

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

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 302-1:2004 sisaldab Euroopa standardi EN 302-1:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 26.10.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 302-1:2004 consists of the English text of the European standard EN 302-1:2004.</p> <p>This document is endorsed on 26.10.2004 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:</p> <p>This part of EN 302 specifies a method of determining the shear strength of adhesive bonds. It is applicable to adhesives used in load-bearing timber structures. This method is not intended for use to provide numerical design data, nor is it applicable to the assessment of adhesives for the manufacture of wood-based panels.</p>	<p>Scope:</p> <p>This part of EN 302 specifies a method of determining the shear strength of adhesive bonds. It is applicable to adhesives used in load-bearing timber structures. This method is not intended for use to provide numerical design data, nor is it applicable to the assessment of adhesives for the manufacture of wood-based panels.</p>
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ICS 83.180

Võtmesõnad: aminoplastid, fenoplastid, liimid, liimühendused, nihketeimid, nihketugevus, puittarind, ühendamine

English version

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

Adhésifs pour structures portantes en bois - Méthodes
d'essai - Partie 1: Détermination de la résistance du joint au
cisaillement en traction longitudinale

Klebstoffe für tragende Holzbauteile - Prüfverfahren - Teil 1:
Bestimmung der Längszugscherfestigkeit

This European Standard was approved by CEN on 16 April 2004.

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.



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Foreword

This document (EN 302-1:2004) 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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document supersedes EN 302-1:1992.

EN 301 and EN 302 Parts 1 to 4 and Parts 6 and 7 have the following titles.

EN 301 *Adhesives, phenolic and aminoplastic, for load-bearing timber structures — Classification and performance requirements*

EN 302 *Adhesives for load-bearing timber structures — Test methods —*

Part 1: *Determination of bond strength in longitudinal tensile shear strength*

Part 2: *Determination of resistance to delamination (Laboratory method)*

Part 3: *Determination of the effect of acid damage to wood fibres by temperature and humidity cycling on the transverse tensile strength*

Part 4: *Determination of the effects of wood shrinkage on the shear strength*

Part 6: *Determination of the conventional pressing time*

Part 7: *Determination of the conventional working life*

ENV 302-5:2001 has the title '*Adhesives for load-bearing timber structures — Test methods — Part 5: Determination of the conventional assembly time*'.

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.

1 Scope

This part of EN 302 specifies a method of determining the shear strength of adhesive bonds. It is applicable to adhesives used in load-bearing timber structures.

This method is not intended for use to provide numerical design data, nor is it applicable to the assessment of adhesives for the manufacture of wood-based panels.

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 301, *Adhesives, phenolic and aminoplastic — for load-bearing timber structures: Classification and performance requirements.*

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

3 Principle

The shear strength of adhesive bonds is determined by applying a longitudinal tensile force to a single lap joint with thin and thick glue lines between two rectangular wooden adherends made of beech (*Fagus sylvatica* L). The joints are strained to rupture.

4 Safety

Persons using this standard shall be familiar with normal laboratory practice.

This document does not purport to address all the safety problems, if any, associated with its use.

It is responsibility of the user to establish health and safety practices and to ensure compliance with any European and national regulatory conditions.

5 Apparatus

The testing machine shall be either:

- a) a constant rate of loading machine, capable of maintaining a rate of loading of $(2,0 \pm 0,5)$ kN/min; or
- b) a constant rate of traverse machine as described in ISO 5893.

The jaws of the testing machine shall grip the test pieces with a wedge action, ensure self-aligning of the test piece and prevent slippage during loading.