

**Agglomerated stone - Test methods - Part 10:  
Determination of chemical resistance**

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## EESTI STANDARDI EESSÕNA

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

## Agglomerated stone - Test methods - Part 10: Determination of chemical resistance

Pierre agglomérée - Méthodes d'essai - Partie 10:  
Détermination de la résistance chimique

Künstlich hergestellter Stein - Prüfverfahren - Teil 10:  
Bestimmung der chemischen Beständigkeit

This European Standard was approved by CEN on 9 March 2012.

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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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## Foreword

This document (EN 14617-10:2012) 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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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 14617-10:2005.

4.3, 4.4, 4.5, A.3 and A.4 have been modified since the last edition of this European Standard.

This European Standard is one of a series of standards for test methods for agglomerated stones which includes 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)*

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*

EN 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*

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*

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, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies a method for determining the chemical resistance and the resistance to stains of agglomerated stones (see EN 14618) with a polished surface after a prolonged contact with chemical materials.

NOTE It is to be remembered that agglomerated stones containing calcium carbonate aggregates are sensitive to any acid attack.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 Principle

Resistance to a chemical attack is the characteristic which defines the behaviour of a floor/wall covering material in contact with chemically aggressive agents potentially able to react with the surface itself, and thereby either corrode it, penetrate it permanently or alter the visible aspect in some manner.

The deteriorating action of the aggressive chemical can generate two different effects:

- a real chemical action, according to which the alteration of the surface is due to the chemical reaction between the aggressive agent and some constituents of the surface itself;
- a physical absorbing action, according to which the aggressive agent is able to penetrate the surface so that the removal is either extremely difficult or impossible.

Both these actions can involve a modification of the visible appearance of the surface of the chemically attacked material, but only in the first case can the damage also introduce a modification in the physical and mechanical properties of the material itself.

## 4 Determination of the chemical resistance

### 4.1 Chemical reagents

**4.1.1** Water solution containing hydrochloric acid solution, 50 % (V/V), prepared from N hydrochloric acid solution.

**4.1.2** Sodium hydroxide in a 50 % (V/V) water solution, prepared from a normal water sodium hydroxide non-carbonated solution.

### 4.2 Apparatus

Glossmeter, able to measure with an accuracy and precision of 10 %, the brightness degree of the surface.

The glossmeter shall measure the reflection of a light ray incident on a surface. The reflection degree is given by the amount of light specularly reflected in a point of the surface in relationship to the amount of light