

LIIMIGA/SEGUGA KINNITATAVATE KERAAMILISTE  
PLAATIDE ALL KASUTATAVAD VEDELANA  
PEALEKANTAVAD VEETÕKKETOOTED. NÕUDED,  
KATSEMEETODID, TOIMIVUSE PÜSIVUSE HINDAMINE JA  
KONTROLLIMINE, LIIGITAMINE NING MÄRGISTAMINE

Liquid applied water impermeable products for use  
beneath ceramic tiling bonded with adhesives -  
Requirements, test methods, assessment and  
verification of constancy of performance, classification  
and marking

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 14891:2017 sisaldab Euroopa standardi EN 14891:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 14891:2017 consists of the English text of the European standard EN 14891:2017.
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 15.02.2017.	Date of Availability of the European standard is 15.02.2017.
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](mailto:standardiosakond@evs.ee).

ICS 91.100.23, 91.100.25, 91.100.50

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:  
Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto: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:

Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English Version

Liquid applied water impermeable products for use  
beneath ceramic tiling bonded with adhesives -  
Requirements, test methods, assessment and verification  
of constancy of performance, classification and marking

Produits d'imperméabilisation appliqués en phase  
liquide utilisés sous carrelage collé - Spécifications,  
méthodes d'essai, évaluation et vérification de la  
constance de performance, classification et marquage

Flüssig zu verarbeitende wasserundurchlässige  
Produkte im Verbund mit keramischen Fliesen und  
Plattenbelägen - Anforderungen, Prüfverfahren,  
Bewertung und Überprüfung der  
Leistungsbeständigkeit, Klassifizierung und  
Bezeichnung

This European Standard was approved by CEN on 7 November 2016.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	4
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Product characteristics</b> .....	<b>7</b>
4.1 <b>General</b> .....	7
4.2 <b>Release of dangerous substances</b> .....	7
<b>5 Testing, assessment and sampling methods</b> .....	<b>8</b>
<b>6 Assessment and verification of constancy of performance (AVCP)</b> .....	<b>8</b>
6.1 <b>General</b> .....	8
6.2 <b>Type testing</b> .....	8
6.2.1 <b>General</b> .....	8
6.2.2 <b>Test samples, testing and compliance criteria</b> .....	9
6.2.3 <b>Test reports</b> .....	9
6.2.4 <b>Shared other party results</b> .....	9
6.3 <b>Factory Production Control (FPC)</b> .....	10
6.3.1 <b>General</b> .....	10
6.3.2 <b>Requirements</b> .....	10
6.3.3 <b>Product specific requirements</b> .....	13
6.3.4 <b>Procedure for modifications</b> .....	14
6.3.5 <b>One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity</b> .....	14
<b>7 Classification and designation</b> .....	<b>15</b>
<b>8 Marking and labelling</b> .....	<b>16</b>
<b>Annex A (normative) Testing, assessment and sampling methods</b> .....	<b>18</b>
A.1 <b>Sampling</b> .....	18
A.2 <b>Test conditions</b> .....	18
A.3 <b>Test materials</b> .....	18
A.3.1 <b>General</b> .....	18
A.3.2 <b>Ceramic tiles</b> .....	18
A.3.3 <b>Test substrate</b> .....	18
A.3.3.1 <b>Concrete slab</b> .....	18
A.3.3.2 <b>Other substrates (optional)</b> .....	18
A.3.4 <b>Ceramic tile adhesive</b> .....	19
A.3.5 <b>Sodium hypochlorite</b> .....	19
A.4 <b>Apparatus</b> .....	19
A.4.1 <b>Weight (Mass)</b> .....	19

