

Ceramic tiles - Part 14: Determination of resistance to stains (ISO 10545-14:2015)

## EESTI STANDARDI EESSÕNA

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EUROPEAN STANDARD

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## Ceramic tiles - Part 14: Determination of resistance to stains (ISO 10545-14:2015)

Carreaux et dalles céramiques - Partie 14 :  
Détermination de la résistance aux taches (ISO 10545-  
14:2015)

Keramische Fliesen und Platten - Teil 14: Bestimmung  
der Beständigkeit gegen Fleckenbildner (ISO 10545-  
14:2015)

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COMITÉ EUROPÉEN DE NORMALISATION  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

This document (EN ISO 10545-14:2015) 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of an identical text or by endorsement, at the latest by April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

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

This document supersedes EN ISO 10545-14:1997.

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### Endorsement notice

The text of ISO 10545-14:2015 has been approved by CEN as EN ISO 10545-14:2015 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](http://www.iso.org/directives)).

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The committee responsible for this document is ISO/TC 189, *Ceramic tiles*

This second edition cancels and replaces the first edition (ISO 10545-14:1995), which has been technically revised. It also incorporates the Technical Corrigendum ISO 10545-14:1995/Cor.1:1997.

ISO 10545 consists of the following parts, under the general title *Ceramic tiles*:

- *Part 1: Sampling and basis for acceptance*
- *Part 2: Determination of dimensions and surface quality*
- *Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density*
- *Part 4: Determination of modulus of rupture and breaking strength*
- *Part 5: Determination of impact resistance by measurement of coefficient of restitution*
- *Part 6: Determination of resistance to deep abrasion for unglazed tiles*
- *Part 7: Determination of resistance to surface abrasion for glazed tiles*
- *Part 8: Determination of linear thermal expansion*
- *Part 9: Determination of resistance to thermal shock*
- *Part 10: Determination of moisture expansion*
- *Part 11: Determination of crazing resistance for glazed tiles*
- *Part 12: Determination of frost resistance*
- *Part 13: Determination of chemical resistance*
- *Part 14: Determination of resistance to stains*
- *Part 15: Determination of lead and cadmium given off by glazed tiles*

— *Part 16: Determination of small colour differences*

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# Ceramic tiles —

## Part 14:

# Determination of resistance to stains

### 1 Scope

This part of ISO 10545 specifies a method for determining the resistance to stains of the proper surface of ceramic tiles.

### 2 Normative reference

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10545-7, *Ceramic tiles — Part 7: Determination of resistance to surface abrasion for glazed tiles*

### 3 Principle

Determination of the resistance to stains by maintaining test solutions and materials in contact with the proper surface of the tiles for a suitable length of time; the surfaces are then subjected to defined cleaning methods, and finally inspected for visual changes.

### 4 Staining agents<sup>1)</sup>

#### 4.1 Stains leaving a trace (pastes)

4.1.1 **Green staining agent in light oil**, in accordance with the specifications of [Annex A](#).

4.1.2 **Red staining agent in light oil (for green coloured tiles only)**, in accordance with the specifications of [Annex B](#).

#### 4.2 Stains having chemical/oxidizing action

4.2.1 **Iodine**, 13 g/l solution in alcohol.

#### 4.3 Stains forming a film

4.3.1 **Olive oil**, according to the definitions of the International Olive Oil Agreement (2005).

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1) The stains specified are only examples of basic groups. There are many staining materials which may, upon agreement by the parties concerned, be tested using the procedure specified in this part of ISO 10545.