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

*Revêtements de sol résilients ou textiles — Détermination de la
longueur des bords, de la rectitude des arêtes et de l'équerrage des
dalles*

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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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.

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

This third edition cancels and replaces the second edition (ISO 24342:2007), which has been technically revised. The main changes compared to the previous edition are as follows:

- The Scope has been updated by including planks.
- [Clause 5](#), Apparatus, has been restructured according to the current ISO drafting rules.
- [5.1](#), Reference plate: tolerance for the angle, has been adjusted to $\pm 0,000\ 18$ rad ($0,01^\circ$), in analogy to [5.3](#) and [5.5](#).
- [Clause 9](#), Calculation and expression of the results, has been updated by including measurement of the average lengths and by specifying the precision of reporting for squareness and straightness.
- [Clause 10](#), Test report, has been updated according to modifications done in [clause 9](#).

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.

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

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 <http://www.electropedia.org/>

3.1

squareness

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

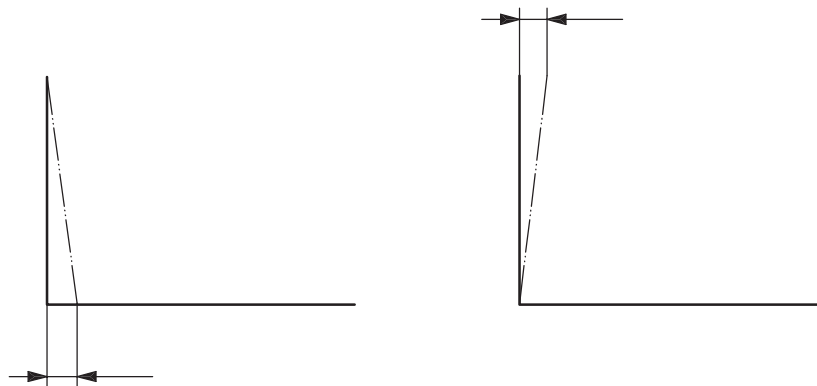


Figure 1 — Definition of squareness

3.2

straightness

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

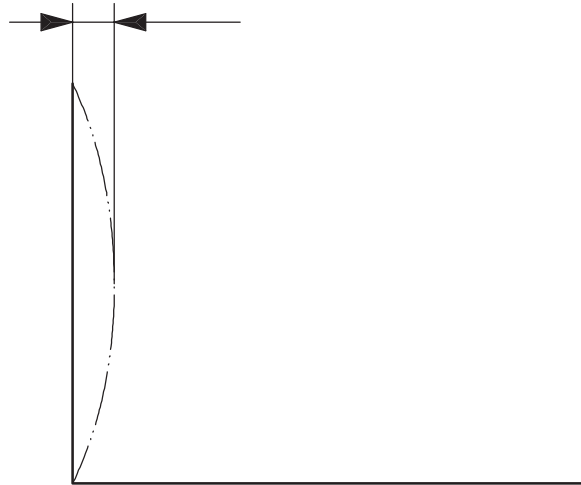


Figure 2 — Definition of straightness

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, but can also be rectangular, in which case they are also referred to as e.g. “plank”, “panel”.

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, each corner of a right-angled tile/plank 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/plank is measured. The maximum opening between the arm and the edge is measured at defined points along the edge to assess the straightness.

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 0,02 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](#)).