing accuracy of the self-declared environmental claim during the period over which the product is on the market, and for a reasonable period thereafter, taking into account the life of the product.

CAN/CSA-ISO 14021, Clause 6.5.3

The information that verifies or supports a claim may be voluntarily released at point of sale or disclosed upon request. This information must be available in a format that is reasonably accessible to members of the public, and barriers must not be created to make it difficult for members of the public, including purchasers and potential purchasers, to have access to this information. Verification information must be accurate and available in a readily understood form to purchasers or potential purchasers as such information could potentially be material to purchasers' buying decisions.

Note: *It is recognized that in Canada, businesses or organizations are not required to disclose confidential or commercially sensitive information of a proprietary nature to the public. If information of a proprietary nature is used to support or validate an environmental claim, it should be made available to regulatory authorities and government agencies, upon request. Businesses or organizations are not precluded or restricted from making any type of environmental claim on the basis that the information supporting or substantiating a claim is premised on confidential business or proprietary information. Thus, in keeping with CAN/CSA-ISO 14021, all self-declared environmental claims can be made if they are substantiated and can be verified. See Section 5.3 of this Guide.*

9 Comparative claims

Comparative claims have the greatest potential to mislead purchasers and therefore they need to be approached with special care.

Comparative claims require the most rigorous evaluation and the most explicit description of the evaluation in the explanatory statement. Comparative claims always require an explanatory statement to identify the benchmark against which they have been evaluated.

Comparative claims shall be evaluated against one or more of the following:

- a) an organization's own prior process;
- b) an organization's own prior product;
- c) another organization's process; or
- d) another organization's product.

The comparison shall only be made:

- using a published standard or recognized test method (as set out in 6.4); and
- against comparable products serving similar functions, supplied by the same or another producer, currently or recently in the same marketplace.

CAN/CSA-ISO 14021, Clause 6.3.1

This is the verification required to ensure that a self-declared claim meets the requirements of Clause 5.7 (n) of CAN/CSA-ISO 14021.

It is also possible to make a comparative claim based on a particular aspect of the product's life cycle. This would normally be done when making a comparison with an organization's own prior product or process.

Comparative claims involving the environmental aspects of the product's life cycle shall be:

- a) quantified and calculated using the same units of measurement;
- b) based on the same functional unit; and
- c) calculated over an appropriate time interval, typically twelve months.

CAN/CSA-ISO 14021, Clause 6.3.2

These comparisons may be expressed as percentages or as absolute values, but improvements related to a product and its packaging must be verified separately.

Comparative claims may be based on:

- a) percentages, in which case they should be expressed as absolute differences; or

NOTE The following example is provided to clarify how relative measurements could be handled:

For a change from 10 % to 15 % recycled content, the absolute difference is 15 % - 10 % = 5 %, in which case, a claim of an additional 5 % recycled content could be made; however, a claim of 50 % increase, while accurate, could be misleading.

b) absolute (measured) values, in which case they should be expressed as relative improvements.

NOTE The following example is provided to clarify how absolute measurements could be handled:

For an improvement that results in a product lasting 15 months instead of the previous 10 months, the relative difference is

$$\frac{15 \text{ months} - 10 \text{ months}}{10 \text{ months}} \times 100 = 50\%$$

in which case, a claim of 50 % longer life could be made. If one of the values is nil, the absolute difference should be used.

As there is a high risk of confusing an absolute claim with a relative claim, the claim should be worded to be clear that it is a claim of absolute difference and not a claim of relative difference.

CAN/CSA-ISO 14021, Clauses 6.3.3 and 6.3.4

Comparisons should be made only for products that have similar functions and marketplace availability.

Example:

A statement such as "This product uses less energy" requires more clarification. You should be precise about the extent of the improvement and the basis for the comparison. "This product uses 20% less energy than our previous model" would be an appropriate way to make such a claim.

Improvements related to a product and its packaging shall be stated separately and shall not be aggregated.

CAN/CSA-ISO 14021, Clause 6.3.5

CAN/CSA-ISO 14021 provides sample equations to assist in the calculation of comparative claims. In using comparative claims, great care must be taken not to use percentages in cases where an absolute value would be more accurate, and vice versa.

10 Details of selected claims defined in CAN/CSA-ISO 14021

10.1 General

10.1.1 Overview

CAN/CSA-ISO 14021 details the usage of twelve claims deemed most commonly found in the marketplace at the time of the standard's development. Manufacturers and/or distributors are not precluded from making other self-declared environmental claims, if such claims meet the requirements of Clause 5.7 of CAN/CSA-ISO 14021 and the general principles set out in CAN/CSA-ISO 14020.

The environmental terms that are dealt with in this clause are arranged in alphabetical order. There is no hierarchical order for these claims. These claims may be applied to any part of the product life cycle — manufacture, distribution, usage, and recovery and disposal — as appropriate.

10.1.2 Selected claims detailed in CAN/CSA-ISO 14021

Detailed instructions are provided on the following terms, numbered according to their sequence in CAN/CSA-ISO 14021:

- 7.2 Compostable
- 7.3 Degradable
- 7.4 Designed for disassembly
- 7.5 Extended life product
- 7.6 Recovered energy
- 7.7 Recyclable
- 7.8 Recycled content
- 7.9 Reduced energy consumption
- 7.10 Reduced resource use
- 7.11 Reduced water consumption
- 7.12 Reusable and refillable
- 7.13 Waste reduction

CAN/CSA-ISO 14021, Clause 7.1.2

10.1.3 Claims of "where facilities exist"

Claims that a product or package is compostable, degradable, designed for disassembly, recyclable, reusable, and refillable might not be met by all facilities collecting materials; therefore, the product claim for collection and processing should be clear.

A claim that a product is compostable, designed for disassembly, or has an extended life sometimes depends on the existence of facilities. Claims that a product is recyclable, reusable, and refillable always depend on the existence of systems and facilities. Further, systems or facilities must be conveniently available to a reasonable proportion of purchasers, potential purchasers, and users in the area that the product is to be sold; otherwise, such claims could be considered false or misleading.

It is not considered adequate to state "where facilities exist" after a claim that is dependent on the existence of such facilities. It is important to obtain information on the availability of the necessary infrastructure from municipalities or distributors before making this claim or any such generalized qualifications, especially on products that may be exported to countries that have incorporated ISO 14021 into their regulations.

"Reasonable proportion" of purchasers, potential purchasers, and users

In Canada, it is recognized that municipalities have jurisdiction over recycling programs. With over 1000 recycling programs across Canada, it is sometimes not practical or feasible to have claims that are based on the availability of various types of local recycling programs. Given this situation, it is recommended that if at least half the population has access to collection facilities, a claim of "recyclable" may be made without the use of any qualification. In the case of limited availability of recycling facilities, or in cases where such facilities are not available to a reasonable proportion of purchasers, potential purchasers, and users, the specific location of the recycling programs or facilities should be identified whenever it is possible and practical to do so.

Generalized qualifications that convey the limited availability of collection facilities are adequate.

Example:

Preferred



This container may not be recyclable in your area.

Discouraged



This container is recyclable where facilities exist.

10.2 Compostable

10.2.1 Usage of term

"Compostable" claims would be appropriate on products or packages that will break down or become part of usable compost (for example, soil-conditioning material or mulch) in a safe and timely manner. For composting, a "timely manner" is approximately the same time it takes for composting organic compounds like leaves, grass, and food.

Specific qualifications are outlined in CAN/CSA-ISO 14021 for the appropriate use of a compostable claim. Each refers to the effect that a product might have on the compost quality.

A characteristic of a product, packaging or associated component that allows it to biodegrade, generating a relatively homogeneous and stable humus-like substance.

CAN/CSA-ISO 14021, Clause 7.2.1

A compostable claim may not be made on any material that

- a) negatively affects the overall value of the compost as a soil amendment;
- b) releases substances in concentrations harmful to the environment at any point during decomposition or subsequent use; or
- c) significantly reduces the rate of composting in those systems in which the product or component is likely to be composted.

CAN/CSA-ISO 14021, Clause 7.2.2.1

10.2.2 Qualifications

All compostable claims normally require an explanatory statement to make it clear whether a home composter or municipal composting facility is required.

All compostability claims shall be clearly qualified as follows.

