



SLOVENSKI STANDARD

SIST EN 12003:2009

01-februar-2009

Nadomešča:
SIST EN 12003:1998

Lepila za ploščice - Ugotavljanje strižne adhezijske trdnosti reakcijskih smolnih lepil

Adhesive for tiles - Determination of shear adhesion strength of reaction resin adhesives

Mörtel und Klebstoffe für Fliesen und Platten - Bestimmung der Scherfestigkeiten von Reaktionsharz-Klebstoffen

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Colles à carrelage - Détermination de l'adhérence par cisaillement des colles réactives

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Ta slovenski standard je istoveten z: **EN 12003:2008**

ICS:

83.180	Lepila	Adhesives
91.100.23	Keramične ploščice	Ceramic tiles

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EUROPEAN STANDARD

EN 12003

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2008

ICS 91.100.10

Supersedes EN 12003:1997

English Version

Adhesive for tiles - Determination of shear adhesion strength of reaction resin adhesives

Colles à carrelage - Détermination de l'adhérence par cisaillement des colles réactives

Mörtel und Klebstoffe für Fliesen und Platten - Bestimmung der Scherfestigkeiten von Reaktionsharz-Klebstoffen

This European Standard was approved by CEN on 22 August 2008.

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 CEN Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 12003:2008) 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 2009, and conflicting national standards shall be withdrawn at the latest by April 2009.

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 12003:1997.

This document is one of a series of European Standards for tests on tile adhesives including:

EN 1308, *Adhesives for tiles – Determination of slip*

EN 1323, *Adhesives for tiles – Concrete slabs for tests*

EN 1324, *Adhesives for tiles – Determination of shear adhesion strength of dispersion adhesives*

EN 1346, *Adhesives for tiles – Determination of open time*

EN 1347, *Adhesives for tiles – Determination of wetting capability*

EN 1348, *Adhesives for tiles – Determination of tensile adhesion strength for cementitious adhesives*

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

EN 12003, *Adhesives for tiles – Determination of shear adhesion strength of reaction resin adhesives*

EN 12004, *Adhesives for tiles – Requirements, evaluation of conformity, classification and designation*

EN 12808-1, *Grouts for tiles – Part 1: Determination of chemical resistance of reaction resin mortars*

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

EN 12003:2008 (E)**1 Scope**

This European Standard specifies the test method to be used to determine the shear adhesion strength of reaction resin ceramic tile adhesives.

This European Standard is applicable to all reaction resin ceramic tile adhesives for internal and external tile installations on floors and walls.

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

NOTE Ceramic tile adhesives can also be used for other kinds of tiles (natural and agglomerated stones, etc.), where these do not adversely affect the stones.

This European Standard can involve hazardous materials and operations. Persons using this European Standard should be familiar with normal laboratory practice. This European Standard does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any European and national regulatory conditions.

2 Normative references

The following referenced documents are indispensable for the application 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.

- [SIST EN 12003:2009](#)
EN 1067, *Adhesives – Examination and preparation of samples for testing*
EN 14411, *Ceramic tiles – Definitions, classification, characteristics and marking*
EN ISO 15605, *Adhesives – Sampling (ISO 15605:2000)*

3 Sampling

Take a sample of at least 2 kg of the adhesive in accordance with EN ISO 15605 and EN 1067.

4 Test conditions

Standard conditions shall be $(23 \pm 2)^\circ \text{C}$ and $(50 \pm 5)\% \text{R.H.}$ and an air velocity in the working area less than 0,2 m/s.

5 Test materials**5.1 General**

Condition all test materials for at least 24 h under standard conditions. The adhesive to be tested shall be within its shelf life, where this is specified.

5.2 Ceramic tiles

The tiles shall be clean and dry.

The tiles used for this method shall be of:

- type V2: fully vitrified tiles in accordance with EN 14411, group B1a, of water absorption (E) $\leq 0,5$ % by mass, unglazed and with plane adhering surface with facial dimensions of (100 ± 1) mm x (100 ± 1) mm and a thickness in the range 8-10 mm.

6 Apparatus

6.1 Template

The template shall be of polytetrafluoroethylene and shall conform to the measurements shown in Figure 1.

