

**Agglomerated stone - Test methods - Part 4:
Determination of the abrasion resistance**

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14617-4:2012 sisaldab Euroopa standardi EN 14617-4:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 14617-4:2012 consists of the English text of the European standard EN 14617-4:2012.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.04.2012.	Date of Availability of the European standard is 11.04.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.100.15

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

English Version

Agglomerated stone - Test methods - Part 4: Determination of the abrasion resistance

Pierre agglomérée - Méthodes d'essai - Partie 4:
Détermination de la résistance à l'usure

Künstlich hergestellter Stein - Prüfverfahren - Teil 4:
Bestimmung der Abriebbeständigkeit

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

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Principle of the test method	4
4 Abrasive material	4
5 Apparatus	4
6 Calibration	7
7 Test specimen preparation	7
7.1 Sampling	7
7.2 Specimens preparation	7
8 Procedure	8
8.1 Test method.....	8
8.2 Groove measurement.....	8
9 Test results	8
10 Test report	9
Bibliography	10

Foreword

This document (EN 14617-4:2012) 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 14617-4:2005.

Clause 6 has 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 abrasion resistance of agglomerated stone products.

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.

EN 13373, *Natural stone test methods — Determination of geometric characteristics on units*

ISO 8486-1, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220*

3 Principle of the test method

The test method is based on scraping off the upper face of the agglomerated stone specimen using an abrasive material under standard conditions.

4 Abrasive material

The abrasive required for this test is corundum (white fused aluminium oxide, i.e. alumina) with grit size of F80 according to standard ISO 8486-1. It shall not be used more than three times.

5 Apparatus

The wearing machine is of the type of Figure 1, which consists of a rotating abrasion wheel, a storage hopper with one or two control valves to regulate the feed of the abrasive material into a flow guidance hopper, a clamping trolley, a counterweight and a device measuring the number of revolutions.

Whenever two valves are used, one, which can be permanently set, shall be used to control the flow rate of corundum, while the other one is used to turn the flow on and off.

The hardness of the steel shall be 203 HB to 245 HB. Its diameter shall be (200 ± 1) mm and its edge thickness (10 ± 1) mm. It shall be driven to a rotation speed of 75 rotations in (60 ± 3) s.

A mobile clamping trolley is mounted on bearings and forced to press the test specimen against the wheel by a counterweight of constant mass.

The storage hopper containing the abrasive material feeds a flow guidance hopper.

The flow guidance hopper (cylindrical or rectangular) shall have a slotted outlet: the length of the slot shall be (9 ± 1) mm and the width shall be adjustable. The body of the flow guidance hopper shall be at least 10 mm bigger than the slot in all directions (though this is not required in the case of a rectangular hopper with at least one of the sides inclined down to the length (see Figure 2, Example B)).