



# SLOVENSKI STANDARD

## SIST EN 14187-3:2004

01-junij-2004

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### Hladno nanosljive tesnilne mase za stike – 3. del: Preskusna metoda za ugotavljanje samoizravnalnih lastnosti

Cold applied joint sealants - Part 3: Test method for the determination of self-levelling properties

Kalt verarbeitbare Fugenmassen - Teil 3: Prüfverfahren zur Bestimmung der selbstverlaufenden Eigenschaften

Mastics pour joints appliqués a froid - Partie 3: Méthodes d'essai pour la détermination des propriétés d'auto-nivellement

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**Ta slovenski standard je istoveten z: EN 14187-3:2003**

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93.080.20	Materiali za gradnjo cest	Road construction materials

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 14187-3**

April 2003

ICS 93.080.20

English version

## Cold applied joint sealants - Part 3: Test method for the determination of self-levelling properties

Mastics pour joints appliqués à froid - Partie 3: Méthodes d'essai pour la détermination des propriétés d'auto nivellement

Kalt verarbeitbare Fugenmassen - Teil 3: Prüfverfahren zur Bestimmung der selbstverlaufenden Eigenschaften

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

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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## Foreword

This document (EN 14187-3:2003) 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 specifies a test method for determination of the self-levelling properties for cold applied joint sealants for use in joints in roads, air fields and other exposed concrete pavements.

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

1) In preparation.

**EN 14187-3:2003 (E)**

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

**3 Terms and definitions**

For the purposes of this European Standard, the terms and definitions given in EN 26927:1990 apply.

**4 Principle**

The self-levelling properties of cold applied joint sealants are determined by pouring into moulds in horizontal and inclined positions.

**5 Apparatus and materials**

**5.1** Mixing baker from polyethylene with a content of 250 ml.

**5.2** Flat bladed spatula.

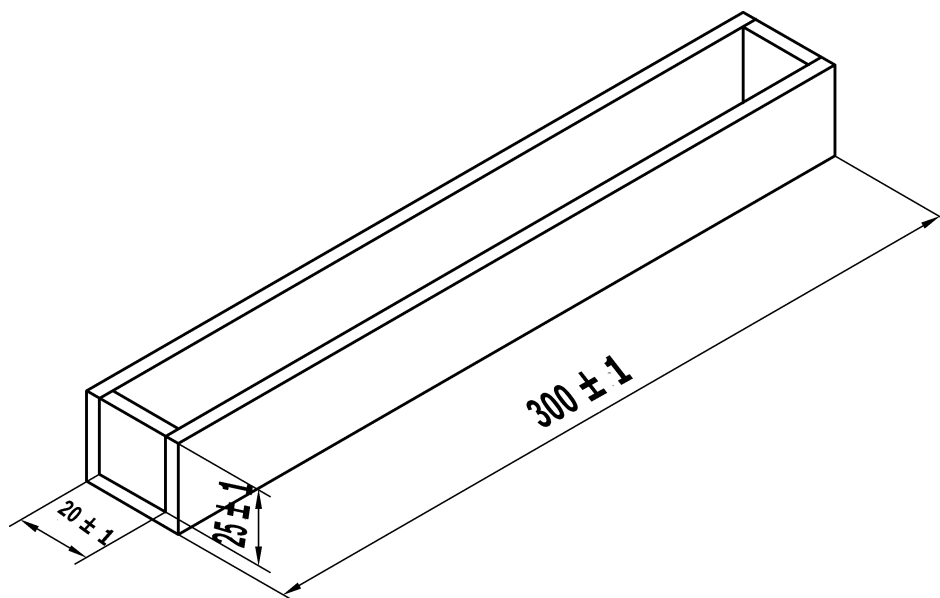
**5.3** Mould (see Figure 1) consisting of a channel with both ends closed and internal dimensions of  $(20 \pm 1)$  mm wide,  $(25 \pm 1)$  mm deep and  $(300 \pm 1)$  mm long. The channel shall be made of 1 mm to 2 mm thick aluminium, steel or plastic.

**5.4** Wedge shaped pieces for positioning the mould in a horizontal position using a spirit level and at a  $(2,5 \pm 0,1)$  % slope with the level plane.

**5.5** Micrometer capable of measurement to 100  $\mu\text{m}$ , fitted with a ratchet.

NOTE Other means of measuring this difference in depth are acceptable providing they are of equal accuracy.

All dimensions in millimetres



**Figure 1 — Mould for the test of the self-levelling properties**

## 6 Conditioning

Condition the mixing baker (see 5.1), moulds (see 5.3), flat bladed spatula (see 5.2) and supplies of sealant samples in a refrigerated environment at  $(5 \pm 2)$  °C for the test in the horizontal plane and at  $(23 \pm 2)$  °C for the test in inclined position for a period of 16 to 24 h.

## 7 Procedure

### 7.1 General

For multi-component cold applied joint sealants, thoroughly mix appropriate quantities of base component with curing agent in the mixing baker following the manufacturers instruction within 2 min. One-component sealants can be applied directly from the pack.

### 7.2 Determination of self-levelling properties using a horizontal mould at $(5 \pm 2)$ °C

**7.2.1** Pour the sealant into the mould in one continuous pour for 30 s along the axis of the mould at a height between 70 mm and 100 mm. Allow the material to flow freely to within 5 mm of the top of the mould.

**7.2.2** Transfer the mould (see 5.3) immediately after filling, without vibration, to the refrigerated environment at  $(5 \pm 2)$  °C and position in a horizontal plane using the spirit level (see 5.3) and leave to cure 48 h at  $(5 \pm 2)$  °C.

**7.2.3** Transfer the mould (see 5.3) to the micrometer (see 5.5). Set the probe in the channel at a convenient height above the sealant and zero the test equipment. Measure the depth of the sealant surface below the zero datum midway between the sides of the channel to an accuracy of  $\pm 0,2$  mm at the centre point of the mould and at points 25 mm, 50 mm, 75 mm, 100 mm and 125 mm on either side of the centre point.

**7.2.4** Subtract the highest reading from the lowest reading and record the difference to the nearest 0,5 mm.

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### 7.3 Determination of self-levelling properties using a mould inclined at 2,5 % slope at $(23 \pm 2)$ °C

**7.3.1** Position the mould conditioned at  $(23 \pm 2)$  °C horizontally using the spirit level (see 5.3). Apply the sealant to the mould as described in 7.2, but in this case overfill the mould and strike off the surplus material level to the mould edges using the flat bladed spatula.

**7.3.2** Transfer the mould (see 5.3) immediately after filling and with a minimum of vibration in the environment capable of maintaining the test specimen at a temperature of  $(23 \pm 2)$  °C and  $(50 \pm 5)$  % relative humidity and position at the  $(2,5 \pm 0,1)$  % slope. Leave to cure for 24 h at  $(23 \pm 2)$  °C and  $(50 \pm 5)$  % relative humidity.

**7.3.3** As described in 7.2.3 measure the depth below an arbitrary datum at two points 20 mm from either end of the mould, each measurement midway between the channel sides.

**7.3.4** Subtract the highest reading from the lowest reading and record the difference to the nearest 0,5 mm.

**EN 14187-3:2003 (E)****8 Test report**

The test report shall include the following information:

- a) reference to this European Standard;
- b) name and type of the cold applied joint sealant;
- c) batch of sealant from which the test specimens were produced;
- d) test results;
- e) any deviations from the specified test conditions;
- f) date of test.

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