- a) The claim shall specify whether the type of composting facility or process in which the identified component is compostable is a home-composting facility or an on-site or central composting facility, unless the product is compostable in all types of composting facilities, in which case no qualification is necessary.
- b) If the entire product is not compostable, the claim shall identify specifically which components are compostable. If the user of the product is required to separate those components, clear direction on how to do so shall be provided.
- c) If problems or risks are associated with introducing the product into either a home-composting facility or on-site or central composting facilities, then the claim shall identify which of these types of facility are capable of composting the product.

CAN/CSA-ISO 14021, Clause 7.2.2.2

The qualifying statement should also clearly state whether the whole product or only components are compostable. If the product has to be disassembled in order to compost components, clear instructions should be given on separating those components (see Clause 10.4 of this Guide).

If there are significant risks associated with putting the product or components in the wrong composting stream, these should be identified.

Example:

The pulp in a disposable diaper might be compostable in certain circumstances. The compostability claim should read, "This product can be put into municipal composting programs, provided the plastic layers are removed. The product should be rinsed in the toilet before it is separated for composting, as the human waste could produce ingredients that are incompatible with a municipal composting process".

A product claiming to be compostable in a home composter must meet specific requirements.

If a compostability claim refers to home composting, the following additional requirements shall apply.

- a) If significant preparation or product modification is necessary to ensure satisfactory compostability, or if significant additional treatment of the finished compost is required as a direct result of the composting of the product or component, the compostability claim shall not be made.
- b) If home composting of the product or component would require materials, equipment (other than a composting unit) or specialized skills that are unlikely to be available in most households, the claim of home compostability shall not be made.

CAN/CSA-ISO 14021, Clause 7.2.2.3

If a compostability claim is made for a product that is not suitable for home composting, the manufacturer should be able to verify that suitable facilities are conveniently available to a reasonable proportion of purchasers, potential purchasers, and users in the marketplace in which the product is to be sold, in order to make an unqualified claim of "compostable". If, however, these facilities are not conveniently available to a reasonable proportion of purchasers, potential purchasers, and users in the area in which the product is marketed, the claim should be qualified to identify the limited extent of the facilities or infrastructure available for composting. Where feasible, this qualification must be specific. To determine what constitutes a reasonable proportion of purchasers, potential purchasers, and users, see Clause 10.1.3 of this Guide.

Example:

Preferred

This package is compostable in municipal composting programs in Southern Ontario only.

Discouraged

This package is compostable where municipal facilities exist.

As composting involves biodegradation, some of the tests listed for degradability in the bibliography of CAN/CSA-ISO 14021 can be helpful in the verification of compostability claims (see Annex D of this Guide).

If a compostability claim is dependent on processes or facilities other than home composters, then the following shall apply.

- a) Such facilities for the purpose of composting the product or packaging shall be conveniently available to a reasonable proportion of purchasers, potential purchasers and users where the packaging or product is sold.
- b) If such facilities are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product, explanatory statements shall be used which are adequate to convey the limited availability of these facilities.
- c) General qualifications, such as "Compostable where facilities exist", which do not convey the limited availability of facilities are not adequate.

CAN/CSA-ISO 14021, Clause 7.2.2.4

Whether or not a claim is appropriate is dependent on the availability of systems or facilities to enable the environmental benefits suggested by the claim to be realized (see Clause 10.1.3 of this Guide).

Example:

Special leaf bags designed to degrade with the leaves they contain could be identified as "Compostable in municipal facilities in the Greater Vancouver area".

Unless the product is compostable in any facility under any conditions, the claim requires an explanatory statement. The following information must be clear to the purchaser: the type of facility in which the product can be composted (home or community); whether all or part of the product is compostable; and if there are any risks to composting this product. If a product is identified as being suitable for composting at home, the claim must identify the necessary treatment and preparation. If this product requires the use of materials or equipment not normally found in a home, the claim should not be made.

For packaging that is both recyclable and compostable (such as egg cartons, boxboard containers, etc.), the Mobius loop can be shown, but an accompanying qualifying statement should indicate that the package is also compostable. The Mobius loop symbol cannot be used to represent compostability.

10.2.3 Evaluation methodology

See Clause 8 of this Guide and Clause 6 of CAN/CSA-ISO 14021 for further information.

10.3 Degradable

10.3.1 Usage of term

The term "degradable" refers to all types of degradability, such as photodegradability and biodegradability.

A characteristic of a product or packaging that, with respect to specific conditions, allows it to break down to a specific extent within a given time.

NOTE Degradability is a function of susceptibility to changes in chemical structure. Consequent changes in physical and mechanical properties lead to the disintegration of the product or material.

CAN/CSA-ISO 14021, Clause 7.3.1

10.3.2 Qualifications

The following qualifications refer to all types of degradation, including for instance biodegradation and photodegradation.

- a) Claims of degradability shall only be made in relation to a specific test method that includes maximum level of degradation and test duration, and shall be relevant to the circumstances in which the product or packaging is likely to be disposed.
- b) A degradable claim shall not be made for a product or packaging, or component of a product or packaging, that releases substances in concentrations harmful to the environment.

CAN/CSA-ISO 14021, Clause 7.3.2.1

All degradability claims must be made using a specific test method in which the maximum level of degradation and the test duration are appropriate to the circumstances in which the material is likely to be disposed or managed through degradation. The bibliography of CAN/CSA-ISO 14021 identifies several recognized tests for the degradation of plastics. See Annex D of this Guide.

In landfills, where most garbage is taken, materials degrade very slowly, if at all. This is because modern landfills are designed, according to law, to keep out sunlight, air, and moisture. This helps prevent pollutants from the garbage from getting into the air and drinking water, and slows the decomposition of the trash.

Example:

Materials such as paper take decades to decompose in a landfill; it is difficult to substantiate a claim that a product normally disposed of in a landfill is "degradable".

Example:

Biodegradable claims for products that go down the drain, like detergents and shampoos, must be substantiated to prove that the product will degrade in a wastewater treatment system.

Example:

Nursery pots made of peat moss or other similar types of planters may be labelled "biodegradable" if, when the planter and tree are planted in the ground, the planter quickly disintegrates and biodegrades, allowing the roots of the tree to reach the surrounding earth. In this case, an unqualified claim is not deceptive.

A claim that a product is biodegradable should be made only if it would be true in the circumstances in which the product is likely to be disposed of and if no substances are released in concentrations harmful to the environment.

Example:

It is unlikely that liquid cleaning spray applied to cleaning wipes that are disposed of in the garbage and invariably end up in a landfill have the ability to degrade, so a claim of "biodegradable ingredients" on the label of the liquid spray bottle or wipes could be considered inappropriate.

Example:

It would be misleading to claim that a refuse bag was biodegradable if it would have to be separated from the waste it contained.

Any limitations or constraints to degradability, biodegradability, or photodegradability in relation to a product or packaging should be indicated in order to avoid deception.

Where appropriate, a claim should qualify which product/package component is degradable and which is recyclable.

Example:

A bathroom hard-surface liquid cleaning product is labelled "biodegradable". The cleaning substance and certain components of the product's packaging are biodegradable, as supported by credible testing methods, but not the spray mechanism. Without being qualified, this claim could be considered false or misleading, given that it implies that the entire product, including the package, is degradable where customarily disposed. In order to avoid deception, this claim should be qualified to indicate which product components have the ability to degrade where it is likely to be disposed.

Note: *On biodegradable packaging that is not recyclable, the Mobius loop should not be used. This is to prevent consumers from placing degradable products in recycling programs where there is risk of contamination in the recycling process.*

If substances that are harmful to the environment are released during the degradation process, the claim of "degradable" should not be made.

Example:

Cleaners containing phosphates biodegrade totally and quickly; however, if they reach rivers and lakes, they can have a serious impact on aquatic life and can promote massive algae growths that can wipe out healthy ecosystems in local waters. A claim of biodegradability on cleaners that have damaging or harmful effects on the environment could be considered deceptive.

Note: *To be biodegradable, degradable, or photodegradable, most substances need either light or oxygen, neither of which is available if the product is placed in a landfill. If a technically biodegradable or degradable product and/or package labelled as such invariably ends up in landfill or in disposal facilities that are deprived of the conditions necessary to the degradation process, the claim of biodegradability or degradability could be false or misleading.*

Note: It is recognized that a product that is technically biodegradable might not be entirely safe for the environment, as it might, nevertheless, be toxic and harmful to the environment while it is in the process of breaking down. In this situation, if a claim of biodegradability is made and is not qualified, the claim could be considered false or misleading. This applies to claims made for a product, product packaging, or any component of a product or packaging.

