



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 24342:2023**  
**01-julij-2023**

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**Netekstilne in tekstilne talne obloge - Ugotavljanje stranske dolžine, ravnosti robov in pravokotnosti plošč in desk (ISO/DIS 24342:2023)**

Resilient and textile floor-covering - Determination of side length, edge straightness and squareness of tiles and planks (ISO/DIS 24342:2023)

Elastische und textile Bodenbeläge - Bestimmung der Kantenlänge, Rechtwinkligkeit und Geradheit von Platten und Dielen (ISO/DIS 24342:2023)

Revêtements de sol résilients ou textiles - Détermination de la longueur des bords, de la rectitude des arêtes et de l'équerrage des dalles (ISO/DIS 24342:2023)

**Ta slovenski standard je istoveten z: prEN ISO 24342**

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**ICS:**

97.150      Talne obloge      Floor coverings

**oSIST prEN ISO 24342:2023**      **en,fr,de**



# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 24342

ISO/TC 219

Secretariat: NBN

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2023-08-04

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## Resilient and textile floor-coverings — Determination of side length, edge straightness and squareness of tiles and planks

ICS: 97.150

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## ISO/DIS 24342:2023(E)

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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](http://www.iso.org/directives)).

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For an explanation on the voluntary nature of standards, 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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 219, *Floor coverings*.

The main changes compared to the previous edition are as follows:

- procedures modified to allow for differences between planks and tiles. Items 3, 4, 5, 8 and 9 have therefore been updated.
- accuracy of the records has been changed to 0.01 mm instead of 0.02 mm.
- minor editorial changes have been made;
- all changes to the document are highlighted for easier reference.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Resilient and textile floor-coverings — Determination of side length, edge straightness and squareness of tiles and planks

## 1 Scope

This document describes methods for determining side lengths, straightness of edges and squareness of resilient or textile floor tiles and planks.

The side lengths, straightness and squareness of resilient or textile floor tiles and planks are important considerations because installed flooring will have an objectionable appearance if these performance criteria are not followed. This can cause the installed tiles/planks to line up unevenly, producing unsightly seams and corners that do not match.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### squareness

measurement of the amount the corner of the tile/plank deviates from 90°, as depicted in [Figure 1](#)

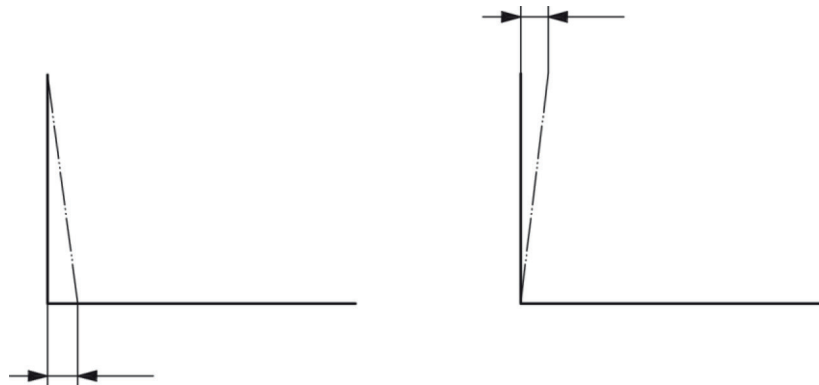


Figure 1 — Definition of squareness

### 3.2

#### straightness

property of an edge to be straight, unbent, as depicted in [Figure 2](#)

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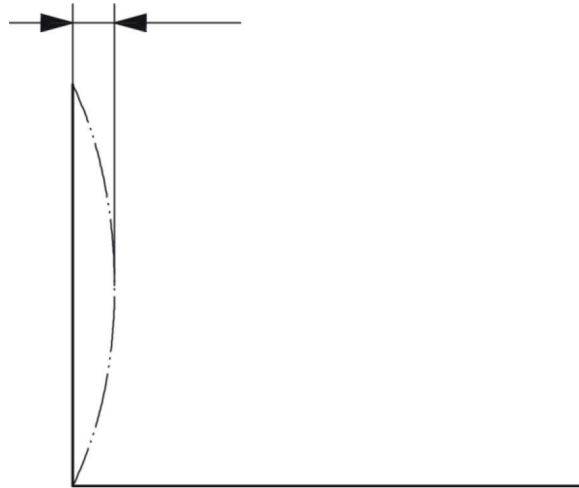


Figure 2 — Definition of straightness

## 3.3

**tile/plank**

type of resilient or textile flooring of predetermined shape intended to be used in a modular mode

Note 1 to entry: Tiles are usually square. Planks have a ratio length divided by width superior or equal to 1,3. A modular product with a ratio inferior to 1,3 has to be considered as a tile.

## 4 Principle

The surface dimensions of a tile/plank are measured by a contact method at defined positions in each direction.

To assess the squareness of a tile, 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 of the tile is measured. The maximum opening between the arm and the edge is measured at defined points along the edge to assess the straightness.

To assess the squareness of a plank, place one side of the plank against one long side of the surface layer of the element. Using the thickness gauges, determine the maximum deviation from square at the small side. The procedure is repeated on the diagonally opposite corner. The maximum opening between the arm and the edge is measured at defined points along the edge to assess the straightness.

