Ceramic tiles - Part 10: Determination of moisture expansion (ISO 10545-10:2021, Corrected version 2021-09)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 10545-10:2021 sisaldab Euroopa standardi EN ISO 10545-10:2021 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 10545-10:2021 consists of the English text of the European standard EN ISO 10545-10:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.07.2021.	Date of Availability of the European standard is 14.07.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.100.23

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10545-10

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English Version

Ceramic tiles - Part 10: Determination of moisture expansion (ISO 10545-10:2021, Corrected version 2021-09)

Carreaux et dalles céramiques - Partie 10: Détermination de la dilatation à l'humidité (ISO 10545-10:2021, Version corrigée 2021-09)

Keramische Fliesen und Platten - Teil 10: Bestimmung der Feuchtigkeitsdehnung (ISO 10545-10:2021, korrigierte Fassung 2021-09)

This European Standard was approved by CEN on 25 June 2021.

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 15 September 2021.

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

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

Ref. No. EN ISO 10545-10:2021 E

European foreword

This document (EN ISO 10545-10:2021) 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of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

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.

This document supersedes EN ISO 10545-10:1997.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

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 websites.

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 10545-10:2021, Corrected version 2021-09 has been approved by CEN as EN ISO 10545-10:2021 without any modification.

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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,* 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).

This second edition cancels and replaces the first edition (ISO 10545-10:1995), which has been technically revised.

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

— addition of Clause 2 "Normative references", subsequent clauses have been renumbered;

— modification of Clause 6 "Test specimens".

This corrected version of ISO 10545-10:2021 incorporates the following corrections:

— in Clause 6 the number of test specimens for tiles with a nominal area ≤3600 cm^2 was incorrectly stated as 3. This number has been removed.

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 10: Determination of moisture expansion

1 Scope

This document specifies a method for determining the moisture expansion of ceramic tiles.

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
moisture expansion
proportional accelerated expansion that results from subjecting reheated tiles to extended immersion in boiling water

4 Principle

The principle of this document is the determination of accelerated moisture expansion by subjecting a reheated tile to boiling water and measuring the proportional change in length. See additional remarks regarding moisture expansion in Annex A.

5 Apparatus

5.1 Measuring frame, a suitable type of measuring frame, fitted with a micrometer, dial gauge, transducer or similar device, with an accuracy of at least 0,01 % of the dimension of the specimen.

5.2 Reference bars of nickel steel (Invar), of approximately the same length as the test specimens, fitted with an insulated grip.

5.3 Kiln, capable of firing up to 600 °C, at a rate of temperature rise of 150 °C/h and with a control over the temperature of ±15 °C.

5.4 Boiling apparatus, to maintain the test specimens in boiling deionized or distilled water for 24 h.