First edition 2013-01-15

# Packaging and the environment — Energy recovery

Emballage et environnement — Récupération d'énergie





### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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	
2 Normative references	
3 Terms and definitions	
4 Specification of minimum net calorific value	2
5 Requirements	2
<ul> <li>6 Procedures.</li> <li>6.1 Application.</li> <li>6.2 Assessment.</li> <li>6.3 Demonstration of meeting the requirements.</li> </ul>	
Annex A (informative) Determination of calorific gain and specification of the theorem inimum net calorific value	etical 4
Annex B (informative) Derivation of a minimum net calorific value for packaging to a optimization of energy recovery in a real industrial system	
Annex C (informative) Packaging not suitable for the energy recovery process	
Annex D (informative) Example of format for the statement of meeting the requirem International Standard	ents of this 12
Annex E (informative) Completed example of format for the statement of meeting th requirements of this International Standard	e 14
Bibliography	

### 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 18605 was prepared by Technical Committee ISO/TC 122, *Packaging*, Subcommittee SC 4, *Packaging* and environment.

## 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 ISO 18601:2012, <u>Annex A</u> 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.

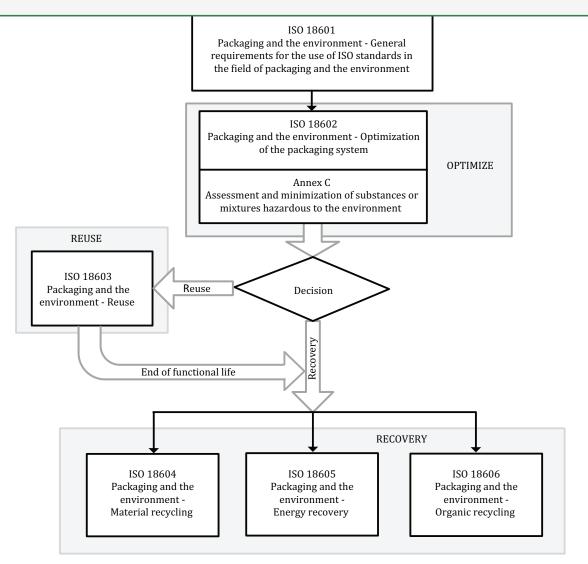


Figure 1 — Relationship of the Packaging and environment standards