See the bibliography in CAN/CSA-ISO 14021, appended as Annex D to this Guide, for a listing of appropriate tests for degradability.

10.3.3 Evaluation methodology

See Clause 8 of this Guide and Clause 6 of CAN/CSA-ISO 14021, for further information.

10.4 Designed for disassembly

10.4.1 Usage of term

A characteristic of a product's design that enables the product to be taken apart at the end of its useful life in such a way that allows components and parts to be reused, recycled, recovered for energy or, in some other way, diverted from the waste stream.

CAN/CSA-ISO 14021, Clause 7.4.1

This claim must reflect a specific design decision. It is also critical that there are facilities available to process the components and parts of the product after it has been disassembled (see Clause 10.1.3 of this Guide).

An explanatory statement must always accompany a claim that a product is designed for disassembly. This statement should specify the way in which various components or parts can be processed. Where components or parts are identified with another claim, such as recyclability, all the requirements of that claim must also be met.

10.4.2 Qualifications

A claim of designed for disassembly shall be accompanied by an explanatory statement that specifies the components or parts to be reused, recycled, recovered for energy or, in some other way, diverted from the waste stream.

If a claim of designed for disassembly accompanies another claim, such as a claim of recyclable, the relevant requirements applying to the other claim shall also be followed.

All claims that a product is designed for disassembly shall specify whether the disassembly is to be done by the purchaser or user, or whether it is to be returned for disassembly by specialists.

CAN/CSA-ISO 14021, Clauses 7.4.2.1 to 7.4.2.3

If the product requires specialists to perform the disassembly, the collection or drop-off facilities should be conveniently available to a reasonable proportion of purchasers, potential purchasers, and users in the area where the product is to be sold (see Clause 10.1.3 of this Guide). This

requirement is similar to those for refillability and recyclability claims. General qualifications on the limited availability of such facilities are permissible.

Example:

Preferred

This product has been designed to be disassembled into parts that can be recycled. This can be done at our outlets in Montreal, Toronto, or Vancouver.

Discouraged

Product can be disassembled where facilities exist.

10.4.3 Use of a special process

- If a special process is required to disassemble the product, then the following shall apply.
- a) Collection or drop-off facilities shall be available to a reasonable proportion of purchasers, potential purchasers and users of the product where the product is sold.
 - b) If such facilities are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product, explanatory statements shall be used which are adequate to convey the limited availability of these facilities.
 - c) General qualifications, such as "Can be disassembled where facilities exist", which do not convey the limited availability of facilities are not adequate.

CAN/CSA-ISO 14021, Clause 7.4.2.4

The appropriateness of claims "designed for disassembly" is sometimes dependent on the availability of facilities (see Clause 10.1.3 of this Guide).

Example:

A claim on a television set that states "This product has been designed to be disassembled into parts that can be recycled at our outlets in Montreal, Toronto, or Vancouver" would be acceptable.

Each component or part of the product must be clearly identified as to the disposal method that should be used, and any claims that a part is recyclable or reusable must meet all the requirements for such claims (see Clauses 10.7 and 10.12 of this Guide).

10.4.4 Disassembly tools or methods

Products designed for disassembly by the purchaser, potential purchaser or user of the product shall have accompanying information on disassembly tools and methods used.

A claim that a product is designed to be disassembled by the purchaser, potential purchaser or user of the product shall only be made if:

- a) specialized tools or expertise are not required; and
- b) clear information on the method of disassembly and reuse, recycling, recovery or disposal of the parts is provided.

NOTE Further guidance on provision of consumer information is given in ISO/IEC* Guide 14.

CAN/CSA-ISO 14021, Clauses 7.4.2.5 and 7.4.2.6

*International Electrotechnical Commission.

A claim is not appropriate unless conditions (a) and (b) above are met. Instructions for disassembly and information on equipment and facilities must be available to purchasers, potential purchasers, and users. If the product is to be disassembled by the purchaser, the instructions must be clear and must identify the tools required (if any are required). The following documents may be helpful in preparing instructions:

- ISO Guide 37, *Instructions for Use* (see www.iso.org); and
- CSA Special Publication PLUS 9901, *Some Assembly Required — A CSA Guide to Writing Instruction Manuals* (see www.csa.ca).

10.4.5 Evaluation methodology

See Clause 8 of this Guide and Clause 6 of CAN/CSA-ISO 14021 for further information.

10.5 Extended life product

10.5.1 Usage of term

A product designed to provide prolonged use, based on either improved durability or an upgradability feature, that results in reduced resource use or reduced waste.

CAN/CSA-ISO 14021, Clause 7.5.1

Although this claim is related to the "use" phase of the product life cycle, it is dependent on a change in the "design" phase. To make this claim, a manufacturer must have made a specific design change for the purpose of improving the durability of a product.

An extended life claim is a comparative claim and should conform to Clause 9 of this Guide, as well as the specific requirements for extended life claims. All extended life claims require an explanatory statement specifying the other products with which the product is being compared.

All claims regarding extended life shall be qualified. As extended life claims are comparative claims, the requirements of 6.3 shall be met.

Where a claim of extended life is based upon an upgradability feature, specific information on how to achieve the required upgrade shall be provided. An infrastructure to enable upgrading shall be available.

CAN/CSA-ISO 14021, Clauses 7.5.2.1 and 7.5.2.2

If the upgrade requires specialized tools, equipment, or expertise, the infrastructure must be in place to enable consumers to access this service, and this must be reflected in the claim, in accordance with Clause 10.1.3 of this Guide.

It is permissible to provide the end user with full information on the environmental benefits of a product, provided data is available to support the additional information.

Example:

Extended life product — This light bulb will last 50% longer than the comparable bulb produced by our competitors. By redesigning this product to have an extended life while you use it, we have

also been able to reduce the amount of resources used by reducing the demand for new light bulbs and the amount of waste created as fewer light bulbs will now enter the waste stream.

Extended life claims that are based on the improved durability of the product shall state the extended life period or the percentage improvement and the measured value (e.g. repetitive number of operations before breakage) or reasoning that supports the claim.

CAN/CSA-ISO 14021, Clause 7.5.2.3

Extensive records and test data will be required to support this claim. If an industry that produces products is considering such a claim, documentation of the durability of the product must be maintained.

10.5.2 Evaluation methodology

An extended life claim must not only identify the product with which the comparison is being made but also specify the feature that extends the life of the product. Point of sale information or bulletins must make it clear to the purchaser how the extended life component of the product can be obtained and installed.

Example:

"This is an extended life computer and will last twice as long as our last model" is an inappropriate claim, despite having the necessary qualifying statement for a comparative claim. This claim requires further information, such as "You can take the hard drive into any of our facilities in the Greater Vancouver area to have the upgrade that extends the life of the computer".

Example:

Electronic components frequently become outdated. Products can be made modular so that upgrade features can be added as needed. Such products may make a claim as follows: "This product is designed to have a life that is 50% longer than last year's model. Upgrade modules that extend the service life of this product are available from local retailers. The locations of stores offering this service can be obtained by calling 1-800-XXX-XXXX".

10.6 Recovered energy

10.6.1 Usage of term

A characteristic of a product that has been made using energy recovered from material or energy that would have been disposed of as waste but instead has been collected through managed processes.

NOTE In this context, the product can be the recovered energy itself.

CAN/CSA-ISO 14021, Clause 7.6.1

Many plants have begun co-generation programs in which waste materials and waste energy are recovered and used to generate energy for operation of the plant. Also, many utilities in Canada now sell power generated from recovered energy.

10.6.2 Qualifications

In order for a claim to be made that a product has been manufactured using recovered energy, the energy used shall meet the following qualifications and shall be evaluated in accordance with 7.6.3.

- a) Energy recovery from waste materials refers to the collection and conversion of waste material into useful energy. This includes any collection and conversion of waste materials from industry, home, business or public service facilities.
- b) Before a claim of recovered energy can be made, the claimant shall ensure that adverse effects on the environment resulting from this activity are managed and controlled.
- c) The type and quantity of waste that has been used for recovery shall be stated.

CAN/CSA-ISO 14021, Clause 7.6.2

If a claim is to be made that a product has been produced using recovered energy, the energy produced must meet qualifications (a), (b), and (c) above.

