



SLOVENSKI STANDARD
SIST EN 14293:2006

01-december-2006

Lepila - Lepila za lepljenje parketa na podlago - Preskusne metode in minimalne zahteve

Adhesives - Adhesives for bonding parquet to subfloor - Test methods and minimum requirements

Klebstoffe - Klebstoffe für das Kleben von Parkett auf einen Untergrund - Prüfverfahren und Mindestanforderungen

Adhésifs - Adhésifs pour le collage de parquet au sol - Méthodes d'essai et exigences minimales en matière de résistance au cisaillement et à la traction

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ICS:

83.180

Lepila

Adhesives

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en

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ICS 83.180

English Version

Adhesives - Adhesives for bonding parquet to subfloor - Test methods and minimum requirements

Adhésifs - Adhésifs pour le collage de parquet au sol -
Méthodes d'essai et exigences minimales en matière de
résistance au cisaillement et à la traction

Klebstoffe - Klebstoffe für das Kleben von Parkett auf einen
Untergrund - Prüfverfahren und Mindestanforderungen

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 14293:2006) 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of an identical text or by endorsement, at the latest by February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

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.

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.

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1 Scope

This European Standard specifies test methods for adhesives for bonding parquet and similar wood floorings to a subfloor. It also specifies the minimum requirements for shear strength and tensile strength to be achieved with these adhesives, as well as a method for determining the open time. There are two different test methods and different minimum requirements for determining the shear strength for hard and soft adhesives.

This Standard does not refer to the selection and installation of parquet floorings.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 1323, *Adhesives for tiles — Concrete slab for test*

EN 13488, *Wood flooring — Mosaic parquet elements*

EN ISO 10365, *Adhesives — Designation of main failure patterns (ISO 10365:1992)*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

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3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 923:2005 and the following apply.

3.1

hard adhesives

adhesives which show a shear elongation factor of less than 2

3.2

soft adhesives

adhesives which show a shear elongation factor of 2 or more

3.3

shear elongation

deformation of the unit thickness of an adhesive under a shear force

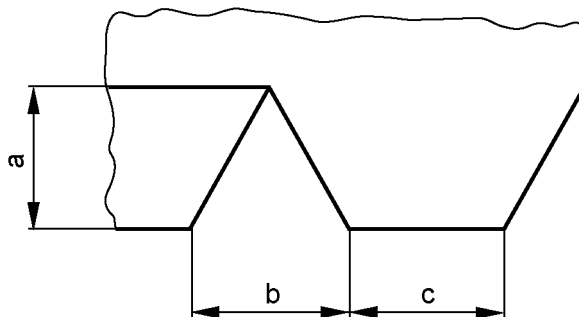
4 Test methods- procedures

4.1 Sampling and test conditions

Take the adhesive sample to be tested in accordance with EN ISO 15605 and examine and prepare it for testing in accordance with EN 1067.

All test methods shall be carried out under standard conditions at (23 ± 2) °C and at a $(50 \pm 5)\%$ relative humidity in accordance with ISO 554. Condition all test materials for at least 24 h under standard conditions.

The shape of the notches shall be triangular for all notched trowels (see Figure 1).



Key

- a notch depth
- b notch width
- c notch distance

Figure 1 - Shape of notches of notched trowels

4.2 Test method for the determination of the rib height after a certain time

4.2.1 Principle

The adhesive is spread on a base plate with a specified notched trowel. A testing plate made of glass is laid down at a given angle into the adhesive layer, and the wetted distance on this plate is measured.

4.2.2 Material

4.2.2.1 **Sample of adhesive**, for testing.

4.2.2.2 **Self adhesive tape**

4.2.3 Apparatus

4.2.3.1 **Notched trowel** (shape of the notch see Figure 1), dimensions are as follows:

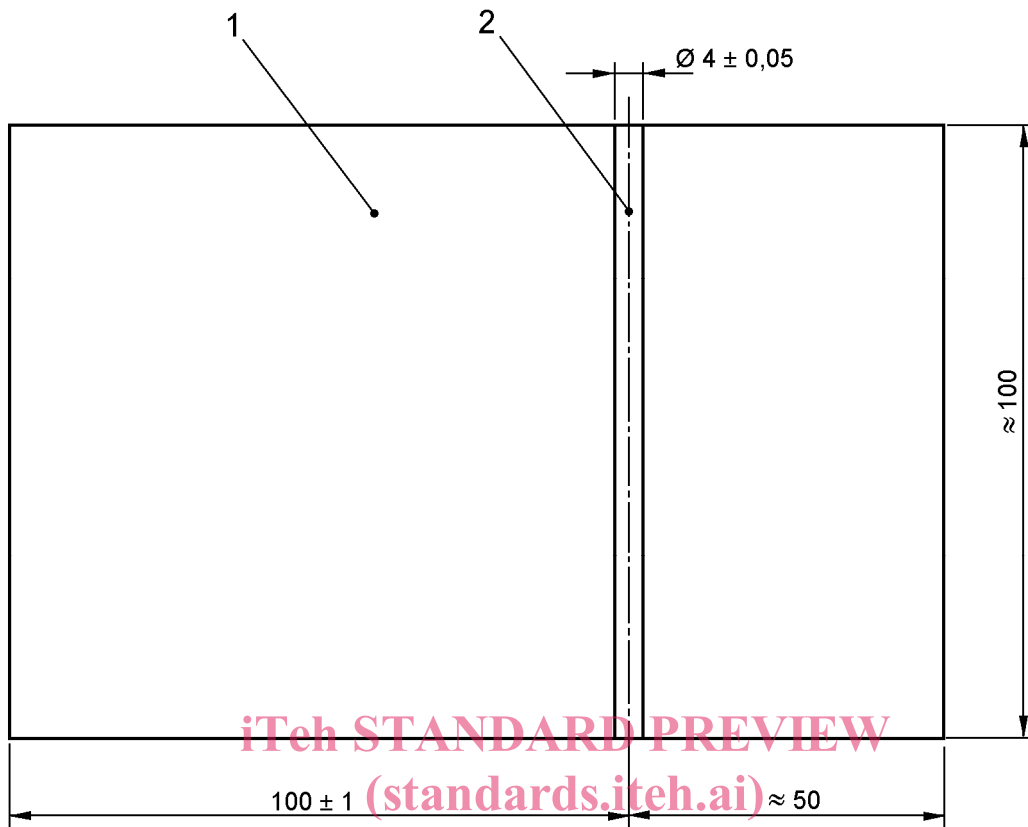
— notch depth: $a = (5,0 \pm 0,2)$ mm;

