

## **Agglomerated stone - Test methods - Part 1: Determination of apparent density and water absorption**

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Determination of apparent density and water  
absorption

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14617-1:2005 sisaldab Euroopa standardi EN 14617-1:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.05.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14617-1:2005 consists of the English text of the European standard EN 14617-1:2005.</p> <p>This document is endorsed on 30.05.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This European standard specifies a method for determining the apparent density and water absorption of natural stone agglomerate products</p>	<p><b>Scope:</b> This European standard specifies a method for determining the apparent density and water absorption of natural stone agglomerate products</p>
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**ICS** 91.060

**Võtmesõnad:**

ICS 91.100.15

English version

## Agglomerated stone - Test methods - Part 1: Determination of apparent density and water absorption

Pierre agglomérée - Méthodes d'essai - Partie 1:  
Détermination de la masse volumique apparente et du  
coefficient d'absorption d'eau

Künstlich hergestellter Stein - Prüfverfahren - Teil 1:  
Bestimmung der Rohdichte und der Wasseraufnahme

This European Standard was approved by CEN on 3 February 2005.

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.

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 Central Secretariat has the same status as the official versions.

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## Foreword

This document (EN 14617-1:2005) 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 2005, and conflicting national standards shall be withdrawn at the latest by September 2005.

Test methods for agglomerated stones consist of the following:

EN 14617-1, *Agglomerated stone - Test methods – Part 1: Determination of apparent density and water absorption*

EN 14617-2, *Agglomerated stone – Test methods – Part 2: Determination of flexural strength (bending)*

prEN 14617-3, *Agglomerated stone - Test methods – Part 3: Determination of slipperiness*

EN 14617-4, *Agglomerated stone - Test methods – Part 4: Determination of the abrasion resistance*

EN 14617-5, *Agglomerated stone - Test methods – Part 5: Determination of freeze and thaw resistance*

EN 14617-6, *Agglomerated stone - Test methods – Part 6: Determination of thermal shock resistance*

prEN 14617-7, *Agglomerated stone – Test methods – Part 7: Determination of ageing*

prEN 14617-8, *Agglomerated stone – Test methods – Part 8: Determination of resistance to fixing (dowel hole)*

EN 14617-9, *Agglomerated stone - Test methods – Part 9: Determination of impact resistance*

EN 14617-10, *Agglomerated stone – Test methods – Part 10: Determination of chemical resistance*

EN 14617-11, *Agglomerated stone – Test methods – Part 11: Determination of linear thermal expansion coefficient*

EN 14617-12, *Agglomerated stone – Test methods – Part 12: Determination of dimensional stability*

EN 14617-13, *Agglomerated stone – Test methods – Part 13: Determination of electrical resistivity*

prEN 14617-14, *Agglomerated stone – Test methods – Part 14: Determination of surface hardness*

EN 14617-15, *Agglomerated stone – Test methods – Part 15: Determination of compressive strength*

EN 14617-16, *Agglomerated stone – Test methods – Part 16: Determination of dimensions, geometric characteristics and surface quality of modular tiles*

prEN 14617-17, *Agglomerated stone – Test methods – Part 17: Determination of biological resistance*

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

## 1 Scope

This document specifies a method for determining the apparent density and water absorption of agglomerated stone products.

## 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.

Not applicable.

## 3 Terms and definitions

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

### 3.1

#### **apparent density (M<sub>v</sub>)**

ratio between mass (expressed in kg) and apparent volume (expressed in m<sup>3</sup>) confined within the external surface of the body.

### 3.2

#### **water absorption (C)**

maximum amount of water absorbed by the material when soaked in deionized water at room temperature and pressure according to the procedure described below, expressed as a percentage of the dry mass of the sample.

## 4 Apparatus

**4.1** A covered tank with a flat base comprising small non-oxidising and non-absorbent supports for the specimens.

**4.2** A device able to maintain a constant water level in the tank, described in 4.1.

**4.3** A time counter with an accuracy of 1 s.

**4.4** A weighting instrument with an accuracy of 0,01% of the sample mass.

**4.5** A hydrostatic balance accurate to at least 0,01% of the sample mass.

**4.6** A ventilated oven capable of maintaining a temperature of (70 ± 5)°C.

## 5 Preparation of the specimens

### 5.1 Sampling

The sampling is not responsibility of the test laboratory except where especially requested. At least six specimens selected from a homogeneous batch consisting of the same material mixture, and of regular geometric shape (cube, cylindrical or parallelepiped) should be tested. The final finishing of the specimen should be the same of the end product (sand blasted, gauged or polished surface) but without chemical surface treatment. The sample sizes should be such that they guarantee and represent the mixture. In case of either slabs or modular tiles with thickness less than 12 mm samples shall be approximately squared to sizes higher than 100 mm. For slabs and modular tiles