

Natural stone test methods - Determination of water absorption coefficient by capillarity

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absorption coefficient by capillarity

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1925:2001 sisaldab Euroopa standardi EN 1925:1999 ingliskeelset teksti.	This Estonian standard EVS-EN 1925:2001 consists of the English text of the European standard EN 1925:1999.
Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a method for determining the water absorption coefficient of natural stone by capillarity.	Scope: This European Standard specifies a method for determining the water absorption coefficient of natural stone by capillarity.
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ICS 73.020, 91.100.15

Võtmesõnad: absorption factor, capillarity, determination, natural stone, procedures, specimen preparation, tests, water absorption

ICS 73.020; 91.100.15

English version

Natural stone test methods

Determination of water absorption coefficient by capillarity

Méthodes d'essai pour pierres
naturelles – Détermination du coeffi-
cient d'absorption d'eau par
capillarité

Prüfverfahren für Naturstein –
Bestimmung des Wasseraufnahme-
koeffizienten infolge Kapillarwirkung

This European Standard was approved by CEN on 1999-02-12.

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.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

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 246 "Natural stones", 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 September 1999, and conflicting national standards shall be withdrawn at the latest by September 1999.

This draft standard is one of the series of draft standards for tests on natural stone.

Test methods for natural stone consist of the following parts:

EN 1926	Natural stone test methods - Determination of compressive strength
EN 1936	Natural stone test methods - Determination of real density and apparent density and of total and open porosity
EN 12370	Natural stone test methods - Determination of resistance to salt crystallisation
prEN 12371	Natural stone test methods - Determination of frost resistance
EN 12372	Natural stone test methods - Determination of flexural strength under concentrated load
prEN 12407	Natural stone test methods - Petrographic description
prEN 13161	Natural stone test methods - Determination of flexural strength under constant moment
prEN 13364	Natural stone test methods - Determination of the breaking load at a dowel hole
prEN(WI 00246011)	Natural stone test methods - Determination of thermal dilatation coefficient
prEN(WI 00246012)	Natural stone test methods - Determination of sound - speed propagation
prEN(WI 00246014)	Natural stone test methods - Determination of abrasion resistance
prEN(WI 00246015)	Natural stone test methods - Determination of Knoop hardness
prEN(WI 00246016)	Natural stone test methods - Determination of thermal shock resistance
prEN(WI 00246017)	Natural stone test methods - Determination of slip coefficient
prEN(WI 00246018)	Natural stone test methods - Determination of static elastic modulus
prEN(WI 00246019)	Natural stone test methods - Determination of rupture energy
prEN(WI 00246030)	Natural stone test methods - Determination of surface finishes (rugosity)
prEN 13373	Natural stone test methods - Determination of geometric characteristics on units
prEN(WI 00246032)	Natural stone test methods - Determination of resistance to ageing by salt mist
prEN(WI 00246033)	Natural stone test methods - Determination of resistance to ageing by humidity, temperature, SO ₂ action
prEN(WI 00246035)	Natural stone test methods - Determination of dynamic elastic modulus (by fundamental resonance frequency)
prEN(WI 00246036)	Natural stone test methods - Determination of water absorption at atmospheric pressure

It is intended that other ENs should call up this EN 1925 as the basis of evaluation of conformity. (Nevertheless it is not intended that all natural stones products should be subjected regularly to all the listed tests. Specifications in other standards should call up only relevant test methods).

This European standard has an annex A (informative) and an annex B (informative).

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European standard specifies a method for determining the water absorption coefficient of natural stone by capillarity.

NOTE: This method is not suitable for stones with an open porosity less than 1% when determined in accordance with EN 1936.

2 Normative references

The present 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 below. For dated references, subsequent amendments 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 last edition of the publication referred to applies.

prEN 12670	Natural stones - Terminology
EN 1936	Natural stone test methods - Determination of real density and apparent density and of total and open porosity
prEN 12440	Denomination of natural stone

3 Principle

After drying to a constant mass, the specimen is immersed in (3 ± 1) mm of water on one of its sides (never the worked side) and the increase in mass is measured as a function of time.

4 Symbols

m_d	mass of the dry specimen, in grams;
m_i	successive masses of the specimen during testing, in grams;
A	area of the side immersed in water, in square metres;
t_i	times elapsed from the beginning of the test until the times at which the successive masses m_i were measured, in seconds;
C_1	water absorption coefficient by capillarity perpendicular to the planes of anisotropy of the stone, in grams per square metre per square root of seconds;
C_2	water absorption coefficient by capillarity parallel to the planes of anisotropy of the stone, in grams per square metre per square root of seconds