
**Packaging and the environment —
General requirements for the use of
ISO standards in the field of packaging
and the environment**

*Emballage et environnement — Exigences générales pour l'emploi des
normes ISO dans le domaine de l'emballage et l'environnement*

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Rationale and methodology — General Principles	4
4.1 Purpose.....	4
4.2 General approach.....	5
4.3 Levels of application.....	5
4.4 Assessment of environmental impact of the four heavy metals and other substances hazardous to the environment in packaging.....	6
5 Requirements	6
5.1 Selection of appropriate assessment procedures.....	6
5.2 Heavy metals and other substances hazardous to the environment.....	6
5.3 Documentation of assessment data.....	6
Annex A (informative) Partial list of the functions packaging may perform	7
Annex B (informative) An example of a form for suppliers to use for indicating that the requirements of these standards have been met	8
Bibliography	9

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 18601 was prepared by Technical Committee ISO/TC 122, *Packaging*, Subcommittee SC 4, *Packaging and environment*.

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Introduction

Packaging plays a critical role in almost every industry, every sector and every supply chain. Appropriate packaging is essential to prevent loss of goods and, as a result, decrease impact on the environment. Effective packaging makes a positive contribution towards achieving a sustainable society by, (e.g.):

- a) meeting consumers' needs and expectation for the protection of goods, safety, handling and information;
- b) efficiently using resources and limiting environmental impact;
- c) saving costs in the distribution and merchandising of goods.

An environmental assessment of packaging may include the manufacturing and distribution system, the wastage of packaging material and goods, the relevant collection systems, as well as recovery or disposal operations. This group of ISO standards and supporting reports provides a set of procedures which aim to:

- d) reduce environmental impact;
- e) support innovation in products, packaging and the supply chain;
- f) avoid undue restrictions on the use of packaging;
- g) prevent barriers and restrictions to trade.

Packaging is designed to provide a number of functions for users and producers such as: containment, protection, information, convenience, unitization, handling, delivery or presentation of goods. A major role of packaging is prevention of damage to or loss of goods. (See [Annex A](#) for a list of the functions of packaging.)

ISO 18601 defines the interrelationships within the family of ISO standards which cover the environmental impact of packaging throughout its life cycle (see [Figure 1](#)). These standards will help define whether the selected packaging can be optimized and whether the packaging needs to be modified to ensure it can be reused or recovered after use.

Demonstration that the requirements of these standards are met can be performed by a first party (manufacturer or supplier), a second party (user or purchaser), or by the support of a third party (independent body).

Public claims on the environmental attributes of packaging may be addressed by different methods. Some of these are technical aspects on reuse or recovery, others relate to access by the population to reuse or recovery systems or the amount of packaging placed on the market for recovery. This series of standards addresses the technical aspects of the packaging. It does not address the requirements of ISO 14021 needed to support a claim or label.

This International Standard does not use the term "and/or" but, instead, the term "or" is used as an inclusive disjunction, meaning one or the other or both.

