SLOVENSKI STANDARD
SIST EN 13888-1:2022

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Fugirne mase za keramične ploščice - 1. del: Zahteve, klasifikacija, označba, označevanje in etiketiranje

Grouts for ceramic tiles - Part 1: Requirements, classification, designation, marking and labelling

Fugenmörtel für keramische Fliesen und Platten - Teil 1: Anforderungen, Klassifizierung, Bezeichnung und Kennzeichnung

Mortiers de jointoiement pour carreaux et dalles céramiques - Partie 1 : Exigences, classification, désignation, marquage et étiquetage

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ICS:

01.040.91	Gradbeni materiali in gradnja (Slovarji)	Construction materials and building (Vocabularies)
91.100.10	Cement. Mavec. Apno. Malta	Cement. Gypsum. Lime. Mortar
91.100.23	Keramične ploščice	Ceramic tiles

SIST EN 13888-1:2022 **en,fr,de**

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Grouts for ceramic tiles - Part 1: Requirements, classification, designation, marking and labelling

Mortiers de jointoiement pour carreaux et dalles céramiques - Partie 1 : Exigences, classification, désignation, marquage et étiquetage

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 13888-1:2022) 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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.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.

This document supersedes EN 13888:2009.

The significant changes between this document and the previous edition are listed herewith:

— Clause 2 Normative references;

— Clause 3 Terms and definitions;

— Clause 4 Specifications;

— Clause 5 Evaluation of conformity of the previous edition has been deleted;

— Clause 5 Classification and designation (Clause 6 of the previous edition).

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This document belongs to the EN 13888 series, *Grouts for ceramic tiles*, which consists of the following parts:

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— *Part 1: Requirements, classification, designation, marking and labelling*;

— *Part 2: Test methods*.

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

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Introduction

The characteristics of the construction products defined in this document take into consideration that the normal stresses due to the works for which they are intended, assembled or installed, can be properly accommodated. Some special characteristics will take into account the type of substrate and that the grouts should resist the degrading actions of climate, environment, etc.

Many properties of grouts for ceramic tiles are mainly determined by the type of binders used.

Tile grouts are defined in different types depending on the chemical nature of their binders.

The different types have specific characteristics in terms of application properties and final performance.

The relationship between characteristics and the working conditions (dry or humid conditions, hot climate, fast setting, etc.) is not given in this document.

The manufacturer gives information about the use of the product and the correct conditions of use.

The specifier evaluates the state of the job site (mechanical, thermal and chemical influences) and chooses the appropriate product considering all the possible risks.

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1 Scope

This document is applicable to ceramic tile grouts for internal and external tile installations on walls and floors.

This document gives the terminology concerning the products, working methods (see Annex A), application properties, etc. for ceramic tile grouts.

This document specifies the performance requirements for cementitious and reaction resin grouts for ceramic tiles.

This document does not contain criteria or recommendations for the design and installation of ceramic tiles.

Ceramic tile grouts can also be used for other types of tiles (natural and agglomerated stones, etc.), where these do not adversely affect these materials.

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.

EN 13888-2:2022, *Grouts for ceramic tiles - Part 2: Test methods*

3 Terms and definitions

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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:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1 General

3.1.1
tile
tile made out of ceramic or natural and agglomerated stones

Note 1 to entry: See EN 14411 [1] for definitions and specifications of ceramic tile.

3.2 Products

3.2.1
ceramic tile grout
any suitable product to be used to fill the joints between all types of ceramic tiles

3.2.2
cementitious grout
mixture of hydraulic binding agents, aggregates, inorganic and organic additives, mixed with water or liquid admix just before use

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3.2.3
reaction resin grout
one or more component mixture of synthetic resin, mineral fillers, inorganic and organic additives in which hardening occurs by chemical reaction

3.2.4
liquid admix
latex additive
special aqueous polymer dispersion to be mixed with a cementitious grout on site

3.3 Application properties

3.3.1
shelf life
time of storage under stated conditions during which a grout may be expected to maintain its working properties

3.3.2
maturing time
interval between the time when the cementitious grout is mixed and the time when it is ready for use

3.3.3
pot life
maximum time interval during which the grout can be used after mixing

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3.3.4
cleaning time
time interval between filling the joints and starting to clean the tiles

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3.3.5
service time
minimum time interval after which the tile installation can be put into service

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3.4 Final properties

3.4.1
flexural strength
maximum value of a grout prism failure determined by exerting a force in flexure at three points

Note 1 to entry: Flexural strength is measured according to EN 13888-2:2022, 9.1.

