

Ceramic tiles - Part 20: Determination of deflection of ceramic tiles for calculating their radius of curvature (ISO 10545-20:2022)

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NATIONAL FOREWORD

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EUROPEAN STANDARD

EN ISO 10545-20

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Ceramic tiles - Part 20: Determination of deflection of
ceramic tiles for calculating their radius of curvature (ISO
10545-20:2022)**

Carreaux et dalles céramiques - Partie 20:
Détermination de la flèche des carreaux et dalles
céramiques pour calculer leur rayon de courbure (ISO
10545-20:2022)

Keramische Fliesen und Platten - Prüfverfahren - Teil
20: Bestimmung der Durchbiegung von keramischen
Fliesen und Platten zur Berechnung des
Krümmungsradius (ISO 10545-20:2022)

This European Standard was approved by CEN on 5 June 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 10545-20:2022) has been prepared by Technical Committee ISO/TC 189 "Ceramic tile" in collaboration with Technical Committee CEN/TC 67 "Ceramic tiles" the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by January 2023, and conflicting national standards shall be withdrawn at the latest by January 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10545-20:2022 has been approved by CEN as EN ISO 10545-20:2022 without any modification.

Contents

	Page
Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	2
5 Apparatus.....	2
6 Test specimens.....	2
7 Procedure.....	3
8 Calculation.....	3
9 Test report.....	4
Bibliography.....	6

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).

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This document was prepared by Technical Committee ISO/TC 189, *Ceramic tile*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 67, *Ceramic tiles*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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

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Ceramic tiles —

Part 20:

Determination of deflection of ceramic tiles for calculating their radius of curvature

1 Scope

This document specifies a method for measuring the deflection of ceramic tiles for calculating their radius of curvature.

NOTE ISO 13006 provides property requirements for tiles and other useful information on these products.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10545-4:2019, *Ceramic tiles — Part 4: Determination of modulus of rupture and breaking strength*

ISO 48-2, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD*

3 Terms and definitions

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

ISO and IEC maintain terminology 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

breaking load

F

force necessary to cause the test specimen to break, as read from the pressure gauge

Note 1 to entry: See [Figure 1](#).

3.2

deflection at breaking

Z

deflection of tile at the breaking point under load

Note 1 to entry: See [Figure 1](#).

3.3

curvature radius

r

radius of the circumference that approximates the curve that is determined when the tile is deflected at breaking