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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 13445

June 2006

ICS 83.180

English Version

**Adhesives - Determination of shear strength of adhesive bonds
between rigid substrates by the block-shear method (ISO
13445:2003)**

Adhésifs - Détermination de la résistance au cisaillement
de joints collés entre éléments rigides par la méthode de
cisaillement entre blocs massifs (ISO 13445:2003)

Klebstoffe - Bestimmung der Scherfestigkeit von
Klebungen zwischen starren Werkstoffen nach dem
Blockscherverfahren (ISO 13445:2003)

This European Standard was approved by CEN on 25 May 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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

EN ISO 13445:2006 (E)

Foreword

The text of ISO 13445:2003 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13445:2006 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of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 13445:2003 has been approved by CEN as EN ISO 13445:2006 without any modifications.

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INTERNATIONAL STANDARD

ISO
13445

Second edition
2003-04-01

Adhesives — Determination of shear strength of adhesive bonds between rigid substrates by the block-shear method

*Adhésifs — Détermination de la résistance au cisaillement de joints
collés entre éléments rigides par la méthode de cisaillement entre blocs
massifs*

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ISO 13445:2003(E)**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 13445 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 13445:1995), which has been technically revised.

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Adhesives — Determination of shear strength of adhesive bonds between rigid substrates by the block-shear method

1 Scope

This International Standard specifies a method for the determination of the shear strength of adhesives used to bond materials with elastic moduli higher than the elastic modulus of the adhesive. The method provides an estimate of the shear strength of an adhesive on various machinable and non-machinable substrate materials.

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 7500-1:—¹⁾, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

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

EN 13887:—²⁾, *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

shear stress

force applied parallel to a flat adhesive joint, divided by the bond area of the joint

3.2

shear strength

maximum shear stress sustained by an adhesive joint during a shear test

1) To be published. (Revision of ISO 7500-1:1999)

2) To be published.