Evaluation shall be undertaken in accordance with clause 6. In addition, evaluation of recovered energy shall be calculated using the following method:

- a) The claim shall only be made if $R \geq E + 0$.*
- b) A claim of net recovered energy shall be expressed as follows:

$$\text{Net recovered energy (\%)} = \frac{(R - E)}{(R - E) + P} \times 100$$

where

- P is the amount of energy from primary sources used in the manufacturing process to produce the product;
- R is the amount of energy resulting from the energy recovery process;
- E is the amount of energy from primary sources used in the energy recovery process to recover or extract the recovered energy.

CAN/CSA-ISO 14021, Clause 7.6.3

*Correction of Clause 7.6.3(a) of CAN/CSA-ISO 14021: The document should read: $R - E > 0$.

The equation to be used in calculating recovered energy in order to validate and substantiate this claim is detailed in CAN/CSA-ISO 14021, Clause 7.6.3, above. The claim must be made only if there is a net environmental benefit demonstrated when the amount of energy resulting from the energy recovery process is greater than the amount of energy from primary resources used in the recovery process.

Adverse effects on the environment resulting from the production of energy from waste shall be managed and controlled before a claim of "recovered energy" can be made to ensure the claim reflects a net environmental benefit over a product's life cycle.

Recovered energy claims are designed for products produced with energy from waste or recovered energy. For example, methane gas can be recovered from the off-gassing of landfill and stored as energy.

Example:

Energy produced from agricultural waste may qualify as recovered energy provided that the energy used to transport and process the waste does not exceed the energy produced from waste.

Example:

Many forest product companies use their waste biomass to generate energy that helps to operate their plants. Wood products from such a plant could carry a claim that they are "processed using 20% recovered energy generated from X tonnes per annum of waste biomass".

10.7 Recyclable

10.7.1 Usage of term

A characteristic of a product, packaging or associated component that can be diverted from the waste stream through available processes and programmes and can be collected, processed and returned to use in the form of raw materials or products.

NOTE Material recycling is only one of a number of waste-prevention strategies. The choice of a particular strategy will depend on circumstances and account should be taken of differing regional impacts in making this choice.

CAN/CSA-ISO 14021, Clause 7.7.1

It is not enough to confirm that there are municipal or industry collection systems where the product is sold in order to make a claim of "recyclable" — there must also be facilities to process the collected materials and reuse them as an input to another product that can be marketed and used (see Clause 10.1.3 of this Guide).

When making a recycling claim, environmental impacts resulting from recycling products should be considered, including collection, transport, processing, proximity to recycling facilities, and type of material, including weight (see Clause 5.9 of this Guide).

10.7.2 Qualifications

If collection or drop-off facilities for the purpose of recycling the product or packaging are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product in the area where the product is sold, then the following shall apply.

- a) A qualified claim of recyclability shall be used.
- b) The qualified claim shall adequately convey the limited availability of collection facilities.
- c) Generalized qualifications, such as "Recyclable where facilities exist", which do not convey the limited availability of collection facilities are not adequate.

CAN/CSA-ISO 14021, Clause 7.7.2

Recycling programs are in place in most major Canadian cities. These programs do not all accept the same products. Local recycling programs can make the consumer aware of the materials they will take back for processing, and a general recyclable claim can be used as a disposal instruction on products. However, claims of recyclability should be qualified to indicate the limitation of facilities. To determine what constitutes a reasonable proportion of purchasers, potential purchasers, and users, see Clause 10.1.3 of this Guide.

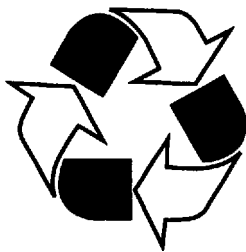
Example:*Preferred*

This container is recyclable through the blue box program in Southern Ontario and at recycling depots in Winnipeg and Edmonton.

Discouraged

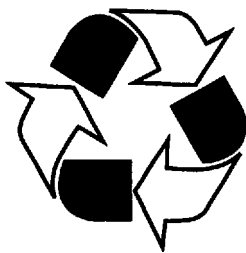
Recyclable where facilities exist.

When a recyclable claim is made, you may use the Mobius loop symbol with or without words. However, a Mobius loop without any qualifying statement would be inappropriate if infrastructure to collect, process, and remanufacture the material is not conveniently available to a reasonable proportion of purchasers, potential purchasers, and users (see Clause 10.1.3 of this Guide).

Example:

Recyclable at any XXX facility in Canada.

Material identification can be included in the explanatory statement.

Example:

This polyethylene (PETE) bottle can be recycled in blue box programs in Montreal and Toronto.

Some businesses or sectors with established private recycling programs can make "recyclable" claims for the products they recycle, provided the program is conveniently available to a reasonable proportion of purchasers, potential purchasers, and users where the products are sold. Otherwise, the "recyclable" claim must be qualified to indicate the availability of the recycling program in the specific locations where recycling programs are offered.

Example:

Used motor oil may be recyclable through retailers and dealers in participating locations. The manufacturer recycles it for resale. It is labelled "recyclable" when originally purchased and "recycled" when re-refined and resold. This claim is acceptable, even though the oil is not recyclable through conventional municipal recycling programs but is recyclable at participating stores in locations identified.

Example:

If a manufacturer of toner cartridges for laser printers establishes a recycling program to recover its cartridges exclusively through its nationwide dealership network and the company advertises its cartridges nationally as "Recyclable — Contact your local dealer for details", the "recyclable" claim should be qualified to indicate the limited availability of recycling locations (e.g., "Dealers in major metropolitan areas accept toner cartridges").

Note: *If a container is universally recyclable throughout Canada, through various curbside and drop-off depot recycling programs and processing or recycling facilities, the Mobius loop symbol may be used on the product to make the claim "recyclable". In this case, the claim may be made without the use of any qualifying statements. It would not be false or misleading to make an unqualified claim of "recyclability" if at least 50% of the population in the area where the product is sold have convenient access to these recycling facilities. If the facilities to process and reuse recycling do not exist for the majority, this claim and the use of the Mobius loop symbol on such a container could be considered false or misleading.*

Likewise, if a product is marketed and sold only in a certain region in which consumers have reasonable access to collection and processing/recycling facilities for the container or product package in question, the Mobius loop symbol may be applied, without any explanatory statement, to those products sold in that region.

10.8 Recycled content

10.8.1 Usage of terms

Recycled content and its associated terms shall be interpreted as follows:

a) **Recycled content**

Proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of terms.

1) **Pre-consumer material**

Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

CAN/CSA-ISO 14021, Clause 7.8.1.1

The requirement above is designed to limit the claim to material that has actually left the plant and been deliberately collected and reintroduced into the process. Industrial scrap, rework, and regrind, which are collected in-plant and recirculated through the production process, should not carry a "recycled" claim.

Example:

If rubber shavings from the floor of a tire manufacturer were put into the beginning of the moulding process and immediately reintroduced to the process, a claim of recycled content on the finished tires would not be appropriate as this material is considered to be "industrial scrap".

Example:

If cuttings from a cardboard box manufacturer were collected and returned to the off-site producer of the sheet cardboard for re-inclusion in the process of producing cardboard, it would be considered pre-consumer material, and a "recycled content" claim would be appropriate.

2) Post-consumer material

Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

CAN/CSA-ISO 14021, Clause 7.8.1.1

Example:

A paper mill cannot make claims for end rolls reintroduced to the process on-site. However, it can collect the office paper used in running the operation — material for which the mill operation is the end user — and count this as "post-consumer" recycled content.

Example:

Overruns of newspapers collected from retail distributors and returned to the paper mill can be counted as post-consumer recycled content, although they never actually reached the intended end user.

The claimant may identify whether recycled content is pre- or post-consumer material, but it is not required. Pre- and post-consumer content can be aggregated to provide the final percentage of recycled content or can be identified separately.

Example:

If a ream of notebook paper is composed of 20% by weight of post-consumer paper and 30% by weight of pre-consumer paper (that was generated after completion of the paper-making process, diverted from the solid waste stream, and would not normally have been reused in the original manufacturing process), the marketer of the notebook paper may claim that the product contains 50% recycled fibre or identify the specific pre-consumer and/or post-consumer content by stating that the product contains 50% total recycled fibre, including 20% post-consumer material.

b) Recycled material

Material that has been reprocessed from recovered [reclaimed] material by means of a manufacturing process and made into a final product or into a component for incorporation into a product.

c) Recovered [reclaimed] material

Material that would have otherwise been disposed of as waste or used for energy recovery, but has instead been collected and recovered [reclaimed] as a material input, in lieu of new primary material, for a recycling or a manufacturing process.