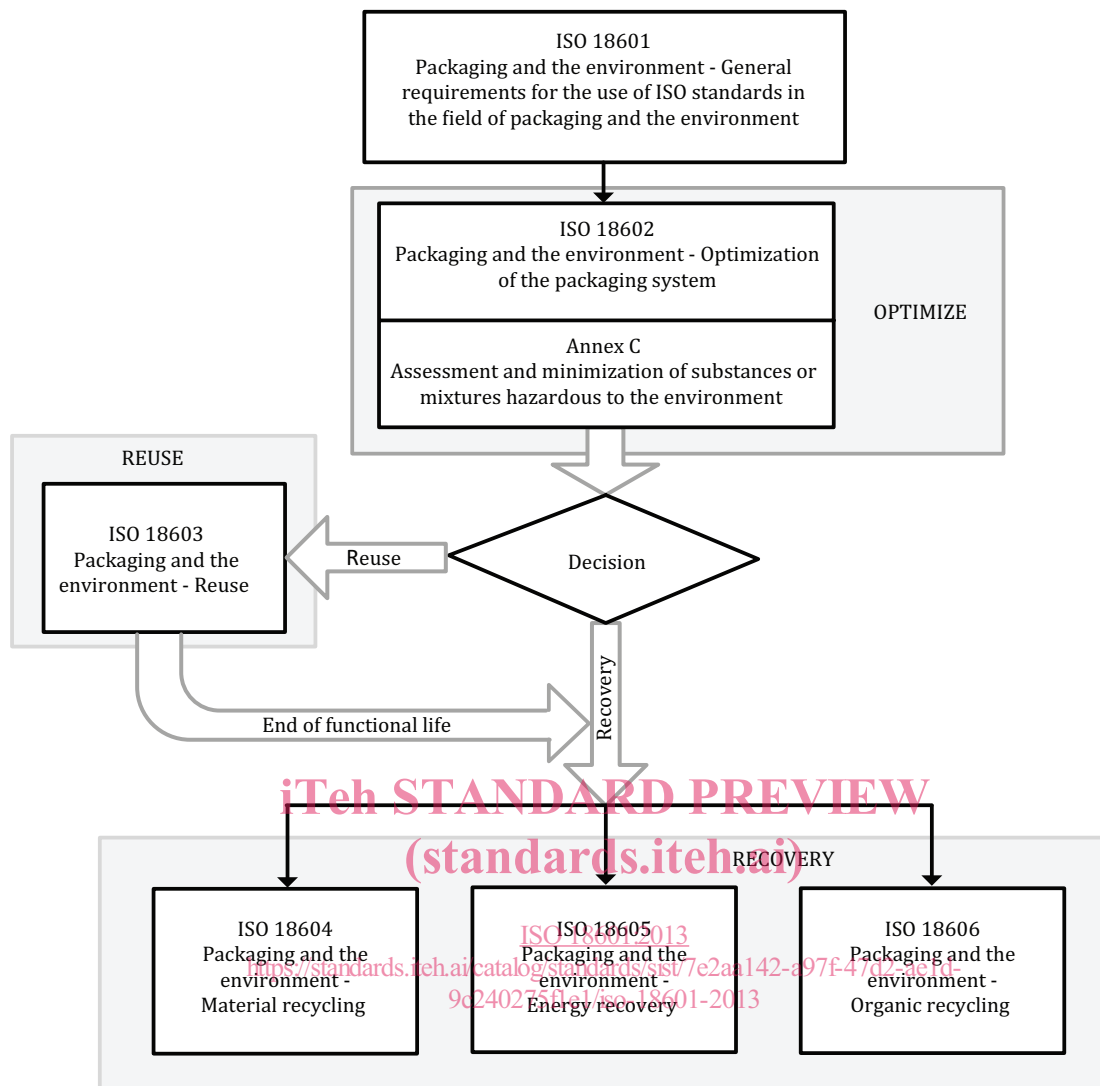


Figure 1 — Relationship of the Packaging and environment standards

Packaging and the environment — General requirements for the use of ISO standards in the field of packaging and the environment

1 Scope

This International Standard specifies requirements and procedures for the other International Standards in this series on packaging and the environment: ISO 18602, ISO 18603, ISO 18604, ISO 18605, and ISO 18606.

This International Standard is applicable to a supplier responsible for placing packaging or packaged goods on the market.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18602, *Packaging and the environment — Optimization of the packaging system*

ISO 18603, *Packaging and the environment — Reuse*

ISO 18604, *Packaging and the environment — Material recycling*

ISO 18605, *Packaging and the environment — Energy recovery*

ISO 18606, *Packaging and the environment — Organic recycling*

ISO 21067, *Packaging — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21067 and the following apply.

