

# SLOVENSKI STANDARD

## SIST EN 14187-6:2017

01-maj-2017

Nadomešča:

SIST EN 14187-6:2004

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**Hladno nanosljive tesnilne mase za stike - Preskusne metode - 6. del: Ugotavljanje adhezijskih/kohezijskih lastnosti po namakanju v preskusnem gorivu in tekočih kemikalijah**

Cold applied joint sealants - Test method - Part 6: Determination of the adhesion/cohesion properties after immersion in test fuels and liquid chemicals

**iTeh STANDARD PREVIEW**

Kalt verarbeitbare Fugenmassen - Teil 6: Prüfverfahren zur Bestimmung der Haft- und Dehnungseigenschaften nach Lagerung in flüssigen Chemikalien

SIST EN 14187-6:2017

Mastics pour joints appliqués à froid - Méthodes d'essai - Partie 6: Détermination des propriétés d'adhésivité/cohésion après immersion dans des carburants d'essai et des produits chimiques liquides

**Ta slovenski standard je istoveten z: EN 14187-6:2017**

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**ICS:**

91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials
93.080.20	Materiali za gradnjo cest	Road construction materials

**SIST EN 14187-6:2017**

**en,fr,de**

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EUROPEAN STANDARD

**EN 14187-6**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 93.080.20

Supersedes EN 14187-6:2003

English Version

## Cold applied joint sealants - Test method - Part 6: Determination of the adhesion/cohesion properties after immersion in test fuels and liquid chemicals

Mastics pour joints appliqués à froid - Méthodes d'essai  
- Partie 6 : Détermination des propriétés  
d'adhésivité/cohésion après immersion dans des  
liquides chimiques liquides

Kalt verarbeitbare Fugenmassen - Prüfverfahren - Teil  
6: Bestimmung der Haft- und Dehnungseigenschaften  
nach Lagerung in flüssigen Chemikalien

This European Standard was approved by CEN on 6 February 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.

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

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

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## European foreword

This document (EN 14187-6:2017) 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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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 14187-6:2003.

Apart from editorial changes the following major changes have been made in this revision:

- a) Change of the title;
- b) Table 1, Change of the test fuels and addition of de-icing liquids in accordance with new technical requirements.

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.*

**EN 14187-6:2017 (E)**

**WARNING — Attention is drawn to the health and safety at work and the need to ensure that this test is carried out under suitable environmental conditions to provide adequate protection to persons against the risk of contact or inhalation of toxic liquid chemicals.**

Annex A is informative.

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.

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## 1 Scope

This European Standard specifies a test method to determine the adhesion/cohesion properties after immersion in test fuels or liquid chemicals.

## 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 14188-4, *Joint fillers and sealants - Part 4: Specifications for primers to be used with joint sealants*

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 test specimen of the cold applied joint sealant is prepared in which the sealant adheres to two parallel contact surfaces. The test specimen is immersed in specified test liquids and subsequently extended to a defined width. This extension is maintained under defined conditions. Any breaks in adhesion or cohesion are recorded.

## 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 supports are required for each test specimen.

**5.2** Spacers of dimensions (12 × 12 × 12,5) mm (see Figure 1) for the preparation of test specimens.

**5.3** Anti-adherent substrate, for the preparation of the test specimens.

**5.4** Spacers of appropriate dimensions to hold the test specimens extended on 100 % of the original width.

**5.5** Tensile testing machine capable of extending the test specimens at a rate of (5,5 ± 0,5) mm/min.

**5.6** Container for immersion of the test specimens in liquid chemicals, deep enough to provide a minimum of 15 mm of the liquid chemical covering the surface of the specimens.

**5.7** Test liquids with compositions as given in Table 1. In addition the relevant jet fuel, hydraulic oil, engine oil, defrosting fluid, glycol or any other liquid chemical can be used as required from the intended application (see Annex A).

Table 1 — Composition of test fuels and liquid chemicals

Chemical liquid	Test fuel I in accordance with EN 228 with maximum content of 20 % bioalcohol	Test fuel II	Test liquid DC Ground	Test liquid DC Aircraft	Other liquid chemical
	V-%				
Isooctane	25,0	70	—	—	in accordance with Annex A, Table A.1
Toluene	42,5	30	—	—	
Ethanol	5,0	—	—	—	
Diisobutylene	12,0	—	—	—	
Methanol	15,0	—	—	—	
Water	0,5	—	60	60	
Sodium formate <sup>a</sup>	—	—	40	—	
Ethylene glycol	—	—	—	40	

<sup>a</sup> With pH buffer, pH < 10,5 V% percent by volume W% percent by weight

## 6 Preparation of test specimens

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Prepare three test specimens for each test liquid and test temperature. Assemble two concrete supports (5.1) and two spacers (5.2) according to Figure 4 and set up on the anti-adherent substrate (5.3).

Follow the instructions of the sealant manufacturer, for instance whether a primer is to be used.

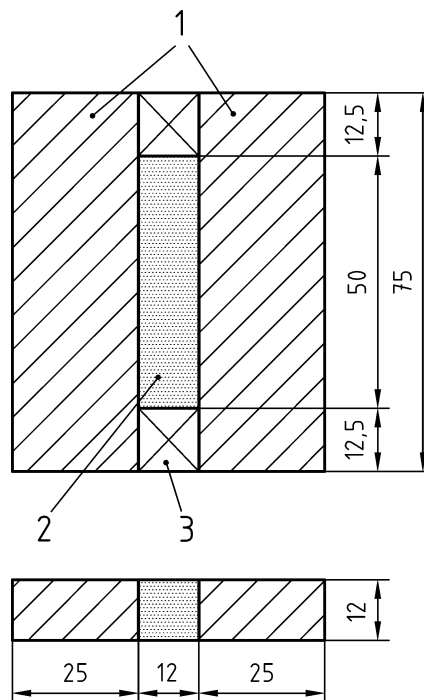
Fill the volume between concrete supports and spacers with sealant, previously conditioned for 24 h at  $(23 \pm 2) ^\circ\text{C}$ .

The following precautions shall be taken:

- avoid the formation of air bubbles;
- 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.



Dimensions in millimetres

**Key**

- 1 support from concrete
- 2 cold applied joint sealant
- 3 spacers

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**Figure 1 – Test specimen**

**7 Conditioning**

Condition the test specimens in accordance with either method A or method B of EN ISO 8340. If method B is used, after conditioning store the test specimens 24 h at  $(23 \pm 2)^\circ\text{C}$  and  $(50 \pm 5)\%$  relative humidity before immersion in test fuel or other liquid chemical.

**8 Procedure****8.1 Test fuels**

Carry out the test with test fuel I or test fuel II or other liquid chemical as required (see Annex A).

**8.2 Temperature of immersion**

Carry out the test at one or more of the following temperatures:

- $(23 \pm 1)^\circ\text{C}$ ;
- $(35 \pm 1)^\circ\text{C}$ ;
- $(50 \pm 1)^\circ\text{C}$ .