Determination of the maximum open time for thermoplastic wood adhesives for non-structural di. applications



# **EESTI STANDARDI EESSÕNA**

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Standard on kättesaadav Eesti Standardikeskuses	The standard is available from the Estonian Centre for Standardisation.	
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Standard on jõustunud sellekohase tea avaldamisega EVS Teatajas.	te This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.	
See Eesti standard EVS-EN 16556:2014 sisaldab Euroopa standardi EN 16556:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 16556:2014 consists of the English text of the European standard EN 16556:2014.	

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ICS 83.180

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# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN 16556** 

November 2014

ICS 83.180

# **English Version**

# Determination of the maximum open time for thermoplastic wood adhesives for non-structural applications

Détermination du temps ouvert maximal des adhésifs thermoplastiques pour bois pour applications non structurales

Bestimmung der maximalen offenen Wartezeit bei thermoplastischen Holzklebstoffen für nicht tragende Anwendungen

This European Standard was approved by CEN on 20 September 2014.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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# **Foreword**

This document (EN 16556:2014) has been prepared 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 May 2015 and conflicting national standards shall be withdrawn at the latest by May 2015.

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

#### Safety statement

Persons using this document should be familiar with the normal laboratory practice, if applicable. This document cannot address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

#### **Environmental statement**

It is understood that some of the material permitted in this standard can have negative environmental impact. As technological advantages lead to better alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, it is recommended that the user of the standard take care to carry out an appropriate disposal of the wastes, according to local regulation.

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

# 1 Scope

This European Standard defines the test method for the determination of the maximum open time for thermoplastic wood adhesives for non-structural applications by tensile shear strength. It is carried out on standardized test pieces glued with increasing open times.

# 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 923, Adhesives - Terms and definitions

EN 1067, Adhesives - Examination and preparation of samples for testing

EN ISO 15605, Adhesives - Sampling (ISO 15605)

ISO 5893, Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923 and the following apply.

# 3.1

#### maximum open time

the longest time within which two wooden adherends, where the adhesive is applied, can remain decoupled ensuring a tensile force value  $\geq$  10 N/mm<sup>2</sup> and a wood failure > 0 %

Note 1 to entry: The open time is expressed in minutes (min).

## 4 Symbols and abbreviations

- A bonded test surface, in square millimetres (mm²);
- a thickness of bond-line, in millimetres (mm);
- $\alpha$  angle between growth ring and surfaces to be bonded, in grades ( $^{\circ}$ );
- b width of test piece, in millimetres (mm);
- $F_{\text{max}}$  the applied load at failure, in Newton (N);
- $l_1$  length of test piece, in millimetres (mm);
- length of overlap (length of tested surface), in millimetres (mm);
- s thickness of the panels, in millimetres (mm);
- $\tau$  shear strength, in Newton (N).

# 5 Sampling

Samples of the adhesive shall be taken according to EN ISO 15605 and prepared for testing according to EN 1067.