SLOVENSKI STANDARD
oSIST prEN ISO 22631:2018

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Lepila - Preskusna metoda za lepila za talne in stenske obloge - Preskus luščenja (ISO/DIS 22631:2018)

Adhesives - Test method for adhesives for floor and wall coverings - Peel test (ISO/DIS 22631:2018)

Klebstoffe - Prüfverfahren für Klebstoffe für Boden- und Wandbeläge - Schälversuch (ISO/DIS 22631:2018)

Adhésifs - Méthodes d'essai d'adhésifs pour revêtements du sol et muraux - Essai de pelage (ISO/DIS 22631:2018)

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ICS:

83.180	Lepila	Adhesives

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Adhesives — Test method for adhesives for floor and wall coverings — Peel test

Adhésifs — Méthodes d'essai d'adhésifs pour revêtements du sol et muraux — Essai de pelage

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 61 *Plastics*, Sub-Committee SC 11 *Products*.

Adhesives — Test method for adhesives for floor and wall coverings — Peel test

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.

1 Scope

This International 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 peel forces. The term "wall covering" does not include any type of wallpaper.

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.

ISO 472, *Plastics — Vocabulary*

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

ISO 3205, *Preferred test temperatures*

ISO 7500-1, *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 9142, *Adhesives — Guide to the selection of standard laboratory ageing conditions for testing bonded joints*

ISO 10365, *Adhesives — Designation of main failure patterns*

ISO 15605, *Adhesives — Sampling*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
covering
flexible resilient or textile floor covering or wall covering

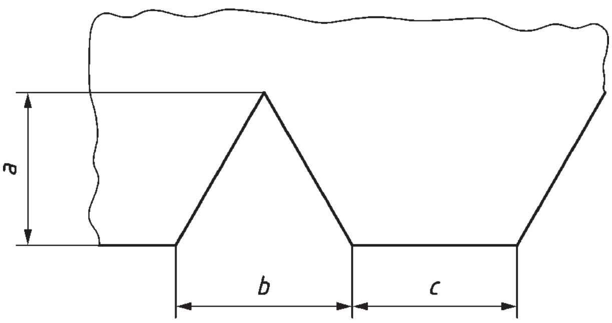
3.2
adhesive for coverings
adhesive which is intended to produce firm and durable bonds between coverings and various substrates

4 Principle

The adhesion is determined by measuring the resistance to peeling 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 ± 0,05) kg with handle at 90° to the axis (as an example, see Figure 2).

Dimensions in millimetres

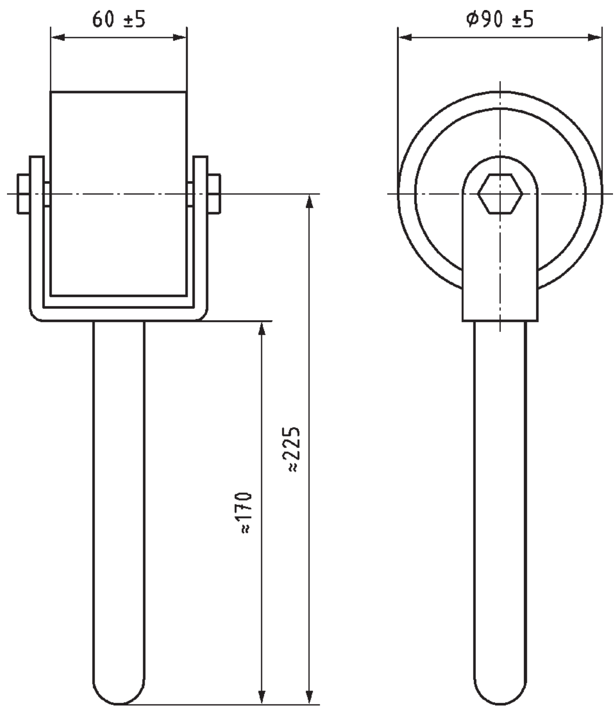


Figure 2 — Roller

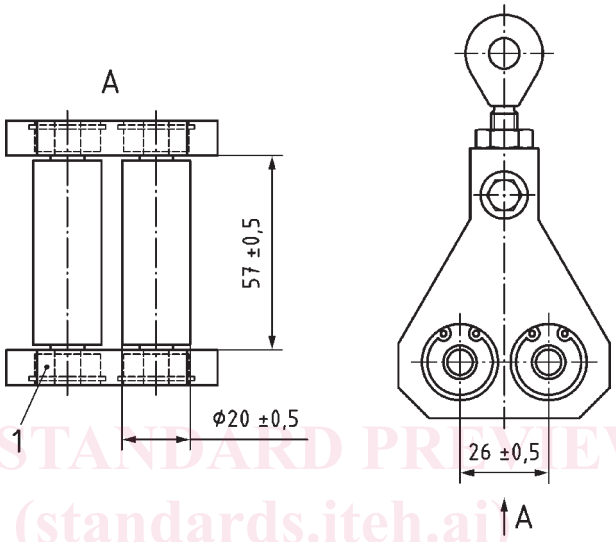
NOTE The length of the handle is not critical and can be used for setting the total mass.

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

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

5.5 Peeling device, with rolls as shown in Figure 3.

Dimensions in millimetres



Key

1 bearing

Figure 3 — Peeling device

5.6 Primer, if applicable.

5.7 Test covering, five test pieces for each conditioning sequence of dimensions 250 mm × 50 mm, the 250 mm long side running in the machine direction (where this can be identified) and shall be taken at least 10 mm from the edge.

5.8 Substrate materials:

5.8.1 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 150 mm and a thickness of approximately 8,0 mm. The width is (50 ± 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 substrate assessment, a suitable primer may be used for testing.

5.8.2 Plywood substrate, one uncoated plywood panel for each test piece. Five plywood panels for each conditioning sequence with a length of approximately 150 mm and a thickness of approximately 5,0 mm. The width is (50 ± 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 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 (5.8.1) 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 ± 2) °C and (50 ± 5) % relative humidity prior to use.

6.3.3 Plywood substrate

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.

6.4 Application of adhesive

Place masking tape across one end of the upper side of each panel so as to leave 120 mm length to be coated with adhesive.

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

Remove the masking tape when the adhesive has been applied.

NOTE 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 panels 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 ISO 472), place the test covering (5.7) onto the coated panel (5.8) such that one end of the test covering