NOTE 1 A diagrammatic representation of a material recycling system is given in annex A.*

NOTE 2 For the purposes of this International Standard, the expressions "recovered material" and "reclaimed material" are treated as synonyms; however, it is recognized that, in some countries, one or other of these expressions may be preferred for this application.

Material recycling is only one of a number of waste-prevention strategies. The choice of a particular strategy will depend on circumstances and account should be taken of differing regional impacts in making this choice. Consideration shall be given to the fact that a higher percentage of recycled content does not necessarily imply a lower environmental impact. Because of this, the recycled content claim, in particular, should be used with discretion.

NOTE Attention is drawn to the requirements of 5.7 h).

CAN/CSA-ISO 14021, Clauses 7.8.1.1 and 7.8.1.2

*With regard to NOTE 1 in the above ISO reference, see Annex C of this Guide.

10.8.2 Qualifications

The percentage of recycled content can be expressed as a written statement, or as a numerical percentage in the Mobius loop or immediately adjacent to the symbol.

Where a claim of recycled content is made, the percentage of recycled material shall be stated.

The percentage recycled content for products and packaging shall be separately stated and shall not be aggregated.

CAN/CSA-ISO 14021, Clauses 7.8.2.1 and 7.8.2.2

Note: The percentage value combined with the words "recycled content" would enhance consumers' understanding of the meaning of the Mobius loop symbol. Typically, the percentage value is followed by the words (e.g., "30% recycled content").

Example:

Preferred

A garment has a hang-tag with the claim "Made from 40% recycled polyester".

Discouraged

A garment's hang-tag claims "Made from recycled polyester". Without the percentage, this claim might give the false impression that the garment is made entirely (100%) from post-consumer material (polyester), when this might not actually be the case.

10.8.3 Use of a symbol

When a claim of recycled content is made, the use of a symbol is optional.

If a symbol is used for a recycled content claim, it shall be the Mobius loop accompanied by a percentage value stated as "X%", where X is the recycled content expressed as a whole number calculated in accordance with 7.8.4. The percentage value shall be located either inside the Mobius loop or outside and immediately adjacent to the Mobius loop. Examples of acceptable locations of the percentage value are shown in Figure 2. The Mobius loop with a percentage value, stated as "X%", shall be taken to be a recycled content claim.

If the percentage recycled content is variable, it may be expressed with statements such as "at least X%", or "greater than X%".

The use of an explanatory statement is optional, subject to 5.6.

Where a symbol is used it may be accompanied by material identification.

Figure 2 — Examples of acceptable locations of percentage value when using the Mobius loop to make claims about recycled content



CAN/CSA-ISO 14021, Clause 7.8.3 and Figure 2

10.8.4 Evaluation methodology

Evaluation shall be undertaken in accordance with clause 6. In addition, recycled content shall be expressed quantitatively as a percentage, calculated as shown below. As there are no methods available for directly measuring recycled content in a product or packaging, the mass of material obtained from the recycling process, after accounting for losses and other diversions, shall be used.

$$X(\%) = \frac{A}{P} \times 100$$

where

- X is the recycled content, expressed as a percentage;
- A is the mass of recycled material;
- P is the mass of product.

CAN/CSA-ISO 14021, Clause 7.8.4.1

It is usually difficult to analyze a product in order to assess the percentage of recycled content. Therefore, the evaluation must be made using the inventory data for the process. The percentage of recycled content should be calculated using the above formula. The manufacturer must be prepared to verify the source and the quantity of recycled material with purchasing documentation and other available inventory records.

The bibliography of CAN/CSA-ISO 14021 identifies several acceptable tests for the verification of recycled content (see Annex D of this Guide).

If the percentage of recycled content is variable, it may be expressed with statements such as "at least X%" or "greater than X%" recycled content.

Example:

If the seller of paper greeting cards buys paper stock from several sources, the amount of recycled fibre in the stock varies but the cards are labelled as containing about 50% recycled fibre. The claim is appropriate because the 50% figure is based on the lowest amount of recycled material in any month of the rolling annual average. A simplified diagrammatic representation of a recycling system is provided in Annex C of this Guide.

10.9 Reduced energy consumption

10.9.1 Usage of term

Reduction in the amount of energy associated with the use of a product performing the function for which it was conceived when compared with the energy used by other products performing an equivalent function.

NOTE Claims of reduced energy consumption are commonly expressed as energy-efficient, energy-conserving or energy-saving.

CAN/CSA-ISO 14021, Clause 7.9.1

10.9.2 Qualifications and evaluation methodology

A claim of reduced energy consumption is a comparative claim and should always be accompanied by an explanatory statement (see Clause 9 of this Guide). The amount of energy to be saved should be expressed as a percentage or an absolute value, calculated according to the methods provided in CAN/CSA-ISO 14021.

Example:

Comparing the energy use of two transportation methods, such as a bicycle and an airplane, is not reasonable as they do not perform equivalent functions. A claim that a bicycle saves energy when compared with an airplane would be considered misleading.

All claims regarding reduced energy consumption shall be qualified. As reduced energy consumption is a comparative claim, the requirements of 6.3 shall be met.

Claims for reduced energy consumption shall be based on the reduction in energy consumption in the use of products and delivery of services. It shall not include reduction of energy in the processes used to manufacture the product.

Evaluation shall be undertaken in accordance with clause 6. In addition, reduced energy consumption shall be measured in accordance with established standards and methods for each product, and the average value should be calculated by statistical processing. The selection of methods shall be in accordance with 6.4.

CAN/CSA-ISO 14021, Clauses 7.9.2 and 7.9.3

Example:

A four-slice toaster should be compared with another four-slice toaster, not with a two-slice toaster, unless the verification data compare the two-slice toaster making four slices of toast and the explanatory statement clearly identifies that it was the function of making four slices of toast that was compared.

Claims of reduced energy consumption are often expressed as “energy-efficient”, “energy-conserving”, or “energy-saving”. Whichever term is used, the same rules apply.

Reduced energy consumption relates solely to the “use” phase of the life cycle of the product. It cannot be used to refer to reduced energy use in the “production” phase; a reduction at that phase of the life cycle requires a “reduced resource use” claim.

While there are no international standards for measuring energy efficiency, Canadian programs, as described in the *Energy Efficiency Act* and administered by Natural Resources Canada, are well-established and may be helpful in establishing verification data.

10.10 Reduced resource use

10.10.1 Usage of term

A reduction in the amount of material, energy or water used to produce or distribute a product or packaging or specified associated component.

CAN/CSA-ISO 14021, Clause 7.10.1

This claim refers to raw materials, as well as energy and water. Because reduced resources use claims are comparative claims, they must be presented in terms of reduction percentage and must be qualified. Clause 9 of this Guide and Clauses 5.7(n) and 6.3 of CAN/CSA-ISO 14021 detail the requirements for comparative claims.

In addition to satisfying the requirements for comparative claims, reduced resource use claims should also state the type of resource in the explanatory statement.

Resources include energy and water resources in addition to raw materials.

All claims regarding reduced resource use shall be qualified.

Reductions in resource use for products and packaging shall be separately stated and shall not be aggregated.

Reduced resource use claims shall be expressed in terms of reduction percentage (%). As reduced resource use is a comparative claim, the requirements of 6.3 shall be met.

If reduced resource use claims are made, the type of resource shall be stated in an explanatory statement.

If an increase in consumption of other resources occurs as a result of the claimed reduction of resource use, the increased resource and percentage shall be stated in an explanatory statement.

CAN/CSA-ISO 14021, Clauses 7.10.2.1 to 7.10.2.6

Clause 5.7(h) of CAN/CSA-ISO 14021 should receive special attention when making reduced resource use claims; all the environmental impacts throughout the product life cycle should be taken into consideration. This should ensure that the claim reflects a net environmental benefit and that it will meet the requirements of Clause 5.7(a) of CAN/CSA-ISO 14021.

Example:

A new process could enable an appliance to be made from thinner and lighter sheets of steel, but the production of these thinner sheets raises the process requirement for energy. In this case, the claim should state, "This product has reduced its use of steel by X% for a net environmental benefit, although energy used in production was increased by Y%".

When a resource reduction has been achieved, for an initial twelve-month period, a claim may be based on an estimated calculation of reduced resource based on the design or distribution of products or production process.