NOTE For systems with edge connection systems, the visible area of the tile/board is considered. The devices can be modified for products with edge connection systems to ensure that only the visible area is considered.

## 5 Apparatus

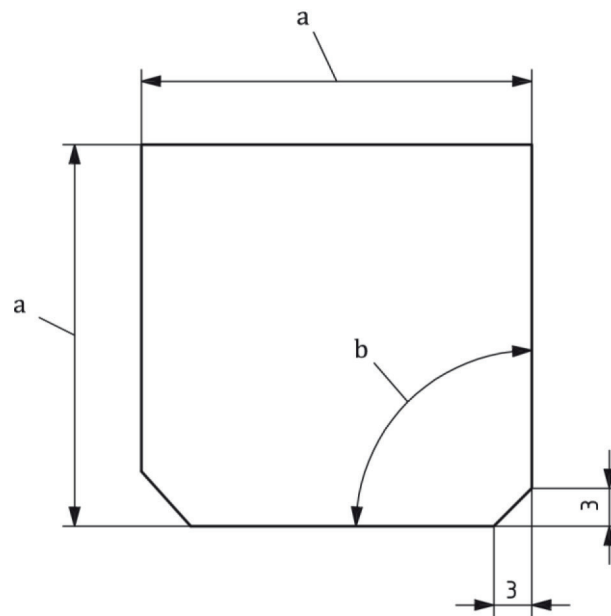
## 5.1 Reference plate

Reference plate, also referred to as a “calibration plate”, made to the target dimensions of the manufactured tile/plank.

The length and width dimensions shall be within 0,01 mm of the specified dimensions of the resilient or textile tiles/planks. The reference plate shall contain at least two sides that are perpendicular to  $[\pm 0,000\ 18\ \text{rad}\ (0,01^\circ)]$  one another. These are used to set the squareness gauge to zero (see Figure 3 for the case of tile as example).



Dimensions in millimetres

**Key**

- a Tile target dimension  $\pm 0,01$  mm.
- b  $1,57080$  rad  $\pm 0,00005$  rad.

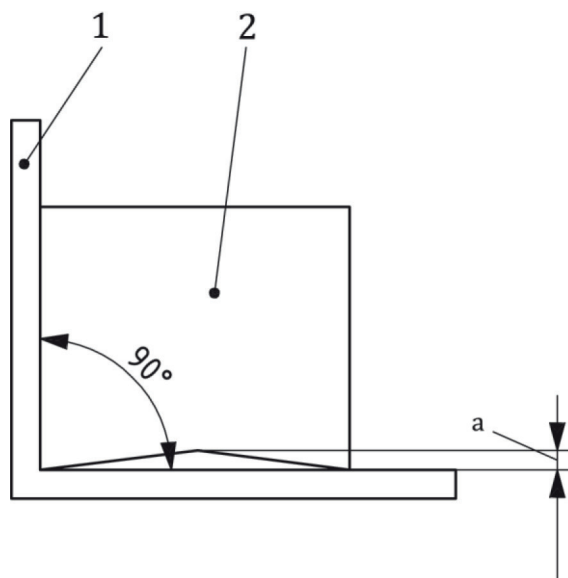
**Figure 3 — Reference plate (case of tile)****5.2 Rigid metal or glass plate**

Rigid metal or glass plate having a similar shape to the tile/plank with dimensions 5 mm to 10 mm less..  
The mass per unit area of the plate shall be approximately  $20 \text{ kg/m}^2$ .

**5.3 Flat bedplate apparatus**

Apparatus for measuring the squareness and straightness of floor tiles/planks.

This apparatus shall be an "L" shaped steel device having an angle of  $1,57080$  rad ( $90^\circ$ ) with a tolerance of  $\pm 0,00018$  rad ( $0,01^\circ$ ), as shown in [Figures 4](#), 5a and 5b with the length of both reference strips larger than the largest dimension of the tile/plank.



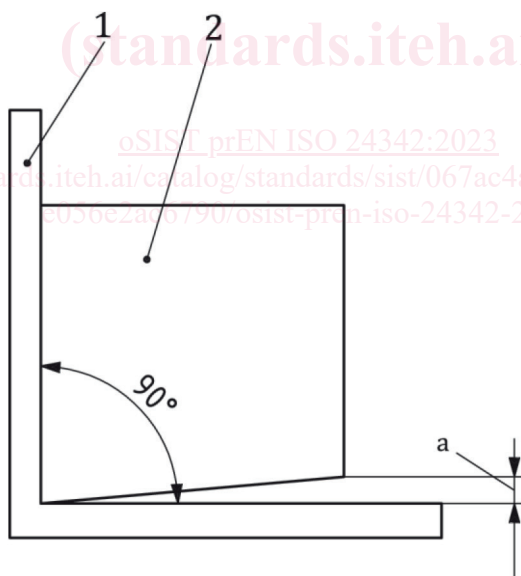
**Key**

- 1 measuring tool
- 2 tile/plank

a Maximum length of gap.

**Figure 4 — Apparatus and position of tile/plank for measuring straightness**

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**Key**

- 1 measuring tool
- 2 tile

a Out of squareness.

**Figure 5.a — Apparatus and position of tile for measuring squareness**