



Technical Report

ISO/TR 18607

Packaging and the environment — Information on environmentally conscious packaging design

*Emballage et environnement — Informations relatives à la
conception d'emballages respectueux de l'environnement*

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Basic packaging specification and design, and relationship with standards on packaging and the environment	1
5 Assessment flow and procedure of the standards on packaging and the environment	2
5.1 General requirements of the standards on packaging and the environment	2
5.1.1 General	2
5.1.2 Assessment procedure of ISO 18601	2
5.2 Optimization of packaging system	4
5.2.1 General	4
5.2.2 Assessment procedure of ISO 18602	4
5.3 Reuse	6
5.3.1 General	6
5.3.2 Assessment procedure of ISO 18603	6
5.4 Material recycling	8
5.4.1 General	8
5.4.2 Assessment procedure of ISO 18604	8
5.5 Energy recovery	9
5.5.1 General	9
5.5.2 Assessment procedure of ISO 18605	10
5.6 Organic recycling	11
5.6.1 General	11
5.6.2 Assessment procedure of ISO 18606	11
5.7 Assessment report of ISO 18601	13
Annex A (informative) Practical explanation of packaging system optimization	14
Annex B (informative) Case study of packaging system optimization - Case liquid detergent container	18
Annex C (informative) Actual case study of optimization using the ISO 18602 checklist	25
Annex D (informative) Self-assessment case study of environmentally conscious packaging design	32
Annex E (informative) Examples of assessment standards	48
Annex F (informative) Packaging system description	50
Bibliography	53

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 document 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 of 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 www.iso.org/iso/foreword.html.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

In 2013, six standards, ISO 18601 to 18606, and two technical reports, ISO/TR 16218 and ISO/TR 17098, were issued as ISO deliverables on packaging and the environment. Thereafter, national standards corresponding to the six standards ISO 18601 to ISO 18606, which are the main and important part of the deliverables, hereinafter collectively referred to as the standards on packaging and the environment, were issued in some countries, while, in Europe, European Standards (EN) served as the basis for establishing the packaging and environment standards. Under these circumstances, the standards on packaging and the environment are expected to work as international standards to be used globally.

The environmentally conscious packaging design principles laid in the standards on packaging and the environment require environmental consideration while ensuring the inherent packaging functions be maintained. For example, if the packaging reduction principle were sought excessively, it will not be possible to maintain the basic packaging function of protecting the packaged product. This would rather result in more serious burden to be inflicted on the environment.

The aim of this document is to support stakeholders in pursuing their efforts for environmentally conscious packaging design and manufacture of packaging based on the standards on packaging and the environment, and increased understanding and promotion of such design principles. Specifically, with ISO 18602, it will explain these factors clearly, using real examples. You can see the layout of this document in [Figure 1](#).

