

Adhesives - Wood-to-wood adhesive bonds for
non-structural applications - Determination of shear
strength by compressive loading

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 17618:2021 sisaldab Euroopa standardi EN 17618:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 17618:2021 consists of the English text of the European standard EN 17618:2021.
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English Version

Adhesives - Wood-to-wood adhesive bonds for non-structural applications - Determination of shear strength by compressive loading

Adhésifs - Joints collés de bois à bois à usages non structuraux - Détermination de la résistance au cisaillement par effort de compression

Klebstoffe - Holz-auf-Holz-Klebverbindungen für nicht tragende Anwendungen - Bestimmung der Scherfestigkeit durch Druckbelastung

This European Standard was approved by CEN on 3 October 2021.

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European foreword

This document (EN 17618:2021) has been prepared by 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of an identical text or by endorsement, at the latest by May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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Introduction

The test method described in this document can be used for the determination of shear strength, wood failure percentage of bonded assemblies with the aim of defining working properties of adhesives. It will allow considerable improvement in consumer protection in any future product liability system with regard to properties guaranteed by the adhesive manufacturer.

1 Scope

This document specifies a method for adhesives for wood and derived solid wood products for determining the shear strength and wood failure percentage of wood-to-wood adhesive bonds loaded in compression. These parameters allow to define different working properties of adhesives (e.g. final bond strength, pressing time, closed assembly time).

Annex A gives information required prior to testing.

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.

EN 923, *Adhesives - Terms and definitions*

EN 13183-1, *Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method*

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

EN ISO 7500-1:2018, *Metallic materials - Calibration and verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Calibration and verification of the force-measuring system (ISO 7500-1:2018)*

ISO 13061-2, *Physical and mechanical properties of wood - Test methods for small clear wood specimens - Part 2: Determination of density for physical and mechanical tests*

ISO 13061-6, *Physical and mechanical properties of wood - Test methods for small clear wood specimens - Part 6: Determination of ultimate tensile stress parallel to grain*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923 and the following 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 <https://www.electropedia.org/>

3.1

thin bond line

close contact adhesive joint where the adhesive layer is nominally 0,1 mm thick

3.2

shear strength

force per surface units necessary to bring an adhesive joint to the point of failure by means of forces applied in a shear mode

[SOURCE: EN 923:2015, 2.7.17]