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# Structural adhesives - Determination of dynamic resistance to cleavage of high strength adhesive bonds under impact conditions - Wedge impact method

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### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 11343:2005 sisaldab Euroopa standardi EN ISO 11343:2005 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11343:2005 consists of the English text of the European standard EN ISO 11343:2005.		
Käesolev dokument on jõustatud 22.06.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 22.06.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.		
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.		
Käsitlusala:	Scope:		
This International Standard specifies a dynamic impact wedge method for the determination of the cleavage resistance under impact loading of high-strength adhesive bonds between two metallic adherends, when tested under specified conditions of preparation and testing. This test procedure does not provide design information.	This International Standard specifies a dynamic impact wedge method for the determination of the cleavage resistance under impact loading of high-strength adhesive bonds between two metallic adherends, when tested under specified conditions of preparation and testing. This test procedure does not provide design information.		

ICS 83.180

**Võtmesõnad:** impact testin, keys (engineering), keys-and keyways, metal bond, metal producing and working industries, motorcar industry, peel resistance, scutchers, scutchers (picking), shock resistance, splitting resistance, structural adhesives, testing, testing devices

# EUROPEAN STANDARD NORME EUROPÉENNE

# **EN ISO 11343**

**EUROPÄISCHE NORM** 

May 2005

ICS 83,180

Supersedes EN 14493:2002

English version

## Adhesives - Determination of dynamic resistance to cleavage of high-strength adhesive bonds under impact conditions - Wedge impact method (ISO 11343:2003)

Adhésifs - Détermination de la résistance dynamique au clivage de joints collés à haute résistance soumis aux conditions d'impact - Méthode d'impact au coin (ISO 11343:2003)

Klebstoffe - Bestimmung des dynamischen Keil-Schlag-Widerstandes von hochfesten Klebungen unter Schlagbelastung - Keil-Schlag-Verfahren (ISO 11343:2003)

This European Standard was approved by CEN on 29 April 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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

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#### EN ISO 11343:2005 (E)

#### Foreword

The text of ISO 11343:2003 has been prepared by Technical Committee ISO/TC TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11343:2005 by Technical Committee CEN/TC 193 "Adhesives", the secretariat of which is held by AENOR.

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 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

This document supersedes EN 14493:2002.

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

#### **Endorsement notice**

The text of ISO 11343:2003 has been approved by CEN as EN ISO 11343:2005 without any modifications.

#### Safety:

Persons using this standard shall be familiar with normal laboratory practice. This standard does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user to establish safety and health practices and to ensure compliance with any European or national regulatory conditions.

# **INTERNATIONAL STANDARD**



Second edition 2003-04-01

# Adhesives — Determination of dynamic resistance to cleavage of high-strength adhesive bonds under impact conditions — Wedge impact method

Adhésifs — Détermination de la résistance dynamique à un clivage de β à ha. Jimpact. joints collés à haute résistance soumis aux conditions d'impact — Méthode d'impact au coin

Reference number ISO 11343:2003(E)

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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 11343 was prepared by Technical Committee ISO/TC 61, Plastics, Subcommittee SC 11, Products.

This second edition cancels and replaces the first edition (ISO 11343:1993), which has been technically revised.

## Adhesives — Determination of dynamic resistance to cleavage of high-strength adhesive bonds under impact conditions — Wedge impact method

#### 1 Scope

This International Standard specifies a dynamic impact wedge method for the determination of the cleavage resistance under impact loading of high-strength adhesive bonds between two metallic adherends, when tested under specified conditions of preparation and testing. This test procedure does not provide design information.

The method allows a choice of sheet metal substrate corresponding to those materials frequently used in industry, e.g. for automotive applications.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 291:1997, Plastics — Standard atmospheres for conditioning and testing

ISO 10365:1992, Adhesives — Designation of main failure patterns

EN 13887:—<sup>1)</sup>, Structural adhesives — Guidelines for surface preparation of metals and plastics prior to adhesive bonding

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

#### dynamic resistance to cleavage

force per unit width necessary to bring an adhesive joint to the point of failure by means of a stress applied by a wedge moving between the two substrates of the joint, and thus separating the adherends in a peeling mode

NOTE It is expressed in kilonewtons per metre.

<sup>1)</sup> To be published.