
Plastics — Environmental aspects — General guidelines for their inclusion in standards

*Matières plastiques — Aspects liés à l'environnement — Lignes
directrices générales pour leur prise en compte dans les normes*





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 14, *Environmental aspects*.

This second edition cancels and replaces the first edition (ISO 17422:2002), which has been technically revised. The changes compared to the previous edition are as follows:

- [Clause 1](#) has been revised to include “renewable resources” [item b) 6) of the Note];
- in [Clause 3](#), [3.10](#) “renewable resource” and [3.11](#) “end-of-life” have been added;
- terms and definitions formerly in [Annex A](#) have been moved to [Clause 3](#), except “life cycle impact assessment (LCIA)” which has been deleted because it is not used in the document;
- subclause [4.3.4](#) “Renewable resources and energy” has been added;
- a Note has been added to [A.4](#) to provide a new example of energy input;
- the Bibliography has been revised and updated.

Plastics — Environmental aspects — General guidelines for their inclusion in standards

1 Scope

This document provides a structure for inclusion of environmental aspects in standards for plastics products. It proposes an approach which is directed at minimizing any adverse environmental impact without detracting from the primary purpose of ensuring adequate fitness for use of the products under consideration.

The guidance provided by this document is intended primarily for use by standards writers. Over and above its primary purpose, however, this document provides guidance of value to those involved in design work and other activities where environmental aspects of plastics are being considered.

NOTE This document is intended to promote the following practices:

- a) the use of techniques for identifying and assessing the environmental impact of technical provisions in standards, and for minimizing their adverse effects;
- b) the adoption of good practices such as:
 - 1) procedures for pollution avoidance, e.g. through end-of-life options and its proper management;
 - 2) material and energy conservation in the light of the intended use (and foreseeable misuse) of the product;
 - 3) safe use of hazardous substances;
 - 4) avoidance of technically unjustifiable restrictive practices;
 - 5) promotion of performance criteria rather than exclusion clauses such as are based, for example, only on chemical composition criteria;
 - 6) use of renewable resources and minimization of the use of non-renewable resources, if the life cycle assessment shows favourable;
- c) the adoption of a balanced approach in standards development to issues such as environmental impact, product function and performance, health and safety, and other regulatory requirements;
- d) the regular review and revision of existing standards in the light of technical innovations, permitting improvement in the environmental impact of products and processes;
- e) the application of life cycle analytical approaches wherever applicable and technically justifiable.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1
design

creative activity that, based on expressed or implied needs, existing means and technological possibilities, results in the definition of technical solutions for a product that can be commercially manufactured or fabricated into prototypes

3.2
eco-profile

partial *life cycle inventory analysis* ([3.14](#)) beginning at the raw material extraction phase and ending at the point where the *plastics product* ([3.8](#)) is ready for transfer to the next operator in the supply chain

3.3
environmental aspect

element of an organization's activities, products or services that interacts or can interact with the environment

[SOURCE: ISO 14001:2015, 3.2.2]

3.4
environmental impact

change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's *environmental aspects* ([3.3](#))

[SOURCE: ISO 14001:2015, 3.2.4]

3.5
environmental provision

normative element of a standard that specifies measures for minimizing adverse environmental impact of a test method, material or product

3.6
life cycle

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

[SOURCE: ISO 14040:2006, 3.1]

3.7
life cycle assessment
LCA

compilation and evaluation of the *inputs* ([3.13](#)), *outputs* ([3.16](#)) and the potential *environmental impacts* ([3.4](#)) of a product system throughout its *life cycle* ([3.6](#))

[SOURCE: ISO 14040:2006, 3.2]

3.8
plastics product

material or combination of materials, semi-finished or finished product that is within the scope of ISO/TC 61

3.9
product standard

standard that specifies requirements to be fulfilled by a product or group of products

3.10
renewable resource

any natural resource in the form of material or energy, which is replenished or replaced on natural processes

Note 1 to entry: Renewable resource includes agricultural products, biomass, solar, wind, water, hydro power, geothermal, tidal energy and renewed biomass etc. and excludes recovered or wasted energy.