

# Cold applied joint sealants —

## Part 7: Test method for the determination of the resistance to flame

The European Standard EN 14187-7:2003 has the status of a  
British Standard

ICS 13.220.50; 93.080.20

## National foreword

This British Standard is the official English language version of EN 14187-7:2003.

The UK participation in its preparation was entrusted by Technical Committee B/510, Road materials, to Subcommittee B/510/3, Materials for concrete roads, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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This British Standard, was published under the authority of the Standards Policy and Strategy Committee on 19 June 2003

### Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 7 and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

### Amendments issued since publication

Amd. No.	Date	Comments

© BSI 19 June 2003

ISBN 0 580 42095 7

EUROPEAN STANDARD

EN 14187-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2003

ICS 13.220.50; 93.080.20

English version

## Cold applied joint sealants - Part 7: Test method for the determination of the resistance to flame

Mastics pour joints appliqués à froid - Partie 7: Méthodes d'essai pour la détermination de la résistance à la flamme

Kalt verarbeitbare Fugenmassen - Teil 7: Prüfverfahren zur Bestimmung des Widerstandes gegen Flammen

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

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## Foreword

This document (EN 14187-7:2003) 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of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by March 2005.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.

**WARNING — This test should be carried out under suitable environmental conditions to provide adequate protection to personnel against the risk of fire, inhalation of smoke and/or toxic products of combustion.**

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.

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1) In preparation.

## 1 Scope

This European Standard specifies a test method for determination of the resistance to flame of 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).

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 resistance to flame of cold applied joint sealants is determined by subjecting it to the flame for a specified time.

## 5 Apparatus and materials

**5.1** High temperature laboratory burner, rated to supply up to 3 000 W and capable of burning approximately 200 g of propane per hour at operating capacity.

**5.2** draught shield consisting of an open ended cylinder of light gauge metal with a diameter of  $(125 \pm 3)$  mm and a height of  $(300 \pm 5)$  mm.

**5.3** Steel specimen support, made from two 150 mm long rods and two 50 mm long rods, all of 3 mm nominal diameter, to form a support with a rectangular centre opening of 40 mm × 50 mm as shown in Figure 1.

**5.4** Temperature measuring device, capable of measuring of up to 300 °C with an accuracy of  $\pm 5$  °C.

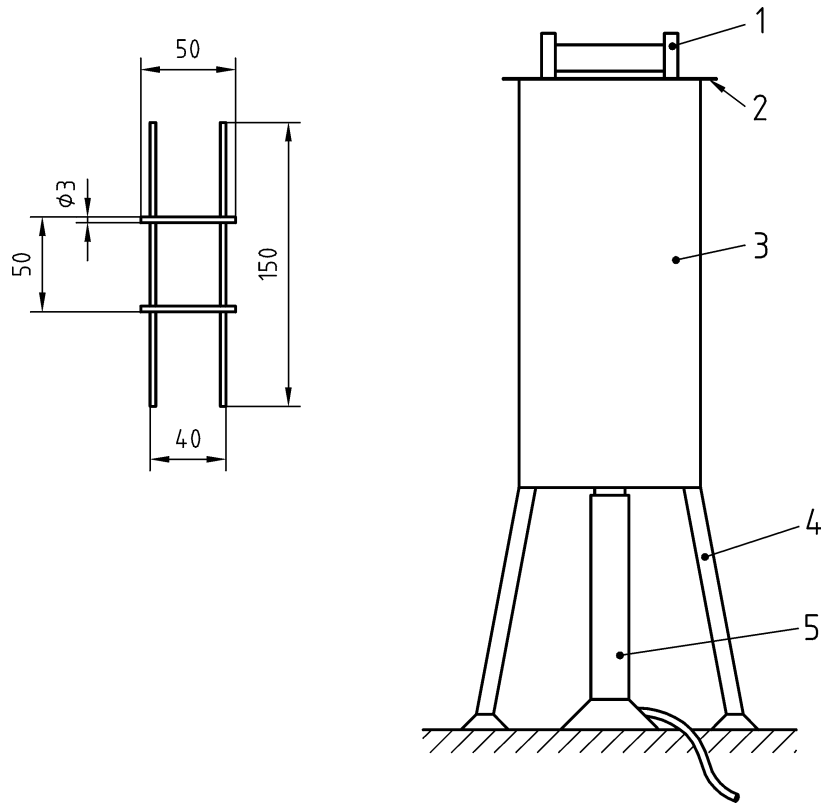
## 6 Preparation of test specimens

One test specimen made and cured in accordance with EN 28340:1990 method B shall be used.

## 7 Procedure

- 7.1 Assemble the apparatus using a tripod as a support for the cylindrical draught shield (see Figure 1).
- 7.2 Centre the high temperature burner (5.1) under the draught shield (see 5.2) with the top in the same place as the bottom of the draught shield.
- 7.3 Centre the specimen support on the top of the draught shield (see 5.2) with the temperature measuring device (see 5.4) in a horizontal position laid on it with the sensor at the centre.
- 7.4 Regulate the high temperature laboratory burner (see 5.1) to produce a reading of constant temperature ( $260 \pm 10$ ) °C for ( $120 \pm 1$ ) s.
- 7.5 Substitute the specimen for the temperature measuring device by the test specimen so that the sealant itself, its 12,5 mm × 75 mm faces horizontal, is directly in the centre of the steel specimen support (see 5.3).
- 7.6 Leave in position for ( $120 \pm 1$ ) s and observe the sealant for signs of ignition, hardening, flow and separation.
- 7.7 At the end of the ( $120 \pm 1$ ) s remove the high temperature laboratory burner (see 5.1) and allow the specimen to cool to room temperature.
- 7.8 When cooled, examine the specimen for signs of flow, cracking, flaking, hardening ignition and any other effects caused by the flame.
- 7.9 record the effects produced by flame treatment.

Dimension in millimetres



**Key**

- 1 Sealant specimen
- 2 Steel specimen support
- 3 Draught shield
- 4 Tripod
- 5 High temperature laboratory burner

**Figure 1 — Test device for flame resistance test**



## 8 Test report

The test report shall include the following information:

- a) reference to this European Standard;
- b) name and type of sealant;
- c) batch of sealant from which the test specimens were produced;
- d) type or types of support material;
- e) the primer used, if applicable;
- f) the method of conditioning used;
- g) time and temperature of test;
- h) description of any the effects produced by flame treatment;
- i) any deviations from the specified test conditions;
- j) date of test.

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