— notch width: $b = (5,0 \pm 0,2)$ mm;

— notch distance: $c = (5,0 \pm 0,2)$ mm.

4.2.3.2 **Timer**, accuracy 1 s.

4.2.3.3 **Testing plate**, made of glass with dimensions of approximately 150 mm x 100 mm x 2 mm, with a round rod of metal or glass with dimensions of approximately 100 mm lengthwise and with an approximate diameter of $4 \pm 0,05$ mm, bonded on the glass plate (see Figure 2).



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Key

- 1 glass plate, approximately 2 mm thickness
- 2 rod, metal or glass

Figure 2 - Testing plate

4.2.3.4 Base plate, made of glass, with dimensions of approximately 300 mm x 300 mm x 4 mm.

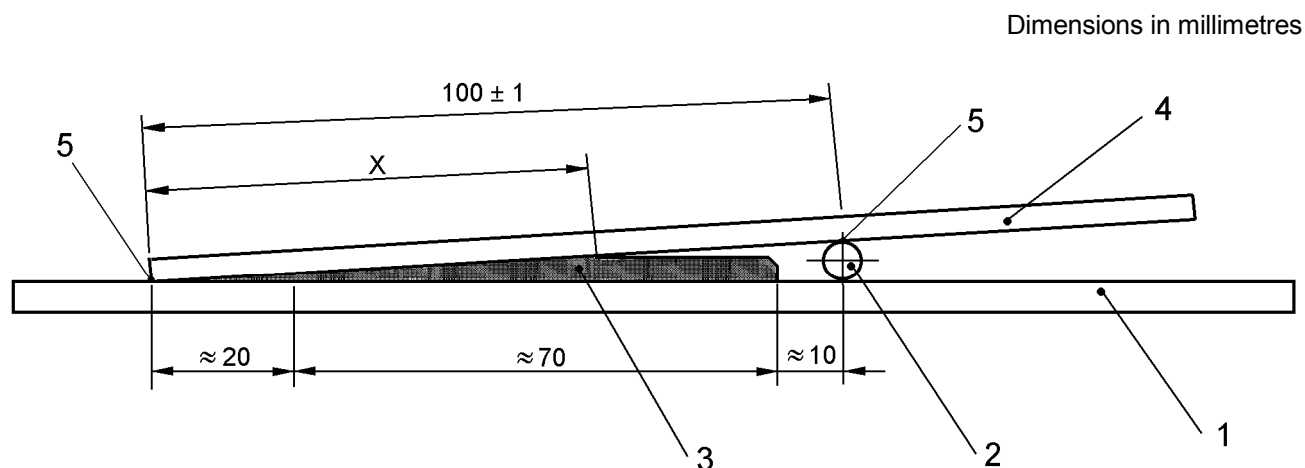
4.2.3.5 Ruler, readable to 1 mm.

4.2.4 Test procedure and evaluation of test results

Apply two parallel strips of self adhesive tape on the base plate perpendicularly to the length of the base plate leaving a distance of approximately 70 mm width unmasked. Hold the notched trowel vertically and spread the adhesive from one tape to the second. Immediately remove the strips of self adhesive tape. After 2 min ± 15 s lay in the testing plate parallel to the ribs and press it carefully down, without sliding, until the testing plate touches the base plate along both supporting lines.

Immediately after, measure the distance X in mm as the mean value over all ribs, illustrating how far the testing plate is wetted by the adhesive.

A test assembly is shown in Figure 3.

**key**

- 1 base plate
- 2 rod
- 3 adhesive
- 4 testing plate
- 5 supporting line
- X wetted distance

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The value X is representative for the height of the ribs.

Figure 3 - Test assembly, side view

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4.3 Test method for determining shear strength

4.3.1 Principle

Two mosaic parquet fingers are lap bonded and stored under two different conditions. After conditioning, the test specimens are clamped in a tensile testing machine and an increasing tensile force is applied until breakage.

The shear strength is then calculated.

4.3.2 Material

4.3.2.1 Mosaic parquet finger according to EN 13488, oak with dimensions of approximately (140 to 165) mm x 23 mm x 8 mm.

4.3.2.2 Sample of adhesive, for testing.

4.3.3 Apparatus

4.3.3.1 Notched trowel (shape of notch see Figure 1), dimensions as follows:

- notch depth: $a = (3,6 \pm 0,2)$ mm;
- notch width: $b = (3,4 \pm 0,2)$ mm;
- notch distance: $c = (3,4 \pm 0,2)$ mm.