A change in resource use shall be expressed separately for each resource.

CAN/CSA-ISO 14021, Clauses 7.10.2.7 and 7.10.2.8

"Reduced resource use" is a claim that cannot be verified by testing the end product. Inventory data must be available to support any "reduced resource use" claim made.

10.10.2 Evaluation methodology

Evaluation shall be undertaken in accordance with clause 6. In addition, except as allowed for in 7.10.2.7, the consumed resource per production unit shall be obtained by dividing the gross input of resources during a twelve-month period by the gross production in the same twelve-month period. Reduced resource use rate percentage ($U\%$) shall be obtained by the following formula.

$$U(\%) = \frac{(I - N)}{I} \times 100$$

Where

- U is the reduced resource use per production unit, expressed as a percentage;
- I is the initial resource use, expressed as consumed resource per production unit;
- N is the new resource use, expressed as consumed resource per production unit.

CAN/CSA-ISO 14021, Clause, 7.10.3

This formula must be applied to each resource used in the "production" phase of the life cycle and to each increase or decrease identified in the explanatory statement. Other life cycle impacts must also be considered before determining whether a valid claim can be made.

The bibliography of CAN/CSA-ISO 14021 identifies several tests that are acceptable for the verification of reduced resource use claims (see Annex D of this Guide).

10.11 Reduced water consumption

10.11.1 Usage of term

Reduction in the consumption of water associated with the use of a product performing the function for which it was conceived when compared with the amount of water used by other products performing an equivalent function.

NOTE Claims of reduced water usage are commonly expressed as water-efficient, water-conserving or water-saving.

CAN/CSA-ISO 14021, Clause 7.11.1

10.11.2 Qualifications

All claims regarding water efficiency or reduction shall be qualified. As reduced water consumption is a comparative claim, the requirements of 6.3 shall be met.

Claims for reduced water consumption shall be based on the reduction in water consumption in the use of the product. It shall not include reduction of water in manufacturing processes of the product.

CAN/CSA-ISO 14021, Clauses 7.11.2.1 and 7.11.2.2

10.11.3 Evaluation methodology

Evaluation shall be undertaken in accordance with clause 6. In addition, water consumption shall be measured in accordance with established standards and methods for each product, and the average value should be calculated by statistical processing. The selection of methods shall be in accordance with 6.4.

CAN/CSA-ISO 14021, Clause 7.11.3

These are comparative claims and require an explanatory statement. Claims of reduced water consumption are applicable to the use phase of the life cycle of a product. Claims of reduced water usage are often expressed as "water-efficient", "water-conserving", or "water-saving". Whichever term is used to make the claim, the requirements of this clause apply.

Example:

A plumbing supply company may make a claim that "Our low-flow shower head uses less water per 15-minute shower than that produced by our competitors".

Reduced water consumption in the material extraction or production phase is covered under claims of "reduced resource use".

10.12 Reusable and refillable

10.12.1 Usage of terms

10.12.1.1 Reusable

A characteristic of a product or packaging that has been conceived and designed to accomplish within its life cycle a certain number of trips, rotations or uses for the same purpose for which it was conceived.

CAN/CSA-ISO 14021, Clause 7.12.1.1

This claim deals primarily with the "product disposal" phase of the life cycle. Claims that deal with this phase are the most common in Canada at this time.

A product that claims to be reusable must have been designed specifically with the intent that it shall be reusable.

Example:

Many rigid plastic food containers are identified as "microwaveable" and/or "dishwasher safe" as it is assumed that consumers will reuse these containers for their own purposes. A claim of "reusable" or "refillable" on these containers could be inappropriate, as they are not designed to be reused for their original purpose.

Note: *It is recognized that the term "reusable" has a wider application than is used in the Guide. This wider application would encompass product reuse for purposes other than that for which it was originally intended.*

10.12.1.2 Refillable

A characteristic of a product or packaging that can be filled with the same or similar product more than once, in its original form and without additional processing except for specified requirements such as cleaning or washing.

CAN/CSA-ISO 14021, Clause 7.12.1.2

The design of products that claim to be refillable and/or reusable must be such that they can be reused for their original purpose.

Example:

An unqualified claim of "refillable" could be made if the manufacturer sells a concentrated refill for the detergent bottle in all markets where the original bottle is sold.

Example:

Lidded hard plastic containers for baby wipes, which can be replenished with baby wipes sold in foil packages, may be marked "refillable" provided that both the rigid boxes and the foil refills are available in all markets where the product is sold.

10.12.2 Qualifications

A claim that a product or packaging is reusable or refillable shall be made only where:

- a) a programme exists for collecting the used product or packaging and reusing or refilling it;
or
- b) facilities or products exist that allow the purchaser to reuse or refill the product or package.

CAN/CSA-ISO 14021, Clause 7.12.2.2

A reusable or refillable claim can be valid only if the systems (i.e., programs for collection) or products (i.e., refillables) are in place to allow for the reuse or refilling to occur. Otherwise, the claim is not valid.

Example:

Beer bottles are sold under a deposit/return system that returns them to the producer for cleaning and refilling. These products can carry an unqualified claim of reusable/refillable as this system is almost universally available in Canada.

Example:

Some grocery stores have a system in place that allows consumers to refill special plastic soft drink bottles on site. These products can carry a reusable/refillable claim provided that the explanatory statement identifies facilities where the bottles can be refilled. A claim of "refillable at your local grocery store" could be considered misleading. The claim should read, "Refillable at Penners Grocery Stores in Manitoba, Saskatchewan, and Alberta".

Example:

Some cosmetics are sold in refillable bottles. The retail stores that sell these products have in-house systems for refilling containers that customers bring back when they are empty. These containers can be claimed to be reusable or refillable but must have an explanatory statement to inform consumers about the system. For example, the label might read, "This is a refillable container. To have this container refilled, bring it to an ABC Cosmetics in Canada".

Facilities for servicing refillable products must be conveniently available to a reasonable proportion of purchasers, potential purchasers, and users in the area in which the product is sold (see Clause 10.1.3 of this Guide). Where these facilities are not conveniently available, the claim must be qualified to adequately convey the limited availability of collection programs or facilities. It is understood that not all end users will take advantage of the reusable/refillable characteristic of these containers.

10.12.3 Evaluation methodology

Evaluation shall be undertaken in accordance with clause 6. In addition, the information referred to in 6.5 shall include evidence of the following.

- a) The product for which the claim is being made is being refilled or reused.
- b) That reuse or refilling facilities are available to accommodate the product for which the claim is being made.
- c) The facilities required to reuse or refill the product are conveniently available to a reasonable proportion of the purchasers, potential purchasers and users of the product.

CAN/CSA-ISO 14021, Clause 7.12.3

This evaluation will require the collection of statistical data and reports from those supplying the refill service. Suppliers, including manufacturers, retailers, and distributors, might need to be contacted for the collection of data to verify the claim.

Note: *It is recognized that the term "refillable" has a wider application than is used in this Guide. This broader scope of reference includes situations where it is possible to refill a container or package with similar or other products, or where other intended refill uses exist. However, if it is the purchaser's responsibility to find new ways to refill the package, or if there are no facilities or means to refill the package with the same or similar product, a refillable claim could be considered false or misleading.*

10.13 Waste reduction

10.13.1 Usage of term

Reduction in the quantity (mass) of material entering the waste stream as a result of a change in the product, process or packaging.

NOTE Waste may include discharges to air and water as well as solid waste from manufacturing or treatment processes.

CAN/CSA-ISO 14021, Clause 7.13.1

This claim can be made whenever a change in the product, process, or packaging effects a reduction in waste at any stage of the life cycle — production, distribution, use, or disposal. Consideration should be given to Clause 5.7(h) of CAN/CSA-ISO 14021 to ensure that, in reducing waste, the environmental burden is not increased in another phase of the life cycle (see Clause 5.9 of this Guide).

Waste reduction claims may include waste discharged into air and water, as well as solid waste. They can also include the waste generated in the treatment of any other waste. These claims can be made if there is a reduction in the water content of solid waste or if there is a reduction in the mass of waste due to a waste treatment process.

Example:

Companies involved in electroplating have designed innovative ways to recover metals from the solvents used in the plating process. This creates a measurable reduction in both the volume and toxicity of the waste. A claim of reduced waste may be made by the electroplating organization. The recovered metals could be used by another organization, which may then make a claim of recycled content.

