



SLOVENSKI STANDARD

SIST EN 1373:2015

01-julij-2015

Nadomešča:
SIST EN 1373:2000

Lepila - Preskusna metoda za lepila za talne in stenske obloge - Strižni preskus

Adhesives - Test method for adhesives for floor and wall coverings - Shear test

Klebstoffe - Prüfverfahren für Klebstoffe für Boden- und Wandbeläge - Scherversuch

Adhésifs - Méthodes d'essais d'adhésifs pour revêtements de sol et muraux - Essai de cisaillement

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ICS:

83.180

Lepila

Adhesives

SIST EN 1373:2015

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 1373

April 2015

ICS 83.180

Supersedes EN 1373:1999

English Version

Adhesives - Test method for adhesives for floor and wall coverings - Shear test

Adhésifs - Méthodes d'essais d'adhésifs pour revêtements de sol et muraux - Essai de cisaillement

Klebstoffe - Prüfverfahren für Klebstoffe für Boden- und Wandbeläge - Scherversuch

This European Standard was approved by CEN on 16 February 2015.

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Foreword

This document (EN 1373:2015) 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of an identical text or by endorsement, at the latest by October 2015 and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1373:1999.

The main changes in respect to EN 1373:1999 are the addition of a plywood substrate and the change of the roller dimensions.

SAFETY PRECAUTIONS — Persons using this document should be familiar with the normal laboratory practice, if 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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 1373:2015 (E)**1 Scope**

This European Standard specifies a test method to measure the adhesion of a resilient or textile floor covering or wall covering bonded to a given substrate under shear forces. The term “wall covering” does not include any type of wallpaper.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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+A1:2008, *Adhesives - Terms and definitions*

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

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

EN ISO 9142, *Adhesives - Guide to the selection of standard laboratory ageing conditions for testing bonded joints (ISO 9142)*

EN ISO 10365, *Adhesives - Designation of main failure patterns (ISO 10365)*

EN ISO 15605, *Adhesives - Sampling (ISO 15605)*

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

ISO 3205, *Preferred test temperatures*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005+A1:2008 and the following apply.

3.1**covering**

flexible resilient or textile floor covering or wall covering

3.2**adhesive for coverings**

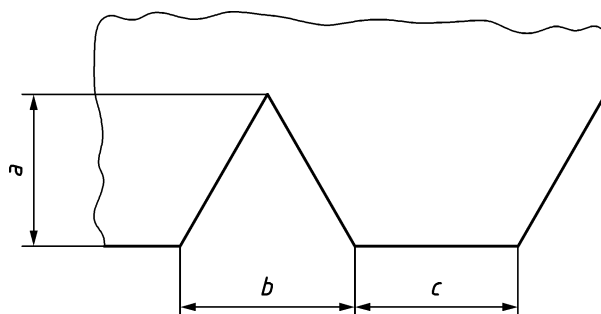
adhesive which is intended to produce firm and durable bonds between coverings and various substrates

4 Principle

The adhesion is determined by measuring the shear strength under specified conditions before and after storing the bonds at 23 °C/ 50 °C under specified conditions.

5 Apparatus and materials

5.1 Notched trowel (for the shape of the notch, see Figure 1) with dimensions a , b and c specified by the adhesive manufacturer.



Key

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

Figure 1 — Shape of notches of notched trowel

5.2 Roller, of width (60 ± 5) mm, diameter (90 ± 5) mm and total mass $(3,50 \pm 0,05)$ kg with handle at 90° to the axis (as an example, see Figure 2).

