

**Adhesives for load bearing timber structures - Test methods - Part 5:
Determination of conventional pressing time**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15416-5:2006 sisaldab Euroopa standardi EN 15416-5:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 20.09.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15416-5:2006 consists of the English text of the European standard EN 15416-5:2006.</p> <p>This document is endorsed on 20.09.2006 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>Käsitlusala: This document specifies a method of determining the conventional pressing time at three temperatures and three wood moisture contents.</p>	<p>Scope: This document specifies a method of determining the conventional pressing time at three temperatures and three wood moisture contents.</p>
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ICS 83.180

Võtmesõnad:

ICS 83.180

English Version

Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 5: Determination of conventional pressing time

Adhésifs pour structures portantes en bois de type autre que phénolique et aminoplaste - Méthodes d'essai - Partie 5 : Détermination de la durée conventionnelle sous pression

Klebstoffe für tragende Holzbauteile ausgenommen Phenolharzklebstoffe und Aminoplaste - Prüfverfahren - Teil 5: Bestimmung der Mindestpresszeit

This European Standard was approved by CEN on 18 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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Foreword

This document (EN 15416-5:2006) 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 February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

This document is one of a series dealing with test methods for adhesives for use in load bearing timber structures. The document is published in support of Eurocode 5, Common unified rules for timber structures. The series consists of seven test methods to assess the performance of adhesives after specified heat and humidity treatments:

EN 302-1, Adhesives for load-bearing timber structures – Test methods – Part 1: Determination of bond strength in longitudinal tensile shear strength;

EN 302-2, Adhesives for load-bearing timber structures - Test methods - Part 2: Determination of resistance to delamination;

EN 302-3, Adhesives for load-bearing timber structures - Test methods - Part 3: Determination of the effect of acid damage to wood fibres by temperature and humidity cycling on the transverse tensile strength;

EN 302-4, Adhesives for load-bearing timber structures - Test methods - Part 4: Determination of the effects of wood shrinkage on the shear strength;

prEN 15416-1, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 1: Static load test of single bondline specimens in compression shear;

prEN 15416-2, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 2: Static load test of multiple bondline specimens in compression shear;

prEN 15416-3, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 3: Creep deformation test at cyclic climate conditions with specimens loaded in bending shear;

and two test methods to characterize the working properties of the adhesive:

EN 15416-4, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods- Part 4: Determination of open assembly time for one component polyurethane adhesives;

EN 15416-5, Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 5: Determination of conventional pressing time.

Requirements for the adhesives are stated in other standards, for instance requirements for one component polyurethane adhesives for load bearing timber structures are given in prEN 15425.

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.

SAFETY STATEMENT

Persons using this document should be familiar with the normal laboratory practice, in principle. This document does not purport to 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.

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1 Scope

This document specifies a method of determining the conventional pressing time at three temperatures and three wood moisture contents.

This document is intended to determine the conventional pressing time for one component polyurethane adhesives using a defined procedure for obtaining a reliable base for comparison of conventional pressing time between adhesives. The method gives a result that cannot be applied to the safe manufacture of timber structures without taking into account the influence of factors such as timber density/moisture content, factory temperature and relative air humidity.

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.

EN 302-1:2004, *Adhesives for load bearing timber structures - Test methods - Part 1: Determination of bond strength in longitudinal tensile shear strength*

EN 923:2005, *Adhesives – Terms and definitions*

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 definitions given in EN 923:2005 and the following apply.

3.1

conventional pressing time

shortest pressing time (expressed as the mean of 10 individual results) that gives tensile shear strength of at least 4 N/mm² at a given temperature and wood moisture content with the test procedure being that described in this standard.

4 Principle

Standard beech lap joints are tested in tensile shear after various curing times until it is found that a shear strength of at least 4 N/mm² is achieved at a given temperature and wood moisture content.

5 Apparatus

5.1 Climate cabinets

Climatic cabinet capable of maintaining a temperature of (20 ± 2) °C and a relative humidity of (50 ± 5) %, (65 ± 5) % or (75 ± 5) % to enable conditioning of the beech panels to a wood moisture content of 9 %, 12 % or 15 % respectively.

Temperature cabinets capable of maintaining air temperature of (15 ± 2) °C, (20 ± 2) °C and (30 ± 2) °C respectively.