Dimensions in millimetres

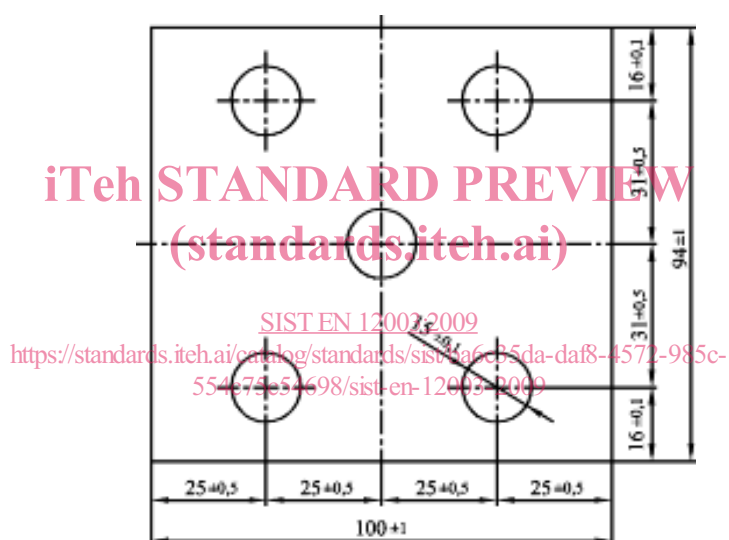
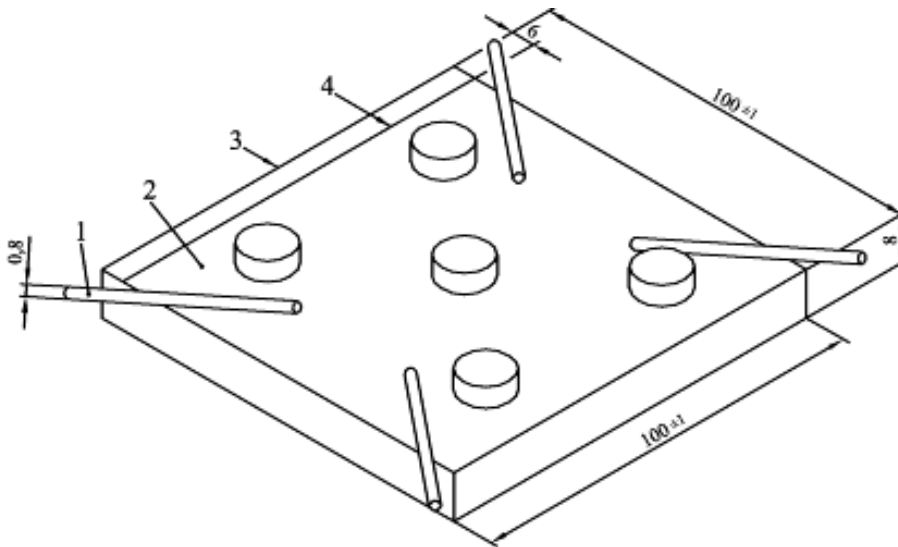


Figure 1 — Template for the preparation of test tile units

Dimensions in millimetres

**Key**

- 1 Spacer rods
- 2 Ceramic test tile
- 3 Force direction
- 4 Pencil guide line

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Figure 2 — Tile with the applied adhesive and the spacer rods
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6.2 Spacer

Spacer rods shall have a diameter of $(0,8 \pm 0,1)$ mm and a length of approximately 40 mm.

6.3 Weight

A weight of cross section (97 ± 3) mm x (97 ± 3) mm capable of exerting a force of $(70 \pm 0,15)$ N.

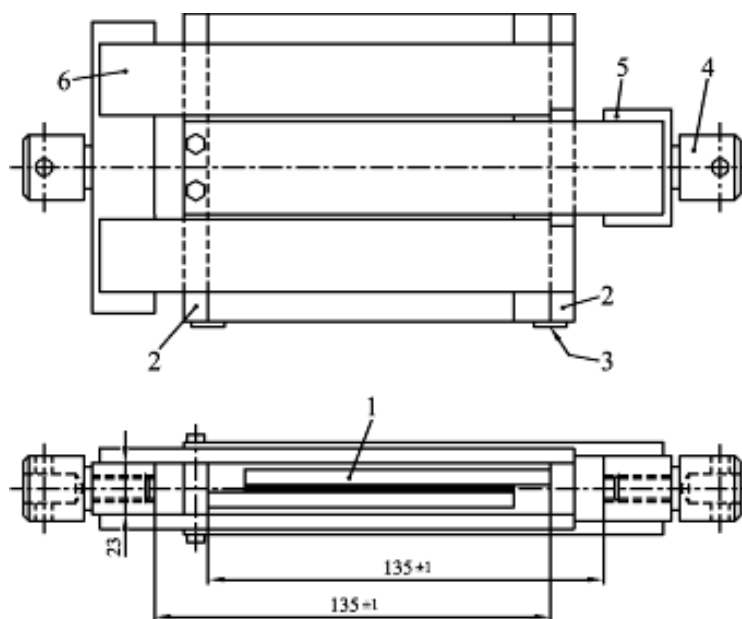
6.4 Test machine

A test machine with suitable capacity and sensitivity for the test and with a variable testing speed. The machine shall be capable of applying the load to the tile through a suitable jig (see 6.5).

6.5 Shear test jig

Any suitable jig used to transfer into shear from the compression or tensile load exerted by the testing machine. Examples of suitable jigs are shown in Figure 3 and Figure 4.

Dimensions in millimetres

**Key**

- 1 Test unit
- 2 Pressure plate
- 3 Stops
- 4 Adapter
- 5 "U" section frame
- 6 Box section frame

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Figure 3 — Jig for shear adhesion test using a tensile machine