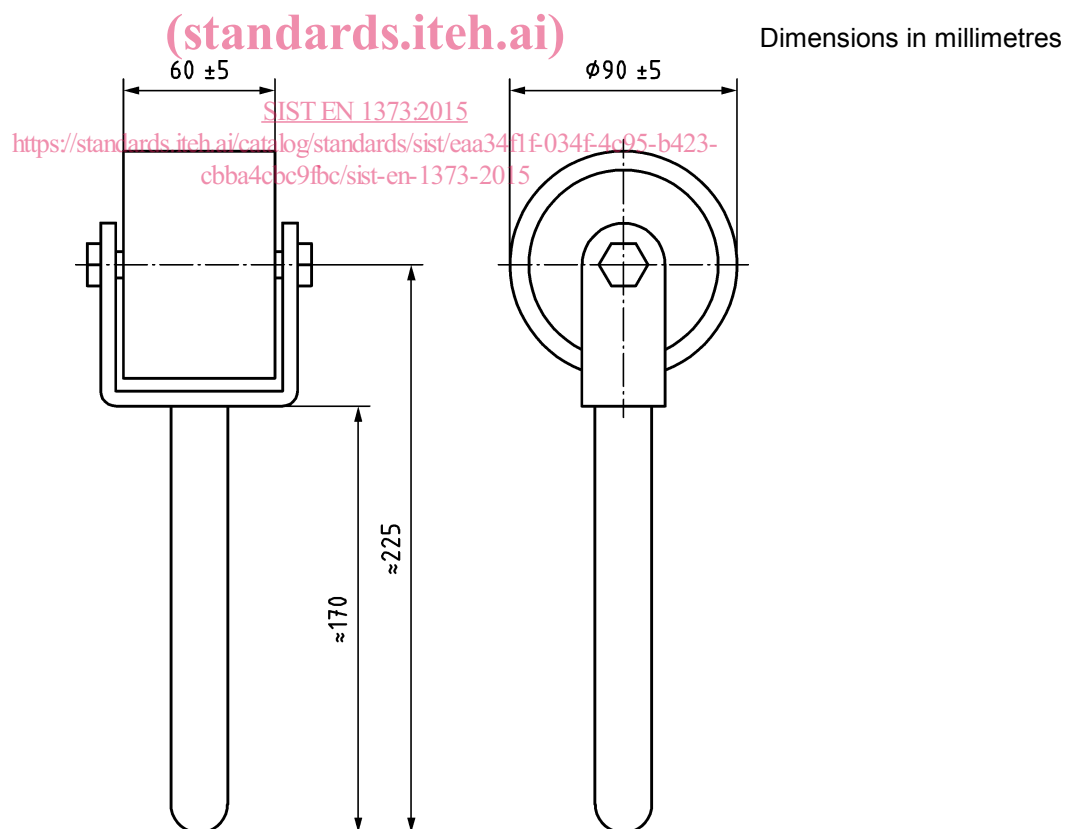


Figure 2 — Roller

NOTE The length of the handle is not critical and can be used for setting the total mass.

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5.3 Heating chamber, ventilated and adjustable to a temperature between 20 °C and 200 °C according to EN ISO 9142.

5.4 Tensile testing machine, conforming to EN ISO 7500-1, class 1.

5.5 Primer, if applicable.

5.6 Test covering, five test pieces for each conditioning sequence of dimensions 60 mm × 50 mm, the long side, running in the machine direction where this can be identified, and shall be taken at least 10 mm from the edge.

5.7 Substrate materials:

Use either fibre cement or plywood as the substrate.

5.7.1 Fibre cement substrate, one uncoated fibre cement panel, fully compressed and autoclaved, for each test piece. Five fibre cement panels for each conditioning sequence with a length of approximately 60 mm and a thickness of approximately 8,0 mm. The width is $(50 \pm 0,5)$ mm.

NOTE 1 Length and thickness are not critical.

NOTE 2 Depending on the source of the fibre cement panels the surfaces sometimes differ with respect to gloss, absorbency and strength. In this case, it is important to do some preliminary assessment (i.e. peel tests) of the panels to identify the preferred side for testing. The preferred side will be called the upper side of the substrate in this standard.

If failure of the substrate is the main finding of the preliminary assessment, a suitable primer may be used for testing.

5.7.2 Plywood substrate, one uncoated plywood panel for each test piece. Five plywood panels for each conditioning sequence with a length of approximately 60 mm and a thickness of approximately 5,0 mm. The width is $(50 \pm 0,5)$ mm.

