SLOVENSKI STANDARD

SIST EN 15416-2:2008

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Lepila (razen fenolnih ali aminskih) za nosilne lesene konstrukcije - Preskusne metode - 2. del: Preskus statične obremenitve preskušancev z več lepljenimi spoji pri tlačni strižni obremenitvi

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

Klebstoffe für tragende Holzbauteile ausgenommen Phenolharzklebstoffe und Aminoplaste - Prüfverfahren - Teil 2: Statische Belastungsprüfung an Prüfkörpern mit mehreren Klebstofffugen bei Druck-Scherbeanspruchung

Adhésifs pour charpentes en bois portantes, de type autre que phénolique et aminoplaste - Méthodes d'essai - Partie 2 : Essai de charge statique des éprouvettes à plan de joint multiple en cisaillement par compression

Ta slovenski standard je istoveten z: **EN 15416-2:2007**

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This European Standard was approved by CEN on 10 November 2007.

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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 Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 15416-2:2007) 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of an identical text or by endorsement, at the latest by June 2008, and conflicting national standards shall be withdrawn at the latest by June 2008.

This European Standard is one of a series dealing with test methods for adhesives for use in load bearing timber structures. The standard is published in support of Eurocode 5, Common unified rules for timber structures. The series consist of six test methods to assess the performance of adhesives after specified heat and humidity treatments (EN 302, Parts 1 to 4, EN 15416-2 and EN 15416-3) and two test methods to characterize the working properties of the adhesive (EN 15416-4 and EN 15416-5). 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.

Safety statement

Persons using this document should be familiar with the normal laboratory practice, in applicable. 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.

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, 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.

1 Scope

This European Standard specifies a method of determining the ability of adhesive bonds to resist static load. It is applicable to adhesives used in load bearing timber structures.

It is suitable for the following applications:

a) for assessing the compliance of adhesives according to prEN 15425;

b) for assessing the suitability and quality of adhesives for load-bearing timber structures.

This test is intended primarily to obtain performance data for the classification of adhesives for load bearing timber structures according to their suitability for use in defined climatic environments. This method is not intended for use to provide numerical design data and does not necessarily represent the performance of the bonded member in service. It is not applicable to assessment of the suitability of adhesives for the manufacture of wood-based panels.

2 Normative references

Not applicable.

3 Principle

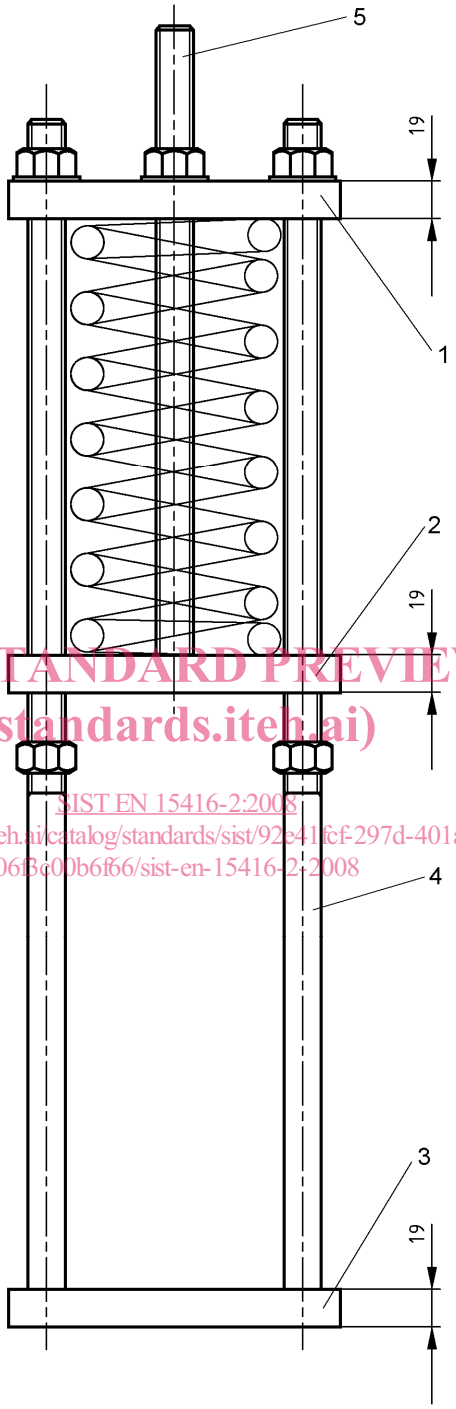
Glued test pieces are subjected to a constant compression shear load under a series of three different climates. Number of failures and the amount of deformation is measured after the test specimens have passed through all the climate cycles.

4 Apparatus

4.1 Test jigs

The test equipment is in principle similar to that described in ASTM D 3535–07a, with the exception of the spring characteristics (Figure 1 and Figure 2).

