

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

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Determination of the rate of cure

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 14187-1:2003 sisaldab Euroopa standardi EN 14187-1:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 14187-1:2003 consists of the English text of the European standard EN 14187-1:2003.</p> <p>This document is endorsed on 14.08.2003 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><br/>This European Standard applies to the determination of the rate of cure of cold applied joint sealants expressed by the built up of the tensile properties during the cure</p> | <p><b>Scope:</b><br/>This European Standard applies to the determination of the rate of cure of cold applied joint sealants expressed by the built up of the tensile properties during the cure</p> |
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**Võtmesõnad:** cold application, construction, construction materials, degree of hardness, gellings, joint filling, joint sealants, joint sealings, road construction, testing, testing conditions

ICS 93.080.20

English version

## Cold applied joint sealants - Part 1: Test method for the determination of rate of cure

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

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

This European Standard was approved by CEN on 25 March 2003.

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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 Management Centre has the same status as the official versions.

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## Foreword

This document (EN 14187-1:2003) 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 2003, and conflicting national standards shall be withdrawn at the latest by March 2005.

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

EN 14187-1, *Cold applied joint sealants — Part 1: Test method for the determination of the rate of cure.*

EN 14187-2, *Cold applied joint sealants — Part 2: Test method for the determination of tack free time.*

EN 14187-3, *Cold applied joint sealants — Part 3: Test method for the determination of self-levelling properties.*

EN 14187-4, *Cold applied joint sealants — Part 4: Test method for the determination of the change in mass and volume after immersion in test fuel.*

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

EN 14187-6, *Cold applied joint sealants — Part 6: Test method for the determination of the adhesion/cohesion properties after immersion in chemical liquids.*

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

EN 14187-8, *Cold applied joint sealants — Part 8: Test method for the determination of the artificial weathering by UV-irradiation.*

prEN 14187-9, *Cold applied joint sealants — Part 9: Function test.*<sup>1)</sup>

No existing European Standard is superseded.

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

## 1 Scope

This European Standard applies to 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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European

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1) In preparation.

Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 10002-1, *Metallic materials — Tensile testing — Part 1: Method of test at ambient temperature.*

prEN 13880-12, *Hot applied joint sealants – Test methods — Part 12: Manufacture of concrete test blocks for bond testing (recipe methods).*

EN 26927:1990, *Building construction - Jointing products - Sealants - Vocabulary (ISO 6927:1981).*

EN 28340:1990, *Building construction - Jointing products - Sealants - Determination of tensile properties at maintained extension (ISO 8340:1984).*

### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 26927:1990 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 prEN 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, (see Figure 1) of dimensions  $(12 \times 12 \times 12,5)$  mm (see 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 conforming to EN 10002-1, capable of extending the test specimens at a rate of 5 mm/min to 6 mm/min.

### 6 Preparation of test specimens

**6.1** Assemble two concrete supports (see 5.1) and two spacers (see 5.2) in accordance with Figure 1 and set up on the anti-adherent substrate (see 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 multicomponent cold applied joint sealants, thoroughly mix appropriate quantities of base component with curing agent following the manufacturers instruction. One-component joint sealants can be applied directly from the pack.

The following precautions shall be taken:

- avoid the formation of air bubbles by filling from the bottom;
- ensure that no sealant is running out at the bottom;
- trim the sealant surface so that it is flush with the faces of the support and spacers.