



SLOVENSKI STANDARD

SIST EN 772-21:2011

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Metode preskušanja zidakov - 21. del: Ugotavljanje vpijanja hladne vode opečnih in apeno peščenih zidakov

Methods of test for masonry units - Part 21: Determination of water absorption of clay and calcium silicate masonry units by cold water absorption

Prüfverfahren für Mauersteine - Teil 21: Bestimmung der Kaltwasseraufnahme von Mauerziegeln und Kalksandsteinen

Méthodes d'essai des éléments de maçonnerie - Partie 21: Détermination de l'absorption d'eau des éléments de maçonnerie en terre cuite et en silico-calcaire par absorption d'eau froide

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Ta slovenski standard je istoveten z: **EN 772-21:2011**

ICS:

91.100.15 Mineralni materiali in izdelki Mineral materials and products

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EUROPEAN STANDARD
NORME EUROPÉENNE
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ICS 91.100.15

English Version

Methods of test for masonry units - Part 21: Determination of water absorption of clay and calcium silicate masonry units by cold water absorption

Méthodes d'essai des éléments de maçonnerie - Partie 21:
Détermination de l'absorption d'eau des éléments de
maçonnerie en terre cuite et en silico-calcaire par
absorption d'eau froide

Prüfverfahren für Mauersteine - Teil 21: Bestimmung der
Kaltwasseraufnahme von Mauerziegeln und
Kalksandsteinen

This European Standard was approved by CEN on 25 December 2010.

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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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Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Principle	4
4 Symbols	4
5 Apparatus	4
6 Preparation	5
6.1 Sampling	5
6.2 Drying.....	5
7 Test procedure	5
8 Calculation of results	5
9 Evaluation of results	5
10 Test report	5

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SIST EN 772-21:2011

<https://standards.iteh.ai/catalog/standards/sist/2339aa9a-5579-49d8-9b66-bb57f35a8fc5/sist-en-772-21-2011>

Foreword

This document (EN 772-21:2011) has been prepared by Technical Committee CEN/TC 125 "Masonry", the secretariat of which is held by BSI.

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 November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

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.

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, Croatia, 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.

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EN 772-21:2011 (E)**1 Scope**

This European Standard specifies a method of determining the water absorption of clay and calcium silicate masonry units by immersing them in cold water.

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.

EN 771-1, *Specification for masonry units — Part 1: Clay masonry units*

EN 771-2, *Specification for masonry units — Part 2: Calcium silicate masonry units*

EN 771-3, *Specification for masonry units — Part 3: Aggregate concrete masonry units (Dense and light-weight aggregates)*

EN 771-4, *Specification for masonry units — Part 4: Autoclaved aerated concrete masonry units*

EN 771-5, *Specification for masonry units — Part 5: Manufactured stone masonry units*

EN 771-6, *Specification for masonry units — Part 6: Natural stone masonry units*

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3 Principle

SIST EN 772-21:2011

After drying to constant mass a masonry unit is immersed in water for 24 h and the increase in mass is determined.

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4 Symbols

M_d is the mass of the specimen after drying (g);

M_s is the mass of the specimen after soaking (g);

W_s is the water absorption of the specimen (%).

5 Apparatus

- 5.1 Water tank large enough to contain all of the samples, supported off the base of the tank so that water is in contact with all the faces of the specimen.
- 5.2 Ventilated oven capable of maintaining a temperature of $105\text{ °C} \pm 5\text{ °C}$.
- 5.3 Weighing instrument capable of weighing the specimens to an accuracy of 0,1 % of their mass when dry.

6 Preparation

6.1 Sampling

The method of sampling shall be in accordance with the relevant part of EN 771.

The minimum number of specimens shall be six, but a larger minimum number may be specified in the product specification, in which case that larger number shall be used.

6.2 Drying

Dry the test specimens to constant mass M_d in a ventilated oven (5.2) at a temperature of $105\text{ °C} \pm 5\text{ °C}$. Constant mass is reached if, during the drying process in two subsequent weighings with not less than a 24 h interval, the loss in mass between the two determinations is not more than 0,2 % of the total mass. Allow the specimens to cool to ambient temperature before they are weighed.

7 Test procedure

Place each unit in the tank of water.

Leave clay units submerged for $24\text{ h} \pm 0,5\text{ h}$. Leave calcium silicate units submerged for $48\text{ h} \pm 0,5\text{ h}$.

Take the units from the tank and remove any water from their surfaces using a damp cloth or sponge.

Weigh the specimens and record their mass, M_s .

8 Calculation of results

SIST EN 772-21:2011

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Calculate the water absorption W_s of each of the units to the nearest 1 %.

$$W_s = \frac{M_s - M_d}{M_d} \times 100\%$$

9 Evaluation of results

Calculate the mean water absorption to the nearest 1 %.

10 Test report

The test report shall contain the following information:

- number, title and date of issue of this European Standard;
- name of the organization that carried out the sampling and the method used;
- date of testing;
- description of the specimens to EN 771-1 or EN 771-2 as is relevant;
- number of specimens in the sample;

EN 772-21:2011 (E)

- f) mass of each specimen dry and after soaking;
- g) soaking period in hours;
- h) individual and mean water absorption values to the nearest 1 %;
- i) remarks, if any.

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