



SLOVENSKI STANDARD

SIST EN 14187-8:2017

01-maj-2017

Nadomešča:
SIST EN 14187-8:2004

Hladno nanosljive tesnilne mase za stike - Preskusne metode - 8. del: Ugotavljanje umetnega staranja z ultravijoličnim sevanjem

Cold applied joint sealants - Test methods - Part 8: Determination of the artificial weathering by UV-irradiation

Kalt verarbeitbare Fugenmassen - Prüfverfahren - Teil 8: Bestimmung der künstlichen Bewitterung durch UV-Bestrahlung

Mastics pour joints appliqués à froid - Méthodes d'essai - Partie 8: Détermination du vieillissement artificiel par rayonnement UV

Ta slovenski standard je istoveten z: EN 14187-8:2017

ICS:

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

SIST EN 14187-8:2017 en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 14187-8:2017

<https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2bfa9e4b7/sist-en-14187-8-2017>

EUROPEAN STANDARD

EN 14187-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 93.080.20

Supersedes EN 14187-8:2003

English Version

Cold applied joint sealants - Test methods - Part 8: Determination of the artificial weathering by UV- irradiation

Mastics pour joints appliqués à froid - Méthodes d'essai
- Partie 8 : Détermination du vieillissement artificiel
par rayonnement UV

Kalt verarbeitbare Fugenmassen - Prüfverfahren - Teil
8: Bestimmung der künstlichen Bewitterung durch UV-
Bestrahlung

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.

iTeh STANDARD PREVIEW

(standards.itih.eu)
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

Contents		Page
European foreword.....		3
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	5
5	Apparatus and materials	5
6	Preparation of test specimens.....	6
7	Conditioning.....	7
8	Procedure.....	7
9	Expression of results.....	8
10	Test report.....	9

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 14187-8:2017](https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2bfa9e4b7/sist-en-14187-8-2017)

<https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2bfa9e4b7/sist-en-14187-8-2017>

European foreword

This document (EN 14187-8:2017) 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 will supersede EN 14187-8:2003.

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

- a) Change of title
- b) Definition of the light source
- c) Definition of black standard thermometer
- d) Test temperature of (40 ± 10) °C and the method to wet the test specimens by water spray or immersion

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 14187-8:2017 (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 products.

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 14187-8:2017

<https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2bfa9e4b7/sist-en-14187-8-2017>

1 Scope

This European Standard describes a test method for evaluating the resistance of cold applied joint sealants to the action of UV-light by determination of the change of physical properties after irradiation by artificial UV-light.

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 4892-1, *Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1)*

EN ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2)*

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

Test specimens of the cured cold applied joint sealant are exposed to artificial light, water or humidity and elevated temperatures under defined conditions and constant elongation.

5 Apparatus and materials

5.1 Artificial light source with suitable filters, for a simulation of the visible and ultraviolet part of daylight. The spectral distribution of radiation shall conform to the requirements of EN ISO 4892-1 and EN ISO 4892-2, method A. The irradiance at the surface of the test specimens at wavelengths of between 290 nm and 800 nm shall be $(550 \pm 75) \text{ W/m}^2$ ($0,51 \text{ W}/(\text{m}^2 \cdot \text{nm})$ at 340 nm).

5.2 Black standard thermometer according to EN ISO 4892-1.

5.3 Climate chamber, for holding the artificial light source and the test specimens, capable of being maintained at a temperature of $(40 \pm 10) \text{ }^\circ\text{C}$ and a device to automatically wet the test specimens by water spray or immersion.

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

EN 14187-8:2017 (E)

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

5.6 Anti-adherent substrate for the preparation of the test specimens.

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

5.8 Distant pieces of appropriate dimensions to hold the test specimens extended to 25 % of the original width.

6 Preparation of test specimens

Assemble two concrete supports (5.4) and two spacers (5.5) according to Figure 1 and set up on the anti-adherent substrate (5.6).

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

Condition the concrete supports (5.4), the spacers (5.5) and the sealant for at least 4 h at (23 ± 2) °C. The volume between concrete supports (5.4) and spacers (5.5) shall be filled with the cold applied joint sealant.

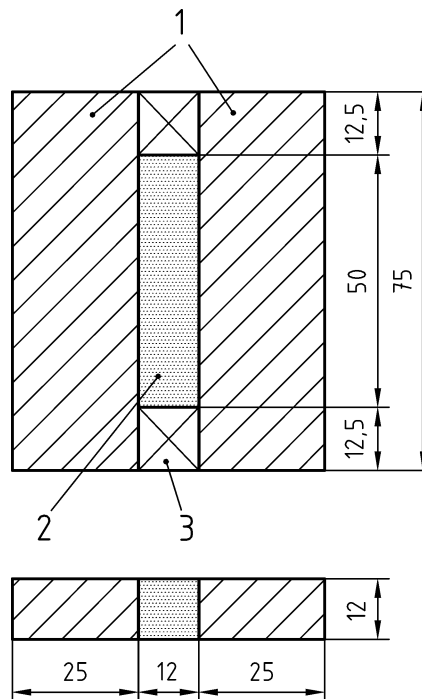
The following precautions shall be taken:

- avoid the formation of air bubbles;
- make sure 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.

For each test prepare three specimens and also three reference specimens.

<https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2bfa9e4b7/sist-en-14187-8-2017>

Dimensions in millimetres

**Key**

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 14187-8:2017

<https://standards.iteh.ai/catalog/standards/sist/d2f4c7c8-62a4-48ae-a474-71c2b1a9c467/sist-en-14187-8-2017>

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 $(2 \pm 0,5)$ h at (23 ± 2) °C and (50 ± 5) % relative humidity before irradiation by UV-light.

8 Procedure

Extend the 6 test specimens with the tensile testing machine (5.7) to 125 % of the original width at a rate of $(5,5 \pm 0,5)$ mm/min. Maintain the extension during exposure to artificial light using the distant pieces (5.8). Expose three specimens in accordance with Table 1 to light from the artificial light source (5.1) in a climate chamber (5.3) at a black standard temperature of (65 ± 2) °C. Wet the specimens for 15-20 min by water spraying or immersion once every second hour. These exposure conditions corresponds to ISO 4892-2 method A cycle 1 or 2.

The irradiance at the surface of the test specimens shall be (550 ± 75) W/m² (UV and visual light). If nothing else specified, expose the specimens for 1 000 h.

Three of the test specimens are kept during this time at (23 ± 2) °C and (50 ± 5) % relative humidity.