

**Packaging - Complete, filled transport packages and unit loads - Impact test by rotational drop**

Packaging - Complete, filled transport packages and unit loads Impact test by rotational drop

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14149:2003 sisaldab Euroopa standardi EN 14149:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.09.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14149:2003 consists of the English text of the European standard EN 14149:2003.</p> <p>This document is endorsed on 17.09.2003 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 European Standard specifies methods for carrying out a rotational impact test on complete, filled transport packages or unit loads, by dropping. It can be performed either as a single test to investigate the effects of rotational impact or as part of a sequence of tests designed to measure the ability of a package or unit load to withstand a distribution system that includes a rotational impact hazard</p>	<p><b>Scope:</b> This European Standard specifies methods for carrying out a rotational impact test on complete, filled transport packages or unit loads, by dropping. It can be performed either as a single test to investigate the effects of rotational impact or as part of a sequence of tests designed to measure the ability of a package or unit load to withstand a distribution system that includes a rotational impact hazard</p>
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**Võtmesõnad:** means of packaging, packages, packaging, packaging tests, packing, parcels, resistance, shipping containers, shipping packages, strength of materials, test equipment, test reports, testing, testing devices, tests, tilt, transport packing, unit load devices

ICS 55.180.40

English version

**Packaging - Complete, filled transport packages and unit loads -  
Impact test by rotational drop**

Emballages - Emballages d'expédition et charges unitaires  
complets et pleins - Essai de choc par chute par  
basculement

Verpackung - Versandfertige Packstücke und  
Ladeeinheiten - Vertikale Stoßprüfung durch Kippen

This European Standard was approved by CEN on 10 July 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Contents

	Page
Foreword.....	3
1 Scope .....	4
2 Normative reference(s).....	4
3 Terms and definitions.....	4
4 Principle.....	4
5 Apparatus .....	4
6 Test item preparation .....	5
7 Conditioning.....	5
8 Procedure .....	5
9 Test report .....	9
Bibliography .....	11

## Foreword

This document (EN 14149:2003) has been prepared by Technical Committee CEN/TC 261, "Packaging", the secretariat of which is held by AFNOR.

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 February 2004, and conflicting national standards shall be withdrawn at the latest by February 2004.

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, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard specifies methods for carrying out a rotational impact test on complete, filled transport packages or unit loads, by dropping. It can be performed either as a single test to investigate the effects of rotational impact or as part of a sequence of tests designed to measure the ability of a package or unit load to withstand a distribution system that includes a rotational impact hazard.

## 2 Normative reference(s)

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 revision 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)*

EN ISO 2233, *Packaging - Complete, filled transport packages and unit loads - Conditioning for testing (ISO 2233:2000)*

## 3 Terms and definitions

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

### 3.1

#### test item

complete, filled transport package or unit load

## 4 Principle

One edge or corner of the test item is raised to a predetermined height above a rigid impact surface, the opposite edge or corner resting either on the impact surface, or on one or two blocks of specified height. The test item is then released to fall freely and impact the rigid impact surface.

## 5 Apparatus

### 5.1 Lifting arrangement

Equipment to raise an edge or corner of the test item to the test height within  $\pm 2\%$  and support it in a stable position for the test.

### 5.2 Means of holding the test item

A means of holding the test item prior to release in its predetermined attitude.

### 5.3 Release mechanism

Release mechanism, to release the test item in such a way that its free fall is not obstructed by any part of the apparatus before striking the impact surface.

### 5.4 Supporting blocks

Rigid block(s) of suitable height(s) for supporting edges or corners as required.