3.4.2
compressive strength
maximum value of a grout prism failure determined by exerting a force in compression on two opposite points

Note 1 to entry: Compressive strength is measured according to EN 13888-2:2022, 9.1.

3.4.3
water absorption
amount of water absorbed by capillary action when the surface of the grout prism is in contact with water without any additional pressure

Note 1 to entry: Water absorption is measured according to EN 13888-2:2022, 9.2.

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3.4.4
abrasion resistance
capability of the grout surface to resist wear

Note 1 to entry: Abrasion resistance is measured according to EN 13888-2:2022, 9.4.

3.4.5
shrinkage
reduction in length of a grout prism during hardening

Note 1 to entry: Shrinkage is measured according to EN 13888-2:2022, 9.3.

3.4.6
chemical resistance
capability of a grout to resist chemical agents

Note 1 to entry: Chemical resistance is measured according to EN 13888-2:2022, 9.5.

3.5 Characteristics

3.5.1
basic characteristics
characteristics that a grout shall have

3.5.2
additional characteristics
characteristics for specific service conditions with enhanced levels of performance

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4 Product characteristics

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4.1 Cementitious grouts (CG)

The cementitious grouts shall comply with the characteristics reported in Table 1.

Table 2 reports the additional characteristics that might be required for special service conditions.

The amount of water and/or liquid admix required for preparing the cementitious grout shall be the same for all tests.

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Table 1 — Basic characteristics for cementitious grouts

1a	NORMAL SETTING GROUTS (CG1)	
Characteristic	**Requirement**	**Test Method**
Abrasion resistance	≤ 2 000 mm³	EN 13888-2:2022, 9.4
Flexural strength after dry storage	≥ 2,5 N/mm²	EN 13888-2:2022, 9.1
Flexural strength after freeze–thaw cycles	≥ 2,5 N/mm²	EN 13888-2:2022, 9.1
Compressive strength after dry storage	≥ 15 N/mm²	EN 13888-2:2022, 9.1
Compressive strength after freeze–thaw cycles	≥ 15 N/mm²	EN 13888-2:2022, 9.1
Shrinkage	≤ 3 mm/m	EN 13888-2:2022, 9.3
Water absorption after 30 min	≤ 5 g	EN 13888-2:2022, 9.2
Water absorption after 240 min	≤ 10 g	EN 13888-2:2022, 9.2
1b	**FAST SETTING GROUTS (CG1F)**	
Characteristic	**Requirement**	**Test Method**
Early compressive strength	≥ 7,5 N/mm² after not more than 6 h	EN 13888-2:2022, 9.1
All other requirements as in Table 1a		

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Table 2 — Additional characteristics for cementitious grouts

2a	NORMAL SETTING (CG2) AND FAST SETTING GROUTS (CG2F)	
Characteristic	**Requirement**	**Test Method**
High abrasion resistance	≤ 1 000 mm³	EN 13888-2:2022, 9.4
Reduced water absorption after 30 min	≤ 2 g	EN 13888-2:2022, 9.2
Reduced water absorption after 240 min	≤ 5 g	EN 13888-2:2022, 9.2

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4.2 Reaction resin grouts (RG)

The reaction resin grouts shall comply with the characteristics reported in Table 3.

Regarding the characteristic of chemical resistance, there is no indication of limit value or chemical agent. When specific chemical resistance data are required for a project, testing shall conform to EN 13888-2:2022, 9.5, with chemical concentrations and immersion temperatures chosen to simulate exposure conditions. The test media shall consist of media to which the chemical resistant materials are exposed in service and the test conditions (temperature, etc.) shall simulate the anticipated service and exposure conditions as closely as possible.