10.13.2 Qualifications

Calculations of process waste reduction shall not include in-process re-utilization of materials such as rework, regrind or scrap materials generated within the process and capable of being reused within the same process that generated it.

CAN/CSA-ISO 14021, Clause 7.13.2.4

This restriction is similar to the one placed on claims about recycled content.

Waste generators who transfer wastes to other users that intend to utilize the waste for a constructive purpose, other than to put it into the waste stream, may make a claim of waste reduction.

CAN/CSA-ISO 14021, Clause 7.13.2.5

Example:

Many cities now have waste exchanges that collect solid waste from some organizations and sell it as a useful input to another organization for a different process. If waste is sold or transferred to such a waste exchange, the claim of waste reduction can be made.

Example:

Newspaper printers may return the ends of paper rolls and overruns or errors to the mill from which they buy their paper. A claim of “reduced waste” would be appropriate on these publications.

Waste reduction is a comparative claim and should meet all the requirements for making comparative claims, as outlined in Clause 9 of this Guide.

10.13.3 Evaluation methodology

Evaluation shall be undertaken in accordance with clause 6. In addition, reduced waste amount may be calculated from material balance sheets, as well as from the actual measurement of waste.

CAN/CSA-ISO 14021, Clause 7.13.3

These data must be available to provide verification of the claim for purchasers, should it be requested.

Annex A

Environmental labels and declarations, and the ISO 14000 Series

A.1 ISO 14000 overview

CAN/CSA-ISO 14001 and CAN/CSA-ISO-14004 are the standards for environmental management systems. The other documents in the CAN/CSA-ISO 14000 Series are tools designed to assist businesses with measuring and communicating their efforts to minimize their environmental impacts.

Documents in the CAN/CSA-ISO 14030 Series deal with issues of environmental performance evaluation, indicators, and reporting. The same information is sometimes required for environmental reports and for verification of environmental claims.

The CAN/CSA-ISO 14040 Series deals with the product life cycle; it covers the guiding principles of life cycle analysis, inventory, impact assessment, and interpretation, and provides some sample applications. Credible environmental labelling is dependent on an understanding of the life cycle of a product; consequently, the linkages between the 14020 and 14040 standards are very important.

ISO and IEC guides are also available to help those developing technical standards to consider the environmental aspects of products. One such guide is ISO Guide 64.

A.2 The CAN/CSA-ISO 14020 Series on environmental labels and declarations

CAN/CSA-ISO 14020: Environmental labels and declarations — General principles

- Outlines nine basic principles that are applicable to all types of environmental labels and declarations
- Does not set out specific requirements

CAN/CSA-ISO 14021: Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)

- Defines commonly used environmental claims, establishes use guidelines for the Mobius loop markings, and suggests methodologies for tests that can be used to verify these claims

CAN/CSA-ISO 14024: Environmental labels and declarations — Type I environmental labelling — Principles and procedures

- Establishes procedures to establish and operate a Type I, or eco-logo, program. Type I programs employ a third-party certification process to verify product or service compliance with a pre-selected set of criteria
- Provides guidance on developing criteria, compliance, systems, and operating procedures for awarding eco-logos for third-party verifiers

CAN/CSA-ISO 14025: Environmental labels and declarations — Type III environmental declarations

- Specifies a format for reporting quantifiable life cycle data (environmental loads, such as energy used, emissions generated, etc.)
- Describes business-to-business declarations and labels, which require independent verification of the data only, not third-party certification. Business-to-consumer declarations require third-party certification.

Annex B

Principles for all environmental labels and declarations

B.1

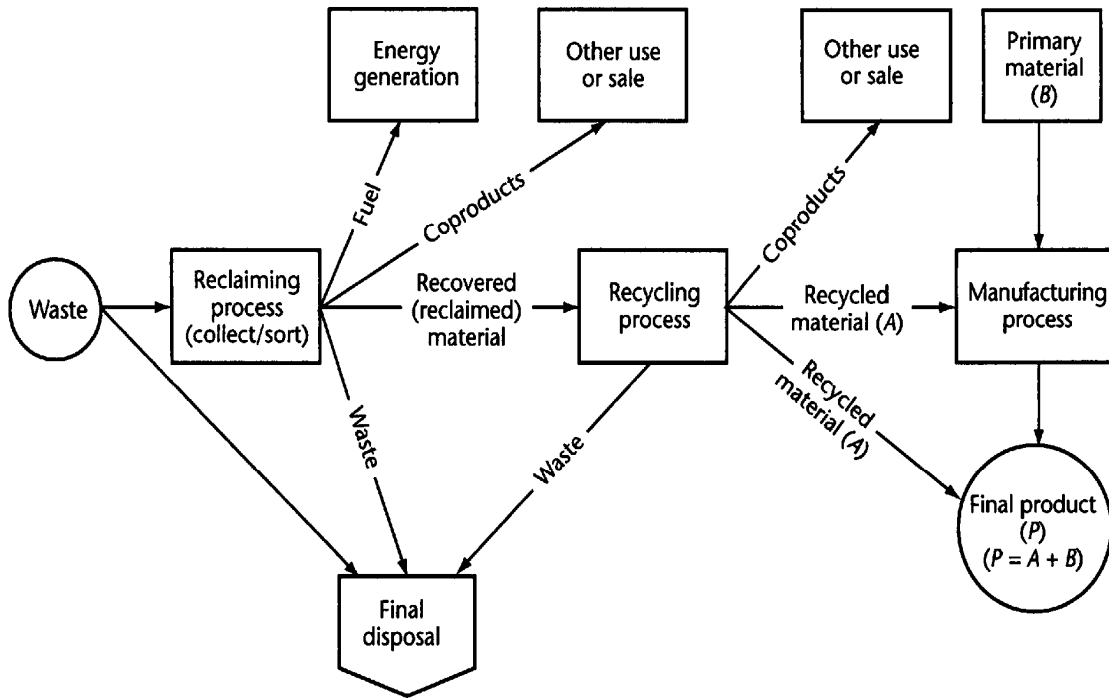
These principles are taken from CAN/CSA-ISO 14020, which provides detailed explanations for each one. Following the relevant principles is a prerequisite for all the other standards in the CAN/CSA-14020 Series.

- Environmental labels and declarations shall be accurate, verifiable, relevant, and not misleading.
- Procedures and requirements for environmental labels and declarations shall not be prepared, adopted, or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade.
- Environmental labels and declarations shall be based on scientific methodology that is sufficiently thorough and comprehensive to support the claim and that produces results that are accurate and reproducible.
- Information concerning the procedure, methodology, and any criteria used to support environmental labels and declarations shall be available and provided upon request to all interested parties.
- The development of environmental labels and declarations shall take into consideration all relevant aspects of the life cycle of the product.
- Environmental labels and declarations shall not inhibit innovation that maintains, or has the potential to improve, environmental performance.
- Any administrative requirements of information demands related to environmental labels and declarations shall be limited to those necessary to establish conformance with applicable criteria and standards of the labels and declarations.
- The process of developing environmental labels and declarations should include an open, participatory consultation with interested parties. Reasonable efforts should be made to achieve a consensus throughout the process.
- Information on the environmental aspects of products and services relevant to an environmental label or declaration shall be available to purchasers and potential purchasers from the party making the environmental label or declaration.

Annex C

Simplified diagrammatic representation of a recycling system

Source: CAN/CSA-ISO 14021



Recycled content of product $(X\%) = (A/P) \times 100$

Some recovered (reclaimed) materials may go directly to a manufacturing process, which includes the recycling process, without having a separate operation called the "Recycling process" in the system. When this is done, coproducts and waste are still likely to be generated in that manufacturing process. These coproducts and waste shall be accounted for when determining the mass of recycled material to be used in the formula for calculating recycled content.

NOTE This diagram represents a simplified example of a recycling system and is intended to provide information for clarity on recycled content calculations. For more complete examples refer to ISO/TR* 14049, *Environmental management — Life cycle assessment — Examples of application of ISO 14041*.
* Technical Report.

Annex D

Bibliography

Note: *This Annex is reproduced from CAN/CSA-ISO 14021-00.*

[1] ISO 14040:1997, *Environmental management — Life cycle assessment — Principles and framework.*

[2] ISO 14041:1998, *Environmental management — Life cycle assessment — Goal and scope definition and inventory analysis.*

[3] ISO/IEC Guide 14:1977, *Product information for consumers.*

Examples of standards for material identification symbols

References [4] through [7] give examples of standards and industry publications which deal with material identification. These are only examples and this is not intended to be an exhaustive list.