NOTE Length and thickness are not critical.

6 Preparation of the test specimens

6.1 Cleaning

Ensure that all test coverings and substrate materials are clean and free from dust, loose particles or other contamination.

6.2 Sampling of adhesive

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

6.3 Conditioning of materials

6.3.1 Adhesive and floor and wall coverings

Condition the materials at a standard atmosphere of (23 ± 2) °C and (50 ± 5) % relative humidity in accordance with ISO 554 for at least 24 h prior to use.

6.3.2 Fibre cement substrate

Place the test panels (5.7.1) in a heating chamber (5.3) for 6 h at (80 ± 2) °C. Ensure that the test panels are spaced in such a way as to enable a free passage of air over them. At the end of this period, remove the test

panels from the heating chamber and store for 48 h in a standard atmosphere of $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity prior to use.

6.3.3 Plywood substrates

Condition the materials at a standard atmosphere of $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity in accordance with ISO 554 for at least 24 h prior to use.

6.4 Application of adhesive

Place masking tape across one end of the upper side of each substrate so as to leave 20 mm length to be coated with adhesive.

Apply the adhesive under test across the full width of the substrate using a notched trowel (5.1), held at an angle of approximately 60° , steadily down the length of the substrate to provide a uniform adhesive application.

Remove the masking tape when the adhesive has been applied.

When applying the adhesive, it is essential that the serrated blade is kept clean and free of adhesive build-up. Clean the blade regularly (no more than five substrates to be prepared without cleaning). In addition, regularly check the notch size and depth, especially where non-hardened steel blades are in use.

6.5 Bonding of the test covering

After a time recommended by the adhesive manufacturer (i.e. minimum open time in accordance with EN 923), place the test covering (see 5.6) onto the coated panel (5.7) to provide an overlap of 20 mm such that the unbonded length protrudes from the edge of the panel coated with adhesive (see Figure 3).

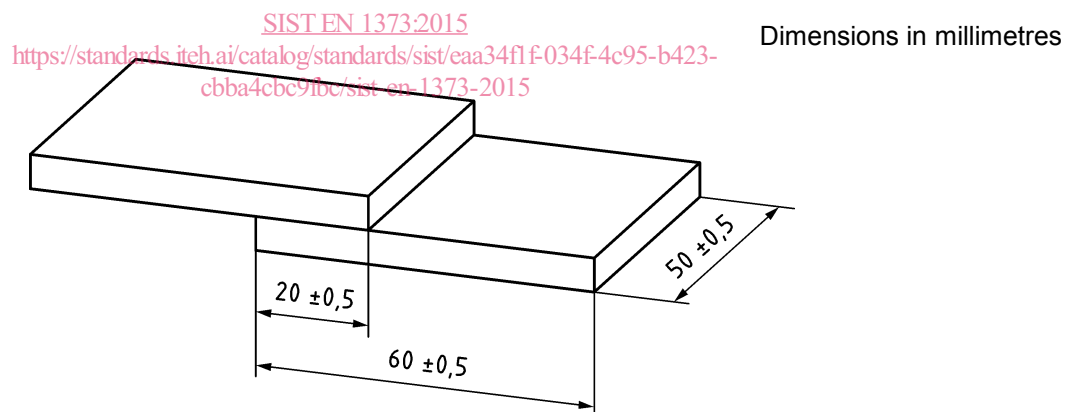


Figure 3 — Shear test specimen

Immediately after positioning the test covering, roll the test specimen with a roller (see 5.2) by passing forward and backward once along the test specimen without any additional pressure being applied.

As the adhesive has not yet set it should be ensured that the overlapping area remains 20 mm x 50 mm without any shift during the subsequent treatments of the test coverings.

Before applying the roller it is advisable to support the unbonded area of the test covering by an additional panel of the same thickness in order to avoid tilting.

To prevent the test covering from slipping caused by the roller an appropriate frame or mould for the substrate sheets in combination with range spacers can be used for the covering.