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Second edition
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Ceramic tiles —

Part 2: Determination of dimensions and surface quality

Carreaux et dalles céramiques —

Partie 2: Détermination des caractéristiques dimensionnelles et de la qualité de surface

Reference number
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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 189, *Ceramic tile.*

This second edition cancels and replaces the first edition (ISO 10545-2:1995) which has been technically revised. It also incorporates the Technical Corrigendum ISO 10545-2:1995/Cor 1:1997.

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

— for the measurement of length and width, the deviation shall be reported as a percentage and in millimetres;

— for the measurement of thickness, the deviation shall be reported as a percentage and in millimetres;

— for the measurement of straightness of sides, the deviation shall be reported as a percentage and in millimetres;

— for the measurement of the centre curvature, edge curvature and warpage, the deviation shall be reported as a percentage and in millimetres;

— tests specimens sampling has been changed;

— for rectangularity measurements of oblong tiles with longer edge ≥60 cm, and ratio between longer edge and shorter edge ≥3, only δ_L and percent deviation shall be determined; as a consequence, the test report is modified accordingly.

A list of all parts in the ISO 10545 series can be found on the ISO website.

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.

Ceramic tiles —

Part 2:
Determination of dimensions and surface quality

1 Scope

This document specifies methods for determining the dimensional characteristics (length, width, thickness, straightness of sides, rectangularity, surface flatness) and the surface quality of ceramic tiles.

Tiles with areas less than 4 cm^2 are excluded from measurements of length, width, straightness of sides, rectangularity and surface flatness.

NOTE Spacer lugs and glaze blobs and other irregularities of the sides are intended to be ignored when measuring length, width, straightness of sides, rectangularity, if these are subsequently hidden in the joints after fixing (installation).

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
straightness of sides
deviation from straightness of the centre of the side in the plane of the tile

Note 1 to entry: See Figure 1.

3.2
deviation from rectangularity
measurement of the departure from squareness of each corner of a tile

Note 1 to entry: It is expressed in millimetres.

Note 2 to entry: See Figures 3 a) and b).

3.3
surface flatness measurement
measurements in three positions on the surface of tiles

Note 1 to entry: Tiles that have relief on the proper surface preventing measurement on that surface shall, where possible, be measured on the back.

3.4
centre curvature
departure of the centre of a tile from the plane in which three of the four corners lie

Note 1 to entry: See Figure 4.

3.5
edge curvature
departure of the centre of one edge of a tile from the plane in which three of the four corners lie

Note 1 to entry: See Figure 5.

3.6
warpage
departure of the fourth corner of the tile from the plane in which the other corners lie

Note 1 to entry: See Figure 6.

3.7
crack
fracture in the body of the tile visible on the face or the back or both

3.8
crazing
fracture of the glaze that appears as irregular hairline *cracks* (3.7)

3.9
dry spot
area on the face of a glazed tile which has no glaze

3.10
unevenness
depression in the surface of a tile or a glaze

3.11
pin hole
tiny pit in the surface of a glazed tile

3.12
glaze devitrification
crystallization of the glaze which is visually apparent

3.13
speck
spot
visually contrasting area in the tile face

3.14
underglaze fault
apparent fault covered by glaze

3.15
decorating fault
apparent fault in decoration

3.16
chip
fragment broken off from the edges, corners or surface of a tile

3.17
blister
small surface bubble or blow-out resulting from the expulsion of gas during firing