[4] ISO 11469: 1993, *Plastics — Generic identification and marking of plastics products.*

[5] IEC 61429:1995, *Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135.*

[6] Technical Bulletin No. PBI-24-1988 Revision 2, October 1, 1990 *Voluntary Guidelines — Plastic Bottle Material Code System: Mold Modification Drawings*, The Society of the Plastics Industry, Inc. (SPI).

[7] Technical Bulletin No. RPCD-13-1989 Revision 1, October 1, 1990 *Voluntary Guidelines — Rigid Plastic Container Material Code System: Mold Modification Drawings*, The Society of the Plastics Industry, Inc. (SPI).

Quality assurance of testing and claim verification data

References [8] through [11] give examples of standards which can provide useful information and guidance regarding the collection of reliable data that can then be used for claim verification. These are only examples and this is not intended to be an exhaustive list.

[8] ISO 9004-1:1994, *Quality management and quality systems elements — Part 1: Guidelines.*

[9] ISO/IEC Guide 25:1990, *General requirements for the competence of calibration and testing laboratories.*

[10] ANSVASQC E4-1994, *Specifications and guidelines for quality systems for environmental data collection and environmental technology programs.*

[11] EN 45001:1989, *General criteria for the operation of testing laboratories.*

Examples of standards for testing and claim verification

References [12] through [66] list standards and industry methods which could be considered for use when collecting various data necessary for claim verification. The list is not exhaustive and is only intended to provide an illustration of the types of standards that could be considered when selecting methods for testing and verification of self-declared environmental claims.

The methods in this list should only be used where the method chosen meets the relevant requirements set out in Clause 6 of ISO 14021, as they apply to the particular claim being made.

a) Recycled content

[12] ASTM D5663-95, *Standard Guide for Validating Recycled Content in Packaging Paper and Paperboard*.

[13] BS 7500;1995, *Specification for marking of recycled paper board*.

[14] AS 4082-1992, *Recycled paper — Glossary of terms*.

[15] PBI 27-1993, Technical Bulletin — *Protocol to Quantify Plant Usage of Recycled Plastics in Plastic Bottle Production*, The Plastic Bottle Institute.

b) Reduced resource use

[16] ASTM D5833-95, *Standard Guide for Source Reduction, Reuse, Recycling and Disposal of Steel Cans*.

[17] ASTM D5834-95, *Standard Guide for Source Reduction, Reuse, Recycling and Disposal of Solid and Corrugated Fiberboard (Cardboard)*.

c) Degradability

[18] ISO 7827:1994, *Water quality — Evaluation in an aqueous medium of the “ultimate” aerobic biodegradability of organic compounds — Method by analysis of dissolved organic carbon (DOC)*.

[19] ISO 9408:1999, *Water quality — Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium by determination of oxygen demand in a closed respirometer*.

[20] ISO 9439:1999, *Water quality — Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium — Carbon dioxide evolution test*.

[21] ISO 10707:1994, *Water quality — Evaluation in an aqueous medium of the “ultimate” aerobic biodegradability of organic compounds — Method by analysis of biochemical oxygen demand [closed bottle test]*.

[22] ISO 14851, *Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium — Method by measuring the oxygen demand in a closed respirometer*.

[23] ISO 14852, *Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium — Method by analysis of evolved carbon dioxide*.

[24] ISO 14853, *Determination of the ultimate anaerobic biodegradability of plastic materials in an aqueous medium — Method by measurement of biogas production*.

[25] ISO 14855, *Determination of the ultimate aerobic biodegradability and disintegration of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide*.

[26] OECD 301, *Guideline for testing of chemicals*.

[27] ASTM D3826-91, *Determining degradation end point in degradable polyethylene and polypropylene using a tensile test*.

- [28] ASTM D5071-91, *Standard practice for operating xenon arc type exposure apparatus with water for exposure of photodegradable plastics.*
- [29] ASTM D5208-91, *Operating fluorescent ultraviolet (UV) and condensation apparatus for exposure of photodegradable plastics.*
- [30] ASTM D5209-92, *Test method for determining the aerobic biodegradation of plastic materials in the presence of municipal sewage sludge.*
- [31] ASTM D5210-92, *Test method for determining the anaerobic biodegradation of plastic materials in the presence of municipal sewage sludge.*
- [32] ASTM D5247-92, *Test method for determining the aerobic biodegradability of degradable plastics by specific microorganisms.*
- [33] ASTM D5271-93, *Test method for determining the aerobic biodegradation of plastic materials in an activated- sludge-waste water treatment system.*
- [34] ASTM D5272-92, *Outdoor exposure testing of photodegradable plastics.*
- [35] ASTM D.5338-93, *Test method for determining aerobic biodegradation of plastic materials under controlled composting conditions.*
- [36] ASTM D5437-93, *Weathering of plastics under marine floating exposure.*
- [37] ASTM D5509-96, *Standard practice for exposing plastics to a simulated compost environment.*
- [38] ASTM D5510-94, *Standard practice for heat aging of oxidatively degradable plastics.*
- [39] ASTM D5511-94, *Standard test method for determining anaerobic biodegradation of plastic materials under high-solids anaerobic digestion conditions.*
- [40] ASTM D5512-96, *Standard practice for exposing plastics to a simulated compost environment using an externally heated reactor.*
- [41] ASTM D5525-94, *Standard practice for exposing plastics to a simulated active landfill environment.*
- [42] ASTM D5526-94, *Standard test method for determining anaerobic biodegradation of plastic materials under accelerated landfill conditions.*
- [43] ASTM D5988-96, *Standard test method for determining aerobic biodegradation with oil of plastic materials or residual plastic materials after composting.*
- [44] ASTM D6002-96, *Standard guide for assessing the compostability of environmentally degradable plastics.*
- [45] ASTM D6003-96, *Standard test method for determining weight loss from plastic materials exposed to simulated municipal solid waste (MSW) aerobic compost environment.*
- [46] DIN V 54900-2, *Testing of the compostability of plastics — Part 2: Testing of the complete biodegradability of plastics in laboratory tests.*
- [47] DIN V 54900-3, *Testing of the compostability of plastics — Part 3: Testing under practice-relevant conditions and testing of quality of the composts.*

[48] DIN V 54900-4, *Testing of the compostability of polymeric materials — Part 4: Testing of the ecotoxicity of the composts.*

d) Energy and water consumption

[49] IEC 60436, *Methods for measuring the performance of electric dishwashers.*

[50] IEC 60350, *Electric cooking ranges, hobs, ovens and grills for household use — Methods for measuring performance.*

[51] IEC 60379, *Methods for measuring the performance of electric storage water-heaters for household purposes.*

[52] IEC 60531, *Household electric thermal storage room heaters — Methods for measuring performance.*

[53] IEC 60675, *Household electric direct-acting room heaters — Methods for measuring performance.*

[54] IEC 60456, *Clothes washing machines for household use — Methods for measuring the performance.*

[55] IEC 61121, *Electric tumble dryers for household use — Methods for measuring the performance.*

[56] IEC 60530, *Methods for measuring the performance of electric kettles and jugs for household and similar use.*

[57] IEC 60661, *Methods for measuring the performance of electric household coffee makers.*

[58] IEC 60705, *Household microwave ovens — Methods for measuring performance.*

[59] ISO 7371, *Household refrigerating appliances — Refrigerators with or without low-temperature compartment — Characteristics and test methods.*

[60] ISO 8187, *Household refrigerating appliances — Refrigerator-freezers — Characteristics and test methods.*

[61] ISO 8561, *Household frost-free refrigerating appliances — Refrigerators, refrigerator-freezers, frozen food storage cabinets and food freezers cooled by internal forced air circulation — Characteristics and test methods.*

[62] ISO 5151, *Non-ducted air conditioners and heat pumps — Testing and rating for performance.*

[63] ISO 13253, *Ducted air-conditioners and air-to-air heat pumps — Testing and rating for performance.*

[64] ISO 13256 (all parts), *Water-source heat pumps — Testing and rating for performance.*

[65] ISO 15042 (all parts), *Multiple split-system air-conditioners and air-to-air heat pumps — Testing and rating for performance.*

[66] ISO 5801, *Industrial fans — Performance testing using standardized airways.*

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- la formulation proposée
- la raison de cette modification.

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