SLOVENSKI STANDARD
SIST EN 434:1999

01-marec-1999

Netekstilne talne obloge - Ugotavljanje dimenzijske stabilnosti in gubanja po izpostavitvi toploti

Resilient floor coverings - Determination of dimensional stability and curling after exposure to heat

Elastische Bodenbeläge - Bestimmung der Maßänderung und Schüsselung nach Wärmeeinwirkung

Revetements de sol résilients - Détermination de la stabilité dimensionnelle et de l'encurvation apres exposition a la chaleur

Ta slovenski standard je istoveten z: **EN 434:1994**

ICS:

97.150	Netekstilne talne obloge	Non-textile floor coverings

SIST EN 434:1999 **en**

EUROPEAN STANDARD **EN 434**

NORME EUROPÉENNE

EUROPÄISCHE NORM August 1994

UDC 698.7:692.535.6:645.13:620.1:536.413

Descriptors: Floor coverings, textile floor coverings, tests, determination, dimensional stability, thermal resistance

English version

Resilient floor coverings - Determination of dimensional stability and curling after exposure to heat

Revêtements de sol résilients - Détermination de la stabilité dimensionnelle et de l'encurvation après exposition à la chaleur

Elastische Bodenbeläge - Bestimmung der Maßänderung und Schüsselung nach Wärmeeinwirkung

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard was prepared by the Technical Committee CEN/TC 134 "Resilient and textile floorcoverings" of which the secretariat is held by BSI.

This document was submitted to the formal vote and approved.

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of an identical text or by endorsement, at the latest by February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.

In accordance with the CEN/CENELEC Internal Regulations, following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies a method for determining the dimensional stability and curling of a resilient floor covering on exposure to heat.

2 Normative references

This European Standard incorporates by dated or undated reference, 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 revision. For undated references the latest edition of the publication referred to applies.

EN 428 Resilient floor coverings - Determination of overall thickness

3 Principle

3.1 For dimensional stability, the relative variation of the distance between marks previously made on the test piece after heat treatment under specified conditions is determined.

3.2 For curling, the vertical deformation appearing in a test piece after specified heat treatment is measured.

4 Apparatus

4.1 A thermostatically-controlled ventilated oven, where the temperature throughout shall be (80 ± 2) °C and the radiation from the heating element shall not reach the test pieces or support places directly.

4.2 Solid metal support plates, ground and covered with a film of polytetrafluoroethylene.

The shapes and dimensions of 4.1 and 4.2 shall be such that:

- curling shall be measured without removing the test pieces from the support plates;

- the clearance between the plates and the vertical walls of the oven shall be not less than 50 mm;

- the vertical clearance between the support plates and between the plates and the oven shall be not less than 100 mm.

4.3 An optical bench, range 200 mm and precision ± 0,02 mm.

4.4 A pillar-mounted micrometer, or other device, accurate to at least 0,1 mm.

5 Sampling and preparation of test pieces

Take a representative sample from the available material.

Before cutting the test pieces, lay out the sample in sheet form as flat as possible and mark the machine direction. In the case of tiles, remove these from the packaging and lay them out.

Take three test pieces at equal distances from the sample, the distance between the outer edge of the sample and the nearest edge of the test piece being at least 100 mm, each of approximate dimensions 225 mm to 250 mm square, their edges being parallel or transverse to the direction of manufacture. On each test piece, approximately 20 mm from the edges, scribe four lengths, two in each direction, at a distance of (200 ± 1) mm, and measure these on an optical bench, (see figure 1).

Place each test piece on a support plate. If present, measure the initial curling before carrying out the test.

Dimensions in millimetres

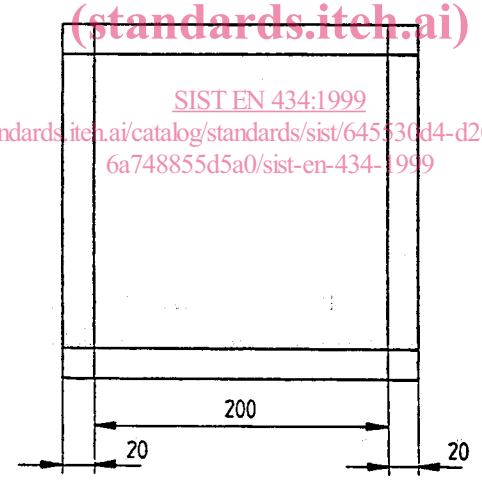

Figure 1: Scribing of test pieces

6 Conditioning

Condition the test pieces at a temperature of (23 ± 2) °C and relative humidity of (50 ± 5) % for a minimum of 24 h.

Maintain these conditions when carrying out the test.

7 Procedure

Carry out the tests on the day of the intial length measurement. At least 1 h after the marks for the dimensional variation measurements have been made, measure the vertical distance between the support plate and the visible surface of the test piece in four places around the edge, usually the corners, where the distance is greatest. Carry out the measurements with the pillar-mounted micrometer.

Store the test pieces for $360\ ^{+15}_{0}$ min in the oven, which has previously been stabilized at (80 ± 2) °C.

Remove the metal plates bearing the test pieces from the oven. Allow these to cool and recondition at a temperature of (23 ± 2) °C and relative humidity (50 ± 5) % for a further 24 h, unless otherwise specified for the product.

NOTE: The reconditioning period for all cork floor coverings should be 7 days.

After reconditioning, take the following measurements:

a) dimensional variations, i.e. the new distance of each scribed length, and

b) curling, i.e. the maximum vertical distances on each edge, usually at the corners.

8 Calculation and expression of results

8.1 Dimensional stability

For each of the test directions, record the variations for the six length measurements (two readings from three test pieces). Calculate the relative variation related to the initial lengths. Calculate the mean value of the six results and express it as a percentage to the nearest 0,05 %.

8.2 Curling

Reduce each of the actual measurements by the mean thickness of the floor covering measured as specified in EN 428. Calculate the mean value of the four differences for each test piece and the mean value for the three test pieces. Express the results in millimetres to the nearest 0,5 mm.

9 Test report

The test report shall contain the following information:

a) a reference to this standard, i.e. EN 434;

b) a complete identification of the product tested, including type, source, colour and manufacturer's reference numbers;

c) previous history of the sample;

d) the mean value of dimensional stability in each direction;

e) the mean value for curling;

f) the mean value for initial curling, if any;

g) any deviation from this standard which may have affected the results.