



SLOVENSKI STANDARD

SIST EN 433:1999

01-marec-1999

Netekstilne talne obloge - Ugotavljanje preostalega vtiska po statičnem obremenjevanju

Resilient floor coverings - Determination of residual indentation after static loading

Elastische Bodenbeläge - Bestimmung des Resteindruckes nach konstanter Belastung

Revetements de sol résilients - Détermination du poinçonnage rémanent apres application d'une charge statique

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Ta slovenski standard je istoveten z: EN 433:1994

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ICS:

97.150 Netekstilne talne obloge Non-textile floor coverings

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en

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EUROPEAN STANDARD

EN 433

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1994

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Descriptors: Floor coverings, textile floor coverings, floor slabs, punching tests, punching strength

English version

Resilient floor coverings - Determination of residual indentation after static loading

Revêtements de sol résilients - Détermination du poinçonnement résiduel après application d'une charge statique

Elastische Bodenbeläge - Bestimmung des Resteindruckes nach konstanter Belastung

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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

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

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of an identical text or by endorsement, at the latest by February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.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

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1 Scope

This European Standard specifies a method for determining the residual indentation produced in a resilient floor covering after the application and removal of a constant load.

2 Definition

For the purposes of this standard, the following definition applies.

residual indentation: The difference between the initial thickness and the thickness measured 150 min after removal of the load.

3 Principle

A test piece is subjected to a static loading, the thickness being measured before loading and after various recovery periods.

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4 Apparatus

4.1 A straight, steel cylinder of diameter as specified in table 1 with the edge of the flat base slightly rounded.

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Table 1: Characteristics of the indentation apparatus					
Structure of floor covering	Diameter of indenter mm	Area mm ²	Preliminary force N	Total force N	Pressure MPa
Solid throughout	11,30 ± 0,05	100	3,00 ± 0,03	500 ± 0,5	5
At least one non-solid layer					
Rubber and other relief materials					
Composition cork	15,97 ± 0,05	200	-	1000 ± 1	5

Page 4
EN 433 : 1994

4.2 A rigid, horizontal platform of minimum diameter 35 mm.

4.3 A device by means of which a preliminary force and a total force as specified in table 1 can be smoothly applied.

NOTE: The frame should not deform by more than 0,05 mm measured in the direction of the axis under the maximum force. This deformation has to be taken into consideration when measuring indentation.

4.4 A comparator for measuring the depth of indentation to $\pm 0,01$ mm.

4.5 Apparatus for measuring the thickness of the test piece as specified in table 2.

Structure of floor covering	Diameter of plate mm	Area mm ²	Mass applied kg	Approximate corresponding pressure kPa
Solid throughout	6,00 \pm 0,03	28,3	0,085 \pm 0,003	30
At least one non-solid layer	6,00 \pm 0,03	28,3	0,028 \pm 0,001	10
Rubber and other relief materials	6,00 \pm 0,03	28,3	0,085 \pm 0,003	30
Composition cork	11,30 \pm 0,05	100	0,80 \pm 0,02	80

4.6 A stopwatch.

4.7 An annular weight of approximate internal diameter 25 mm and mass 0,5 kg.

5 Sampling and preparation of test pieces

Take a representative sample from the available material.

Take three test pieces with a surface area of at least 3 500 mm² cut from a roll or different tiles.

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

Mark the place of measurement and measure the initial thickness of the test piece, t_0 , at its centre to 0,01 mm, using the appropriate apparatus specified in table 2.

Place the test piece on the platform. Place the annular weight on the test piece.

Within 5 s, apply the appropriate preliminary force specified in table 1 and adjust the comparator to zero, taking deformation of the frame into consideration. Smoothly apply the appropriate total force specified in table 1, and start the stopwatch within 2 s.

Record the depth of indentation after 150 min to 0,01 mm, and remove the force and the test piece from the platform.

NOTE: This measurement is not required in the calculation of results, but is required in a number of product specifications.

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After a further 150 min, measure the final thickness of the test piece, t_1 , at the same position, using the appropriate apparatus specified in table 2.

Repeat the test on the remaining test pieces.

8 Calculation and expression of results

Calculate the residual indentation, $t_0 - t_1$, for each test piece. Calculate the mean value from the measurements taken and express the result to 0,01 mm.

9 Test report

The test report shall contain the following information:

- a) a reference to this standard, i.e. EN 433;
- b) a complete identification of the product tested, including type, source, colour and manufacturer's reference numbers;
- c) previous history of the sample;

Page 6
EN 433 : 1994

- d) the mean value for residual indentation;
- e) the mean value for the depth of indentation after 150 min, if required;
- f) any deviation from this standard which may have affected the results.

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