
Adhezivji za keramiko in betonske ploščice - Betonske ploščice za preizkušnje

Adhesives for tiles - Concrete slab for test

Mörtel und Klebstoffe für keramische Fliesen und Platten - Betonsplatten

Colles a carrelage - Plaques de béton pour essais

Ta slovenski standard je istoveten z: **EN 1323:1996**

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ICS:

83.180	Lepila	Adhesives
91.100.10	Cement. Mavec. Apno. Malta	Cement. Gypsum. Lime. Mortar
91.100.30	Beton in betonski izdelki	Concrete and concrete products

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en

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EUROPEAN STANDARD

EN 1323

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1996

ICS 83.180; 91.100.10; 91.100.30

Descriptors: tiles, floor coverings, glue, supports, plates, concrete, preparation, specifications, manufacturing, water absorption tests

English version

Adhesives for tiles - Concrete slab for test

Colles à carrelage - Plaques de béton pour essais

Mörtel und Klebstoffe für keramische Fliesen und Platten - Betonplatten

This European Standard was approved by CEN on 1996-11-25. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by June 1997, and conflicting national standards shall be withdrawn at the latest by June 1997.

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

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1 Scope

This European standard specifies the substrate (concrete slab) to be used for the determination of the properties of adhesives for tiles.

This European standard does not contain performance requirements or recommendations for the design and installation of ceramic tiles.

NOTE: Ceramic tile adhesives may also be used for other types of tiles (natural and agglomerated stones, etc.).

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 draft European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ENV 197-1 Cement - Composition, specifications and conformity criteria - Part 1: Common cements
EN 1322 Adhesives for tiles - Definitions and terminology

3 Test conditions

The standard conditions shall be $(23 \pm 2)^\circ \text{C}$ and $(50 \pm 5)\%$ relative humidity and the air circulation in the working area less than 0,2 m/s.

4 Apparatus

4.1 Pull-head plates

Square metallic (e.g. steel, aluminium) plates, with dimensions of (50 ± 1) mm x (50 ± 1) mm and a minimum thickness of 10 mm with a suitable fitting for connection to the tensile testing machine.

4.2 Tensile testing machine

A tensile testing machine for direct pull tensile force test and with suitable capacity and sensitivity for the test. The machine shall be capable of applying the load to the pull-head plate at the rate of (250 ± 50) N/s, through a suitable fitting that does not exert any bending force.

4.3 Carsten-Röhrchen flask (standards.iteh.ai)

Carsten-Röhrchen flask or other suitable apparatus for measuring the water absorption at the surface of the concrete slab (see figure 1). [SIST EN 1323:1998](https://standards.iteh.ai/catalog/standards/sist/cd7f64bd-d9a5-40a7-85f1-b9d31846548f/sist-en-1323-1998)

5 Concrete slab

5.1 Specification

The concrete slab shall be at least 40 mm thick, have a moisture content of less than 3% by mass (carbide method) and have a water absorption at the surface after 4 h in the range of $0,5 \text{ cm}^3$ to $1,5 \text{ cm}^3$ measured by the method described in clause 5.3.

The tensile adhesion strength shall be at least 1,5 N/mm². The tensile adhesion strength shall be determined by bonding at least five pull head plates (see 4.1) directly to the slab, e.g. with an epoxide resin, and determining the tensile adhesion strength by applying a force which increases at a constant rate of (250 ± 50) N/s.

The test surface shall have a finish similar to that obtained by using a wooden float and be clean and dust-free at the time of the test.

5.2 Manufacture of the concrete slab

The specification (see 5.1) may be achieved by using the following procedure to manufacture the concrete slab:

- binder: Portland cement type CEI 42,5 R in accordance with EN 197
- aggregate: gravel sand, of 0 mm to 8 mm particle size, continuous grading curve between A and B (see figure 2)
- mix ratio binder and aggregate: 1:5 in proportion by mass
- ultrafines content per m³ of ready mixed concrete: 500 kg/m³ prepared concrete.
The concrete shall contain ultra fines in order to be properly workable and have a closed structure; the ultra fines content consists of cement and aggregate particle size up to 0,125 mm.
- water/cement ratio: 0,5
- manufacture: vertically or horizontally in molds, avoid the use of any mold release agent
- compaction: 90 s on a vibrating table at 50 Hz
- conditioning: 24 h conditioning under standard conditions followed by six days water immersion at (20 ± 2)° C and then conditioning for 21 days under standard conditions with each slab placed separately in vertical position.

NOTE: Reference slabs may be obtained from :

CEBTP - domaine de St -Paul - 78470 St-Remy les Chevreuse, France

SÄUREFLIESNER VEREINIGUNG E.G. - Im langen Felden 4 Postfach - 1254 - 3006
Burgwedel, Germany

5.3 Water absorption at the surface

Water absorption at the surface of the concrete slab shall be determined by the following method.

- a) Bond a graduated glass measuring tube (Carsten Röhrchen flask) to the concrete slab, by means of a suitable sealant.
- b) After the sealant has cured, fill the measuring tube with water, to the upper level.

- c) Record the water level every 60 min during the 4 hours of the test, and draw the absorption as a function of time.
- d) Perform at least 3 tests on a reference concrete slab from each batch.

6 Test report

The following items shall be recorded in the test report:

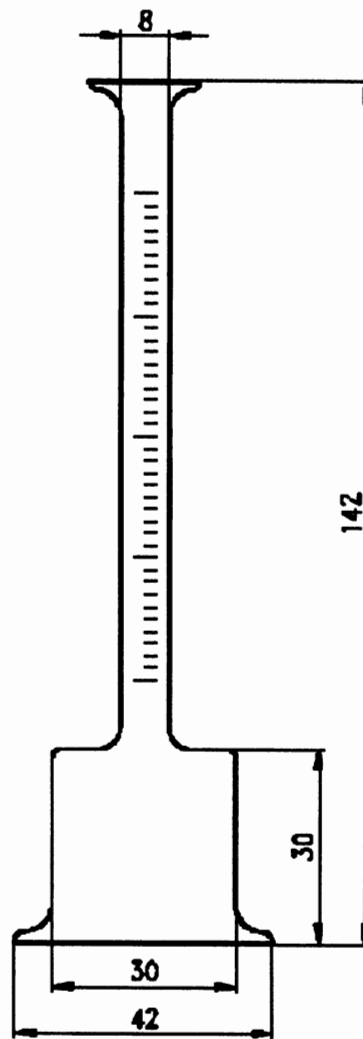
- a) the number and date of this European standard;
- b) description of the concrete slab, and reference to the batch;
- c) handling and storage of concrete slabs before testing;
- d) water absorption of concrete slab, representative of the batch;
- e) moisture content of concrete slabs, representative of the batch;
- f) tensile adhesion strength of concrete slab, representative of the batch;
- g) any other factor that might have influenced the result.
- h) date of the test

The conformance of the concrete slabs to this draft European standard shall be confirmed in the test report.

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**Figure 1 - Apparatus for evaluating water absorption
(Carsten - Röhrchen flask)**

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