

**Pakend. Ohtlike kaupade veopakend.  
Katsemeetodid.**

Packaging - Transport packaging for dangerous  
goods - Test methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 16104:2003 sisaldab Euroopa standardi EN ISO 16104:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 16104:2003 consists of the English text of the European standard EN ISO 16104:2003.</p> <p>This document is endorsed on 14.08.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This Standard specifies the design type test requirements for packagings as described in 3.6 of this standard and intended for use in the transport of dangerous goods</p>	<p><b>Scope:</b> This Standard specifies the design type test requirements for packagings as described in 3.6 of this standard and intended for use in the transport of dangerous goods</p>
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**ICS** 13.300, 55.020

**Võtmesõnad:**

**English version**

Packaging

**Transport packaging for dangerous goods**

Test methods

(ISO 16104 : 2003)

Emballage – Emballage de transport  
pour marchandises dangereuses –  
Méthodes d'essai (ISO 16104 : 2003)

Verpackung – Verpackungen zur  
Beförderung gefährlicher Güter –  
Prüfverfahren (ISO 16104 : 2003)

This European Standard was approved by CEN on 2002-06-07.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

This document (EN ISO 16104:2003) has been prepared by Technical Committee CEN/TC 261, "Packaging", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 122 "Packaging".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2003, and conflicting national standards shall be withdrawn at the latest by November 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present standard are normative only when the standards themselves are referred to in the RID and/or in the technical annexes of the ADR.

Annexes A, B, D and F are informative.

Annexes C, E and G are normative.

This standard includes a Bibliography.

## Introduction

This Standard was developed to provide requirements and test procedures to meet the multi-modal United Nations Recommendations on the Transport of Dangerous Goods [1] and successful passing of the tests may lead to the allocation of an appropriate packaging mark (e.g. UN, RID/ADR). The UN Recommendations have been developed by the United Nations Committee of Experts on the Transport of Dangerous Goods as a "model regulation" (referred to in this document as the UN Recommendations) in the light of technical progress, the advent of new substances and materials, the exigencies of modern transport systems and, above all, the need to ensure the safety of people, property and the environment. Amongst other aspects, the UN Recommendations cover principles of classification and definition of classes, listing of the principal dangerous goods, general packing requirements, testing procedures, marking, labelling or placarding, and shipping documents. There are in addition special recommendations related to particular classes of goods.

The UN Recommendations are given legal entity by the provisions of a series of international modal agreements and national legislation for the transport of dangerous goods. The international agreements include:

- The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) (covering most of Europe). [2]
- Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) (covering most of Europe, parts of North Africa and the Middle East). [3]
- The International Maritime Dangerous Goods Code (IMDG Code) (worldwide). [4]
- The International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TIs) (worldwide). [5]

The application of this Standard will need to take account of the requirements of these international agreements and the relevant national regulations for domestic transport of dangerous goods.

Occasionally during adoption as a modal regulation the text has been modified; RID/ADR permit some variations to tests for light gauge metal packagings and these are included in annex A.

The cross references between this Standard, the UN Recommendations and the International Agreements are summarized in annex B.

It is important to note that there will be certain modal differences from the UN Recommendations and that the schedule for revision of the Recommendations and modal provisions may lead to temporary inconsistencies with this Standard, which is regularly updated to the latest version of the UN Recommendations.

It is noted that success in the tests and the allocation of an official UN mark do not on their own authorize the use of a packaging for any dangerous goods, which are subject to the packing instructions published in the various modal regulations.

This Standard is based on Revision 12 of the UN Recommendations.

## 1 Scope

This Standard specifies the design type test requirements for packagings as described in 3.6 of this standard and intended for use in the transport of dangerous goods.

NOTE This Standard should be used in conjunction with one or more of the international regulations set out in the Bibliography.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 22206, *Packaging — Complete filled transport packages — Identification of parts when testing* (ISO 2206:1987)

ISO 2137, *Petroleum products — Lubricating grease and petroleum — Determination of cone penetration*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

EN ISO 2431, *Paints and varnishes - Determination of flow time by use of flow caps* (ISO 2431:1993, including Technical Corrigendum 1:1994)

## 3 Terms and definitions

For the purposes of this European Standard the following terms and definitions apply.

### 3.1 competent authority

any national regulatory body or authority designated or otherwise recognized as such for any purpose in connection with the regulations specified in the Bibliography

### 3.2 packaging design type

packaging of one design, size, material and thickness, manner of construction and packing, but may include various surface treatments together with packagings which differ from the design type only in their lesser design height

### 3.3 liquids and solids

(see annex B)