

Adhesives - Determination of dynamic resistance to cleavage of high-strength adhesive bonds under impact wedge conditions - Wedge impact method (ISO 11343:2019)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 11343:2019 sisaldab Euroopa standardi EN ISO 11343:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11343:2019 consists of the English text of the European standard EN ISO 11343:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.07.2019.	Date of Availability of the European standard is 10.07.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 83.180

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EUROPEAN STANDARD

**EN ISO 11343**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Adhesives - Determination of dynamic resistance to  
cleavage of high-strength adhesive bonds under impact  
wedge conditions - Wedge impact method (ISO  
11343:2019)**

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 11343:2019)

Klebstoffe - Bestimmung des dynamischen Keil-Schlag-  
Widerstandes von hochfesten Klebungen unter  
Keilschlagbelastung - Keil-Schlag-Verfahren (ISO  
11343:2019)

This European Standard was approved by CEN on 11 June 2019.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## European foreword

This document (EN ISO 11343:2019) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 193 "Adhesives" the secretariat of which is held by UNE.

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of an identical text or by endorsement, at the latest by January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11343:2005.

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## Endorsement notice

The text of ISO 11343:2019 has been approved by CEN as EN ISO 11343:2019 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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

This third edition cancels and replaces the second edition (ISO 11343:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

- a) added new terms and definitions;
- b) explicitly included usage of different test machines in apparatus;
- c) added Note regarding signal filtering;
- d) added representative points in force-time figures;
- e) minor editorial changes.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

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

## 1 Scope

This document specifies a dynamic impact wedge method for the determination of the cleavage resistance under impact loading of high-strength adhesive bonds between two 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 or fibre reinforced plastic substrates corresponding to those materials frequently used in industry, such as for automotive applications.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Plastics — Standard atmospheres for conditioning and testing*

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

EN 13887, *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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 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 cleaving mode

Note 1 to entry: The dynamic resistance to cleavage is expressed in kilonewtons per metre.

### 3.2

#### **cracking force**

maximum force after which the force falls to a plateau

Note 1 to entry: The cracking force is expressed in newtons.

Note 2 to entry: Typically, it is also the highest force measured. It characterizes the beginning of cracking.