3.1

chemical recovery

process to recover valuable chemical substances by chemical treatment of used packaging by hydrolysis, glycolysis, methanolysis, catalytic reaction, thermal reaction, and other chemical processes - process to substitute used packaging for natural resources

Note 1 to entry: See ISO/TR 16218¹⁾.

3.2

combustion

incineration

oxidation reaction covering both organic materials and metals

Note 1 to entry: Modern incineration plants are able to generate and recover energy efficiently. The term “incineration” in normal usage means the process of reducing solid waste volume by combustion with or without energy recovery. For the purpose of this International Standard, they refer only to the incineration process with energy recovery.

[SOURCE: ISO 18605:2012, definition 3.9]

1) To be published.

ISO 18601:2013(E)

3.3

composting

aerobic process designed to produce compost

[SOURCE: ISO 18606:2012, definition 3.2]

3.4

energy recovery

production of useful energy through direct and controlled combustion

Note 1 to entry: Solid-waste incinerators producing hot water, steam or electricity are a common form of energy recovery.

[SOURCE: ISO 15270:2008, definition 3.11]

3.5

material recycling

reprocessing, by means of a manufacturing process, of a used packaging material into a product, a component incorporated into a product, or a secondary (recycled) raw material, excluding energy recovery and the use of the product as a fuel

Note 1 to entry: References to recycling in this document refer to material recycling. Other options for recycling or recovery are not considered in this document.

[SOURCE: ISO 18604:2012, definition 3.3]

3.6

organic recycling

through microbial activity, the controlled biological treatment of the biodegradable components of used packaging which produce compost and, in the case of anaerobic digestion, also methane

Note 1 to entry: Landfilling is not considered as organic recycling.
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[SOURCE: ISO 18606:2012, definition 3.9]

3.7

packaging

<product> any product to be used for the containment, protection, handling, delivery, storage, transport and presentation of goods, from raw materials to processed goods, from the producer to the user or consumer, including processor, assembler or other intermediary

[SOURCE: ISO 21067:2007, definition 2.1.1]

3.8

packaging

<operation> operations involved in the preparation of goods for containment, protection, handling, delivery, storage, transport and presentation of goods, from raw materials to processed goods, from the producer to the user or consumer

Note 1 to entry: The term includes preservation, packing, marking and unitization.

[SOURCE: ISO 21067:2007, definition 2.1.2]

3.9

pack, noun

package, noun

packaging (3.7) and its contents

[SOURCE: ISO 21067:2007, definition 2.1.3]

3.10
pack
package

create a package (3.9)

[SOURCE: ISO 21067:2007, definition 2.1.4]

3.11
packaging component

part of packaging that can be separated by hand or by using simple physical means

3.12
packaging constituent

part from which packaging or its components are made and which cannot be separated by hand or by using simple physical means

3.13
packaging optimization

process for the achievement of a minimum adequate weight or volume (source reduction) for meeting the necessary requirements of primary or secondary or transport packaging, when performance and user/consumer acceptability remain unchanged or adequate, thereby reducing the impact on the environment

[SOURCE: ISO 18602:2012, definition 3.1]

3.14
packaging system

complete set of packaging for a packaged good, encompassing one or more of the following that are applicable (depending on the packaged goods): Primary packaging, Secondary packaging, Tertiary (distribution or transport) packaging

[SOURCE: ISO 18602:2012, definition 3.6]
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3.15
packaging waste

packaging that has been used by the final consumer or end user and which is discarded for final disposal and is not intended for reuse or recovery

3.16
primary packaging

packaging (3.8) designed to come into direct contact with the product

[SOURCE: ISO 21067:2007, definition 2.2.2]

3.17
recyclable

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

[SOURCE: ISO 14021:1999, usage of term 7.7.1]

3.18
recycling process

physical or chemical process which converts collected and sorted used packaging, together in some instances with other material, into secondary (recycled) raw materials, products or substances, excluding energy recovery and the use of the product as fuel

[SOURCE: ISO 18604:2012, definition 3.5]