

Keraamilised plaadid. Määratlused, liigitamine, omadused, vastavushindamine ja märgistamine

Ceramic tiles - Definitions, classification, characteristics, evaluation of conformity and marking

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14411:2012 sisaldab Euroopa standardi EN 14411:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 14411:2012 consists of the English text of the European standard EN 14411:2012.
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English Version

Ceramic tiles - Definitions, classification, characteristics, evaluation of conformity and marking

Carreaux céramiques - Définitions, classification,
caractéristiques, évaluation de la conformité et marquage

Keramische Fliesen und Platten - Definitionen,
Klassifizierung, Eigenschaften, Konformitätsbewertung und
Kennzeichnung

This European Standard was approved by CEN on 10 August 2012.

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Foreword

This document (EN 14411:2012) has been prepared by 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of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by July 2014.

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 14411:2006.

The main changes with respect to the previous edition are listed below:

- inclusion of decorative pieces, trims and mosaics;
- no application of ceramic tiles in ceilings;
- consideration of technical specification for slipperiness;
- inclusion of mandated characteristic on tactility, when required;
- rearrangement and readjustment of evaluation of conformity clause according to CEN template;
- modification of dimensional tolerances for group B tiles (Annexes G to L);
- elimination of previous Annex Q on "Additional European requirements on ceramic tiles" (this information is already clarified in the body of the standard);
- Annex ZA: simplification of tables and revised content of simplified marking.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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

1 Scope

This European Standard defines terms and specifies characteristics for ceramic tiles produced by extrusion and dry-pressing techniques, used for internal and/or external floorings (including stairs) and walls. Furthermore, it provides the level of requirements for these characteristics and references to the test methods applied (see Note) as well as provisions for evaluation of conformity and marking.

NOTE The series of standards EN ISO 10545 describe the test procedures required to determine most of the product characteristics listed in this European Standard. The series is divided into 16 parts, each describing a specific test procedure or related matter.

This European Standard does not cover:

- ceramic tiles made by processes other than extrusion or dry-pressing;
- dry-pressed unglazed ceramic tiles with water absorption greater than 10 %;
- ceramic tiles used for floorings on external road finishes;
- ceramic tiles used in ceiling finishes or suspended ceilings.

2 Normative references

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.

EN 1015-12, *Methods of test of mortar for masonry — Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates*

EN 12004:2007+A1:2012, *Adhesives for tiles — Requirements, evaluation of conformity, classification and designation*

CEN/TS 15209, *Tactile paving surface indicators produced from concrete, clay and stone*

CEN/TS 16165, *Determination of slip resistance of pedestrian surfaces — Methods of evaluation*

EN ISO 10545-1, *Ceramic tiles — Part 1: Sampling and basis for acceptance (ISO 10545-1)*

EN ISO 10545-2, *Ceramic tiles — Part 2: Determination of dimensions and surface quality (ISO 10545-2)*

EN ISO 10545-3, *Ceramic tiles — Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density (ISO 10545-3)*

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

EN ISO 10545-5, *Ceramic tiles — Part 5: Determination of impact resistance by measurement of coefficient of restitution (ISO 10545-5)*

EN ISO 10545-6, *Ceramic tiles — Part 6: Determination of resistance to deep abrasion for unglazed tiles (ISO 10545-6)*

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

- EN ISO 10545-8, *Ceramic tiles — Part 8: Determination of linear thermal expansion (ISO 10545-8)*
- EN ISO 10545-9, *Ceramic tiles — Part 9: Determination of resistance to thermal shock (ISO 10545-9)*
- EN ISO 10545-10, *Ceramic tiles — Part 10: Determination of moisture expansion (ISO 10545-10)*
- EN ISO 10545-11, *Ceramic tiles — Part 11: Determination of crazing resistance for glazed tiles (ISO 10545-11)*
- EN ISO 10545-12, *Ceramic tiles — Part 12: Determination of frost resistance (ISO 10545-12)*
- EN ISO 10545-13, *Ceramic tiles — Part 13: Determination of chemical resistance (ISO 10545-13)*
- EN ISO 10545-14, *Ceramic tiles — Part 14: Determination of resistance to stains (ISO 10545-14)*
- EN ISO 10545-15, *Ceramic tiles — Part 15: Determination of lead and cadmium given off by glazed tiles (ISO 10545-15)*
- EN ISO 10545-16, *Ceramic tiles — Part 16: Determination of small colour differences (ISO 10545-16)*
- ISO 1006:1983, *Building construction — Modular coordination — Basic module*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1006:1983 and the following apply.

3.1

ceramic tile

tile made from clays and/or other inorganic raw materials

Note 1 to entry: Tiles are usually shaped by extruding (Method A) or dry-pressing (Method B) at room temperature followed by drying and firing at temperatures sufficient to develop the required properties, but can be formed by other processes (these are not covered by this European Standard). Tiles can be glazed (GL) or unglazed (UGL).

3.2

porcelain ceramic tile

fully vitrified ceramic tile with water absorption of 0,5 % or less

Note 1 to entry: See groups Ala and Bla, as given in Table 1.

3.3

glaze

vitrified covering on ceramic tile

3.4

engobed surface

clay-based covering with a matt finish which can be permeable or impermeable

Note 1 to entry: A tile with an engobed surface is regarded as an unglazed tile.

3.5

polished surface

surface of a glazed or unglazed ceramic tile which has been given a glossy finish by mechanical polishing carried out after firing