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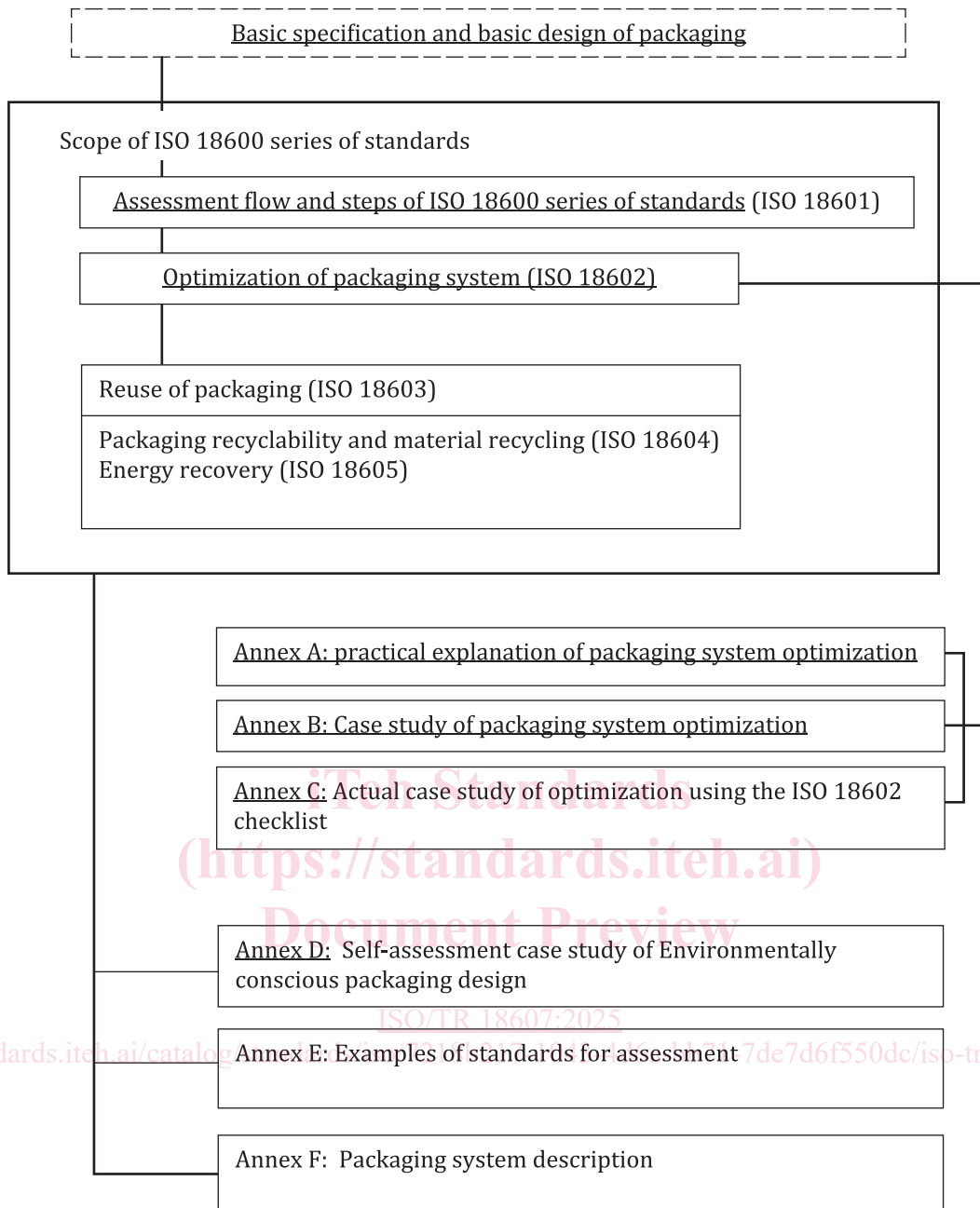


Figure 1 — Main structure of this document

NOTE 1 The scope of the standards on packaging and the environment, which this document is based on, do not include the processes for packaging basic design, including material selection, although it is necessary to review basic design specifications during designing and verification. These processes are the main factors of determining the environmental impact of the packaging. Therefore, information on these processes is described in [clause 4](#) of this document.

NOTE 2 Unless otherwise noted, the referenced clauses, figures, tables, and Annexes numbers refer to this document.

Packaging and the environment — Information on environmentally conscious packaging design

1 Scope

This document gives information on environmentally conscious packaging design based on the standards on packaging and the environment. It provides essential tips on how to improve packaging through reduction processes and includes practical examples to illustrate these points.

This document is applicable to all suppliers responsible for placing packaging or packaged goods on the market.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18601, *Packaging and the environment — General requirements for the use of ISO standards in the field of packaging and the environment*

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*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18601, ISO 18602, ISO 18603, ISO 18604, ISO 18605, and ISO 18606 apply.

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

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

4 Basic packaging specification and design, and relationship with standards on packaging and the environment

The basic packaging specifications and design are determined through various evaluations during the development phase, and the accuracy is improved by going back and re-examining the steps, if necessary, as shown in [Figure 2](#). This cyclic approach of plan-do-check-act brushes up the basic package specification and design to contribute to reducing the environmental impact of the packaging.

Key specifications, which include type of packaging, packaging materials, structure, size and dimension, closure type and functions are decided in this development phase, when companies compete for originality and their technologies. After the development phase is completed, the standards on packaging and the