Dimensions in millimetres



Key

1 top plate
2 spacer plate
3 base plate
4 tension rod x 4, diameter 15,9 mm
5 centre rod x 1, diameter 15,9 mm

Figure 1 —Test jig

Dimensions in millimetres

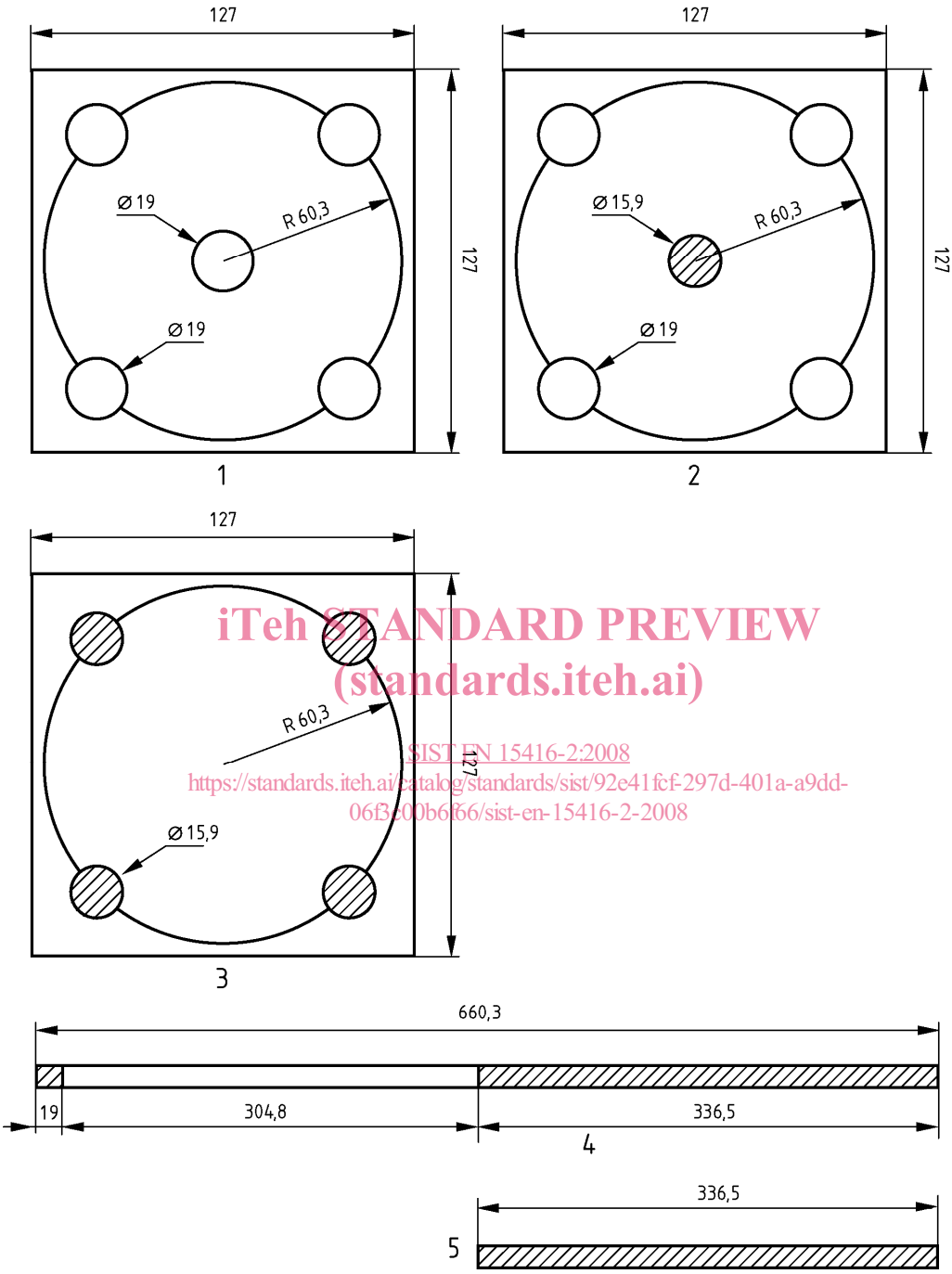


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Figure 2 — Dimensions of plates and rods

If equipment according to ASTM D 3535–07a is used, distance blocks need to be placed over and under the specimen. The distance blocks shall be prepared in such a way that the two contact surfaces, between the distance block and the jig and between the distance block and the specimen, are parallel. Blocks produced from several pieces of plywood bonded together have been found suitable. Distance blocks made by metal should be avoided. Dimension of distance blocks: 47,6 mm × 50,8 mm × ca. 100,0 mm.

NOTE 1 Reduced height of test jig. Since the length of the specimens is shorter than in ASTM D3535–07a, the height of the test jigs can be reduced correspondingly. Minimum height of distance pieces: 25 mm.

The spring shall have the following characteristics:

— outside diameter (unloaded): 105 mm;

— end fix: both ends fixed and grounded;

— free length: 320 mm;

— compression at maximum load 45 mm to 50 mm.

NOTE 2 A spring rate of 81 N/mm has shown to be suitable.

4.2 Heating chamber

The heating chamber shall be capable of maintaining (70 ± 2) °C.

4.3 Climate chamber

The climate chamber shall be capable of maintaining the two climates (20 ± 2) °C and (85 ± 5) % relative humidity, and (50 ± 2) °C and (75 ± 5) % relative humidity.

4.4 Testing machine

A universal testing machine is required for applying the load to the test jigs.

5 Selection and preparation of wood

5.1 General

Untreated beech wood (*Fagus sylvatica L.*) with a density of (700 ± 50) kg/m³ at (12 ± 1) % moisture content shall be used. The material shall be straight grained and free from knots. The angle of the annual rings to the surface to be bonded should be between 30° and 60°. The parts, of which the specimen is built of, should have the same direction for the annual rings in the cross section by gluing (Figure 3).