

Cold applied joint sealants - Test methods - Part 1:  
Determination of rate of cure

This document is a preview generated by EVS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 14187-1:2017 sisaldab Euroopa standardi EN 14187-1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 14187-1:2017 consists of the English text of the European standard EN 14187-1:2017.
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 14.06.2017.	Date of Availability of the European standard is 14.06.2017.
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 93.080.20

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)

EUROPEAN STANDARD

**EN 14187-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2017

ICS 93.080.20

Supersedes EN 14187-1:2003

English Version

## Cold applied joint sealants - Test methods - Part 1: Determination of rate of cure

Mastics pour joints appliqués à froid - Méthodes d'essai  
- Partie 1: Détermination du taux de polymérisation

Kalt verarbeitbare Fugenmassen - Prüfverfahren - Teil  
1: Bestimmung des Aushärtungsgrades

This European Standard was approved by CEN on 17 April 2017.

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>		Page
<b>European foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>4</b>
<b>4</b>	<b>Principle</b> .....	<b>4</b>
<b>5</b>	<b>Apparatus and materials</b> .....	<b>4</b>
<b>6</b>	<b>Preparation of test specimens</b> .....	<b>4</b>
<b>7</b>	<b>Procedure</b> .....	<b>5</b>
<b>8</b>	<b>Calculation and expression of results</b> .....	<b>6</b>
<b>9</b>	<b>Test report</b> .....	<b>6</b>

## European foreword

This document (EN 14187-1:2017) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

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 December 2017, and conflicting national standards shall be withdrawn at the latest by December 2017.

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 14187-1:2003.

Apart from editorial changes no major changes have been made in this revision.

This European Standard is one of a series of standards as listed below:

EN 14187-1, *Cold applied joint sealants — Test methods — Part 1: Determination of rate of cure.*

EN 14187-2, *Cold applied joint sealants — Test methods — Part 2: Determination of tack free time.*

EN 14187-3, *Cold applied joint sealants — Test methods — Part 3: Determination of self-levelling properties.*

EN 14187-4, *Cold applied joint sealants — Test methods — Part 4: Determination of the change in mass and volume after immersion in test fuels and liquid chemicals.*

EN 14187-5, *Cold applied joint sealants — Test methods — Part 5: Determination of the resistance to hydrolysis.*

EN 14187-6, *Cold applied joint sealants — Test methods — Part 6: Determination of the adhesion/cohesion properties after immersion in test fuels and liquid chemicals.*

EN 14187-7, *Cold applied joint sealants — Test methods — Part 7: Determination of the resistance to flame.*

EN 14187-8, *Cold applied joint sealants — Test methods — Part 8: Determination of the resistance to artificial weathering by UV-irradiation.*

EN 14187-9, *Cold applied joint sealants — Test methods — Part 9: Function testing of joint sealants.*

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, 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 describes the determination of the rate of cure of cold applied joint sealants indicated by the build-up of the tensile modulus during the cure.

## 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 13880-12, *Hot applied joint sealants — Part 12: Test method for the manufacture of concrete test blocks for bond testing (recipe methods)*

EN ISO 6927, *Buildings and civil engineering works — Sealants — Vocabulary (ISO 6927)*

EN ISO 8340, *Building construction — Sealants — Determination of tensile properties at maintained extension (ISO 8340)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 6927 apply.

## 4 Principle

The rate of cure of a cold applied joint sealant is determined as the relation between the tensile modulus at any time during cure and after complete cure of the test specimen.

## 5 Apparatus and materials

5.1 Concrete supports in accordance with EN 13880-12 for the preparation of the test specimens, of dimensions as shown in Figure 1. Two concrete supports shall be used for each test specimen.

5.2 Spacers, (Figure 1) of dimensions 12 mm × 12 mm × 12,5 mm (Figure 1) for the preparation of test specimens. Two spacers shall be used for each test specimen.

5.3 Anti-adherent substrate for the preparation of the test specimens, on which the sealant does not adhere.

5.4 Tensile test machine capable of extending the test specimens at a rate of  $(5,5 \pm 0,5)$  mm/min.

## 6 Preparation of test specimens

6.1 Assemble two concrete supports (5.1) and two spacers (see 5.2) in accordance with Figure 1 and set up on the anti-adherent substrate (5.3). For the test six specimens are needed.

6.2 Follow the instructions of the sealant manufacturer whether a primer is to be used.

6.3 Condition the concrete supports, the spacers and the sealant for 4 h at  $(23 \pm 2)$  °C. Fill the volume between the concrete supports and spacers with sealant.

6.4 For multi-component cold applied joint sealants, thoroughly mix appropriate quantities of base component with curing agent following the manufacturer's instruction. One-component joint sealants can be applied directly from the pack.