
Netekstilne talne obloge - Ugotavljanje stranske dolžine, ravnosti robov in pravokotnosti plošč

Resilient floor coverings - Determination of the side length, squareness and straightness of tiles

Elastische Bodenbeläge - Bestimmung der Kantenlänge, Rechtwinkligkeit und Geradheit von Platten

Revetements de sol résiliants - Détermination de la longueur et de la rectitude des arêtes et de l'équerrage des dalles

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Ta slovenski standard je istoveten z: EN 427:1994

ICS:

97.150

Netekstilne talne obloge

Non-textile floor coverings

SIST EN 427:1999**en**

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EUROPEAN STANDARD

EN 427

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1994

UDC 698.7:692.535.6-41:620.1:531.74

Descriptors: Floor coverings, floor slabs, corks, dimensional measurements, length, squaring

English version

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side length, squareness and straightness of tiles**

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de la longueur et de la rectitude des arêtes et
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Kantenlänge, Rechtwinkligkeit und Geradheit von
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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 members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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of an identical text or by endorsement, at the latest by February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.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 methods for determining side lengths of floor tiles measuring at least 150 mm, the squareness of rectangular tiles and the straightness of edges.

NOTE: For composition cork floor tiles, use the apparatus and procedure described in ISO 9366.

2 Principle

The surface dimensions of a tile of minimum side length 150 mm are measured by a contact method at three positions in each direction. To assess the squareness, each corner of a right-angled tile is fitted into the dihedral angle of a precision square and the maximum gap between the arm of the square and the ends between the arm and the edge is measured at any point along the edge to assess the straightness.

3 Apparatus

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3.1 Length

3.1.1 A sliding caliper gauge or equivalent device, e.g. a table with comparators and stop unit, of accuracy 0,05 mm.

3.1.2 A flat surface with dimensions larger than those of the tiles, e.g. a plate of thickness greater than or equal to 10 mm.

3.1.3 A rigid plate, squared and finished, with dimensions 5 mm to 10 mm less than those of the tiles. The mass per unit area of the plate shall be approximately 20 kg/m², e.g. steel of thickness 2,5 mm, duralumin of thickness 7 mm.

3.2 Squareness and straightness

3.2.1 A precision square, with arms longer than the side length of the tiles. The linearity error for the arms shall be less than or equal to 0,01 mm and the angular error shall be less than 0,02 mm at 300 mm.

3.2.2 A flat surface as described in 3.1.2.

3.2.3 A rigid plate as described in 3.1.3.

3.2.4 A set of thickness gauges ranging from 0,20 mm to 0,55 mm in steps of 0,05 mm.

4 Sampling

Take five tiles from the sample as test pieces. Where a pack of tiles comprises the sample, ensure that the first and last tiles are not used as test pieces.

5 Conditioning

Condition the tiles at a temperature of $(23 \pm 2) ^\circ\text{C}$ and relative humidity $(50 \pm 5) \%$ for a minimum of 24 h.

Maintain these conditions when carrying out the test.

6 Procedure

6.1 Length

Place the tile on the flat surface with the squared plate on top. Take three measurements of the distance between the opposite sides in each direction, two of these measurements approximately 10 mm from the perpendicular edges and the third equidistant from the first two.

6.2 Squareness and straightness

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Place one edge of the tile against an arm of the square and slide up to touch the other arm. Then place the rigid plate on top without moving the tile. Determine the thickest gauge which can be easily inserted between the second arm of the square and the tile at the end of the edge to assess the deviation from the squareness (see figures 1 and 2). Determine the thickest gauge which can be easily inserted at any point between the second arm of the edge of the tile to assess the straightness of the edge (see figure 3).

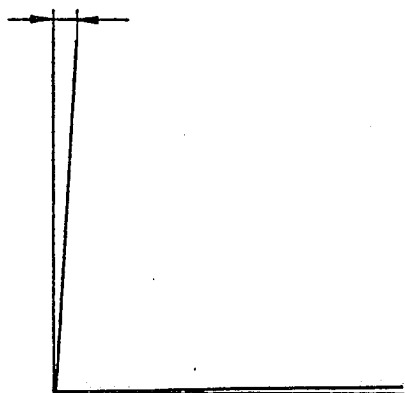


Figure 1: Squareness

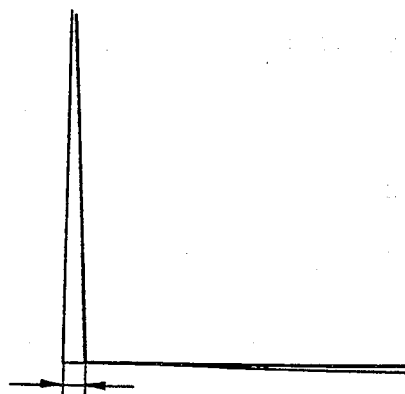


Figure 2: Squareness

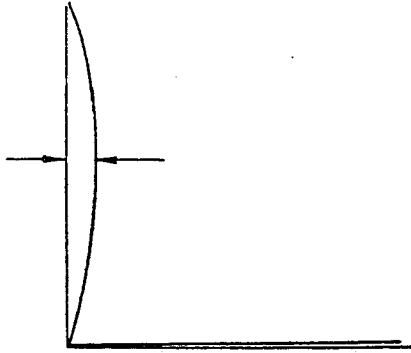


Figure 3: Straightness

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7 Calculation and expression of results

7.1 Length

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For each direction, calculate the side length of each tile as the mean value of the three relevant measurements. Express the result in millimetres, to one decimal place.

7.2 Squareness and straightness

Express the maximum deviation for each side of each tile in millimetres, to the nearest 0,05 mm for:

- a) the end of the edge for squareness;
- b) any point along the edge for straightness.

Report the greater size of deviation of a) or b) for each side.

8 Test report

The test report shall contain the following information:

- a) a reference to this standard, i.e EN 427;
- b) a complete identification of the product tested, including type, source, colour and manufacturer's reference number;
- c) previous history of the sample;
- d) the mean length for each direction per tile;
- e) the maximum deviation for each edge of the tile, and whether the deviation refers to squareness or straightness;
- f) any deviation from this standard which may have affected the results.

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