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SIST EN 1841:2000

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EUROPEAN STANDARD

EN 1841

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1998

ICS 83.180

Descriptors: adhesives, glueing, floor coverings, linoleum, tests, measurements, dimensional stability, specimen preparation

English version

Adhesives - Test methods for adhesives for floor coverings and wall coverings - Determination of dimensional changes of a linoleum floor covering in contact with an adhesive

Adhésifs - Méthodes d'essais pour adhésifs pour revêtements de sols et revêtements muraux - Détermination des variations dimensionnelles d'un revêtement en linoléum en contact avec un adhésif

Klebstoffe - Prüfverfahren für Klebstoffe für Boden- und Wandbeläge - Bestimmung der Maßänderung eines Linoleumbodenbelages im Kontakt mit einem Klebstoff

This European Standard was approved by CEN on 9 October 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard 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of an identical text or by endorsement, at the latest by April 1999, and conflicting national standards shall be withdrawn at the latest by April 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

This test is designed as a laboratory test to show the change in dimensions of a linoleum floorcovering in the early stages of bonding with an adhesive. Glass was chosen as an impervious substrate to maximise the effect.

This test does not necessarily reproduce the effects which occur on porous substrates such as in practical site conditions.

1 Scope

This European standard specifies a test method to measure the dimensional changes of a linoleum floorcovering whilst being adhered to a glass substrate. This method is to be used in conjunction with other test methods and not used solely to determine the suitability of a particular adhesive/linoleum combination.

2 Normative references

This European Standard incorporates, by dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references subsequent amendments to, or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revisions. For undated reference the latest edition of the publication referred to applies.

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|---------|---|
| EN 548 | Resilient floor coverings - Specification for plain and decorative linoleum |
| EN 923 | Adhesives - Terms and definitions |
| EN 1066 | Adhesives - Sampling |
| EN 1067 | Adhesives - Examination and preparation of samples for testing |
| ISO 554 | Standard atmospheres for conditioning and/or testing - Specifications |

3 Definitions

For the purposes of this standard, the definitions in accordance with EN 923 and the following definitions apply:

3.1 adhesives for linoleum floorcoverings: Adhesives which are intended to produce firm and durable bonds between linoleum and various substrates.

3.2 linoleum: Product produced by calendaring a homogeneous mixture of linoleum cement, cork and/or woodflour, pigments and inorganic filler onto a fibrous backing. The product is then converted into its final form by an oxidative curing process as described in EN 548.

3.3 linoleum cement: Binder in linoleum, consisting of a mixture of linseed oil and/or other vegetable drying oils, rosin and normal drying oil catalysts which is converted to a semi-elastic mass by an oxidative curing process as described in EN 548.

4 Principle

Indication of the dimensional changes which occur during the drying out process of the adhesive, i. e. in the early stages of an installation.

5 Safety

Persons using this standard shall be familiar with normal laboratory practice.

This standard does not purport to address all the safety problems, if any, associated with its use.

It is the responsibility of the user to establish safety and health practices and to ensure compliance with any European and national regulatory conditions.

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6 Apparatus and materials (standards.iteh.ai)

6.1 Adhesive applicator. Serrated trowel with notch size as specified by the adhesive manufacturer.

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6.2 Roller. Width (60 ± 1) mm, diameter (92 ± 1) mm and total mass $(3,5 \pm 0,01)$ kg with handle at 90° to the axis (see figure 1).

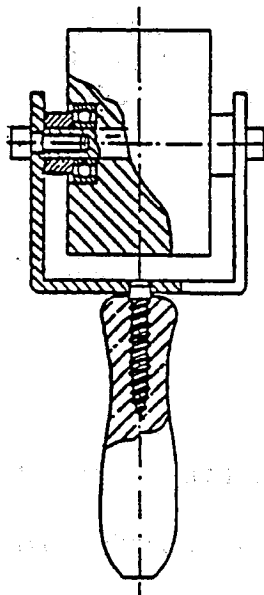


Figure 1: Roller

6.3 Three glass plates for each adhesive under test. Thickness at least 6 mm. Dimensions 300 mm x 300 mm or 350 mm x 350 mm.

6.4 Suitable measuring device capable of measuring to an accuracy of 0,01 mm over a length either 200 mm or 250 mm, e.g. elongation meter or other.

6.5 Three linoleum test pieces 250 mm x 250 mm or 300 mm x 300 mm for each adhesive under test.

6.6 Suitable adhesive for fixing gauge studs to the linoleum surface if required by the measuring method.

6.7 Self adhesive paper labels when using the travelling microscope method.

6.8 Square metal plate of uniform thickness (approx. 10 mm) with dimensions 10 mm less than the distance between the reference points, producing a load of ≈ 5 kg.

7 Preparation of test specimens

Ensure that all the glass plates are clean and free from dust, grease or other contaminants.

Place the test pieces in a 50 °C oven for 24 h to form a stack of pairs where the upper surface of one piece is in contact with the upper surface of its partner. Place a uniform load of 5 kg on top of the stack.

Remove from the oven and cool in a standard atmosphere 23/50 in accordance with ISO 554 for a further 24 h while still maintaining the load of 5 kg.

Separate the test pieces after this period.

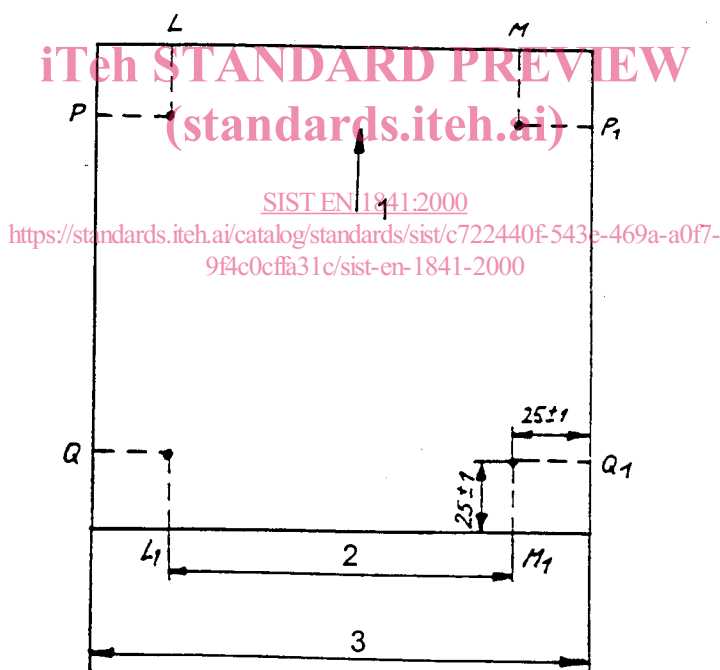
NOTE: This pre-treatment is to release any stresses or curl in the linoleum so that it is in a flat state when the test proper is commenced.

7.1 Conditioning

Take and prepare a significant sample of the adhesive in accordance with EN 1066 and EN 1067. Condition glass plates, linoleum test pieces and the adhesives in a standard atmosphere 23/50 in accordance with ISO 554 for 10 days and maintain the climate for the duration of the test.

7.2 Datum points

Fix the gauge studs in four positions, each being (25 ± 1) mm from the outer edge of the covering (see figure 2) using the appropriate adhesive.



- 1 grain direction
- 2 measurements between studs
- 3 edge to edge measurements

Figure 2: Measurements

7.3 Reference dimension - measurement A

Lay each linoleum test piece onto a glass plate and place the metal plate centrally to ensure the test piece is completely flat.