A.4.2	Pull head plates .....	19
A.4.3	Machine for pull testing.....	19
A.4.4	Air-circulating oven .....	19
A.4.5	Mould .....	19
A.4.6	Jig.....	21
A.4.7	Equipment for permeability test.....	22
A.4.8	Machine for tensile testing.....	23
A.5	Mixing of liquid-applied water impermeable products.....	23
A.6	Tensile adhesion tests.....	23
A.6.1	Preparation of test pieces.....	23
A.6.2	Initial tensile adhesion strength .....	24
A.6.3	Tensile adhesion strength after water contact.....	24
A.6.4	Alternative method for tensile adhesion strength after water contact .....	24
A.6.5	Tensile adhesion strength after heat ageing .....	25
A.6.6	Tensile adhesion strength after freeze-thaw cycle.....	25
A.6.7	Tensile adhesion strength after contact with chlorinated water.....	25
A.6.8	Alternative method for tensile adhesion strength after contact with chlorinated water .....	26
A.6.9	Tensile adhesion strength after contact with lime water .....	26
A.6.10	Evaluation and expression of the results.....	27
A.7	Water impermeability .....	27
A.8	Crack bridging ability.....	29
A.8.1	General .....	29
A.8.2	Crack bridging ability under standard conditions .....	30
A.8.3	Crack bridging ability at low temperature .....	30
A.9	Test report .....	30
Annex ZA (informative)	Relationship of this European Standard with Regulation (EU) No.305/2011 .....	32
ZA.1	Scope and relevant characteristics .....	32
ZA.2	System of Assessment and Verification of Constancy of Performance (AVCP) .....	33
ZA.3	Assignment of AVCP tasks .....	33
Bibliography	.....	35

## European foreword

This document (EN 14891:2017) has been prepared by Technical Committee CEN/TC 67 “Ceramic tiles”, 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 August 2017, and conflicting national standards shall be withdrawn at the latest by December 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14891:2012.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic requirements for construction works of Regulation No. 305/2011.

For relationship with this Regulation, see informative Annex ZA, which is an integral part of this document.

The significant technical changes between this European Standard and the previous edition are listed herewith:

- Clause 3.7 replacement of the term “Fundamental” with “Basic”;
- Clause 4, Tables 1;
- New Clause 5;
- New Clause 6 in accordance with CEN Guidance documents;
- New Annex ZA (informative) in accordance with the CPR (Regulation (EU) No. 305/2011) and the Commission Delegated Regulations (EU) No. 568/2014 relative to the assessment and verification of constancy of performance.

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

## 1 Scope

This European Standard applies to all liquid-applied water impermeable products, based on polymer modified cementitious mortars, dispersions and reaction resin coatings, used beneath ceramic tiling, for external tile installations on walls and floors and in swimming pools.

This European Standard gives the terminology concerning the products and specifies the test methods and the values of performance requirements for liquid-applied water impermeable products associated with tile adhesives.

This European Standard specifies the assessment and verification of constancy of performance, and the classification and marking of liquid-applied water impermeable products beneath ceramic tiling.

This European Standard does not contain recommendations for the design and installation of ceramic tiles and grouts in combination with water impermeable products.

NOTE Liquid-applied water impermeable products may also be used beneath other types of tiles (natural and agglomerated stones, etc.), where they do not adversely affect these materials.

## 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 196-1:2016, *Methods of testing cement - Part 1: Determination of strength*

EN 197-1:2011, *Cement - Part 1: Composition, specifications and conformity criteria for common cements*

EN 480-1:2014, *Admixtures for concrete, mortar and grout - Test methods - Part 1: Reference concrete and reference mortar for testing*

EN 1008, *Mixing water for concrete - Specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete*

EN 1067, *Adhesives - Examination and preparation of samples for testing*

prEN 12004-1:2014, *Adhesives for tiles — Part 1: Requirements, evaluation of conformity, classification and designation*

EN 12004-2:2016, *Adhesives for tiles — Part 2: Test methods*

EN 12390-2, *Testing hardened concrete - Part 2: Making and curing specimens for strength tests*

EN 12620:2002+A1:2008, *Aggregates for concrete*

EN 14411:2016, *Ceramic tiles — Definitions, classification, characteristics, evaluation of conformity and marking*

EN ISO 15605, *Adhesives - Sampling (ISO 15605)*