SLOVENSKI STANDARD
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Fugirne mase za plo ̇l ice ï Definicije in specifikacije

Grouts for tiles - Definitions and specifications

Fugenmörtel für Fliesen und Platten - Definitionen und Festlegungen

Mortiers de jointoiement pour carreaux et dalles céramiques - Définitions et spécifications

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This European Standard was approved by CEN on 26 July 2002.

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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 Management Centre has the same status as the official versions.

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

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Contents

Foreword

This document EN 13888:2002 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of an identical text or by endorsement, at the latest by March 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

This standard includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The characteristics of the construction products defined in this European Standard have to consider 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 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 standard.

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.

1 Scope

This European Standard applies to ceramic tile grouts for internal and external tile installations on walls and floors.

This standard gives the terminology concerning the products, working methods, application properties, etc., for ceramic tile grouts.

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

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

NOTE 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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 87[1], *Ceramic floor and wall tiles – Definitions, classification, characteristics and marking.*

EN 12002, *Adhesives for tiles - Determination of transverse deformation for cementitious adhesives and grouts.*

EN 12808-1, *Adhesives and grouts for tiles – Part 1: Determination of chemical resistance of reaction resin mortars.*

EN 12808-2, *Grouts for tiles – Part 2: Determination of resistance to abrasion.*

EN 12808-3, *Grouts for tiles – Part 3: Determination of flexural and compressive strength.*

EN 12808-4, *Grouts for tiles – Part 4: Determination for shrinkage.*

EN 12808-5, *Grouts for tiles – Part 5: Determination of water absorption.*

3 Terms and definitions

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

3.1 General

3.1.1
wall and floor tiles
tiles made out of ceramic (see EN 87) or natural and agglomerated stones

3.1.2
grouting a tile surface
process of filling the joints between all types of tiles, with the exception of movement joints

[1] Will be replaced by EN 14411 which is under preparation.

3.2 Products

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

3.2.2
cementitious grout (CG)
mixture of hydraulic binding agents, aggregates, inorganic and organic additives. The grout has only to be mixed with water or liquid admix just before use

3.2.3
reaction resin grout (RG)
mixture of synthetic resin, aggregates, inorganic and organic additives in which hardening occurs by chemical reaction

They are available in one or more component forms.

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

3.3 Tools and working methods

There are three possible working methods for filling the joints between tiles:

1) manually with a rubber float or suitable tool;

2) with an air pressurized- or handgun from a cartridge or an appropriate container (often done with reaction resin grouts);

3) mechanically with a suitable machinery.

The cleaning of tiles after the application of the grout can be performed manually or mechanically with appropriate tools.

3.4 Application properties

3.4.1
shelf life
time of storage under stated conditions during which a grout may be expected to maintain its working properties

3.4.2
maturing time
interval between the time when the cementitious grout is mixed and the time when it is ready for use

3.4.3
pot-life
maximum time interval during which the grout can be used after mixing

3.4.4
grouting time
minimum time interval after installation of tiles, after which the grout can be applied into the joints

3.4.5
cleaning time
time interval between filling the joints and starting to clean the tiles

3.4.6
service time
minimum time interval after which the tile installation can be put into service

3.5 Final properties

3.5.1
flexural strength
maximum value of a grout prism failure determined by exerting a force in flexure at three points. It is measured according to EN 12808-3

3.5.2
compressive strength
maximum value of a grout prism failure determined by exerting a force in compression on two opposite points. It is measured according to EN 12808-3

3.5.3
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. It is measured according to EN 12808-5

3.5.4
abrasion resistance
capability of the grout surface to resist wear. It is measured according to EN 12808-2

3.5.5
shrinkage
reduction in length of a grout prism during hardening. It is measured according to EN 12808-4

3.5.6
chemical resistance
capability of a grout to resist chemical agents. It is measured according to EN 12808-1

3.5.7
transverse deformation
deflection recorded at the centre when a beam of hardened grout is subjected to three point loading. It is used to evaluate the deformability of a cementitious grout and it is measured according to EN 12002

3.6 Characteristics

3.6.1
fundamental characteristics
characteristics that a grout shall have

3.6.2
additional characteristics
characteristics for specific service conditions where enhanced levels of performance are required

4 Specifications

4.1 Cementitious grouts

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

Table 1b reports the additional characteristics that might be required for special service conditions.