



SLOVENSKI STANDARD
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Joint fillers and sealants - Part 4: Specifications for primers to be used with joint sealants

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Fugeneinlagen und Fugenmassen - Teil 4: Spezifikationen für Voranstriche für Fugeneinlagen und Fugenmassen

Produits de scellement de joints - Partie 4 : Spécifications relatives aux primaires utilisés avec les produits de scellement de joints

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 227.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Page

Foreword.....	3
1 Scope	3
2 Normative references	3
3 Terms and definitions	4
4 Types.....	4
5 Requirements	4
5.1 Shelf life	4
5.2 Homogeneity	4
5.3 Density	4
5.4 Viscosity	5
5.5 Resistance against alkali	5
5.6 Drying behaviour	5
5.7 Solid content	5
5.8 Flash point.....	5
5.9 Softening point of solids.....	5
5.10 Dangerous substances	5
6 Evaluation of conformity.....	6
6.1 General.....	6
6.2 Type testing.....	7
6.2.1 Initial Type Testing	7
6.2.2 Further type testing	7
6.3 Factory Production Control (FPC).....	7
6.3.1 General.....	7
6.3.2 Frequency of testing	7
6.3.3 Equipment	7
6.3.4 Raw materials and components.....	7
6.3.5 Design process	8
6.3.6 Non-conforming products	8
7 Marking, labelling and packaging	8
7.1 General.....	8
7.2 Primer.....	8
7.3 Containers	8
Annex A (normative) Initial Type Testing and frequencies of testing for Factory Production Control	9
Annex B (informative) Example of a product data sheet.....	10

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Foreword

This European Standard (prEN 14188-4:2006) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

1 Scope

This European Standard specifies requirements for material characterisation for primers for hot and cold applied joint sealants for use in roads, airfields and other concrete pavements. This European Standard also applies to primers for hot applied joint sealants in bituminous surfacing and between bituminous surfacing and concrete pavements.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14188-1, *Joint fillers and sealants — Part 1: Specifications for hot applied sealants.*

EN 14188-2, *Joint fillers and sealants — Part 2: Specifications for cold applied sealants.*

EN 1427, *Bitumen and bituminous binders - Determination of softening point - Ring and ball method*

EN 26927, *Building construction — Jointing products—Sealants — Vocabulary.*

EN ISO 2431, *Paints and varnishes — Determination of flow time by use of flow cups.*

EN ISO 2719, *Determination of flash point — Pensky-Martens closed cup method.*

EN ISO 2811-2, *Determination of density.*

prEN 15466-1, *Primers for cold and hot applied joint sealants — Part 1: Test method for the determination of homogeneity.*

prEN 15466-2, *Primers for cold and hot applied joint sealants — Part 2: Test method for the determination of resistance against alkali.*

prEN 15466-3, *Primers for cold and hot applied joint sealants — Part 3: Test method for the determination of drying behaviour and solid content.*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14188-1, EN 14188-2 and EN 26927 and the following apply.

- 3.1 primer**
surface coating applied to the faces of the joint before placing the sealant in order to ensure its adhesion
- 3.2 manufacturer's limiting value MLV**
the manufacturer's stated minimum or maximum value to be met during testing according to the requirements of this European Standard
- 3.3 manufacturer's declared value MDV**
value declared by the manufacturer accompanied by a declared tolerance

4 Types

Primers for joint sealants shall be one of the types given in Table 1.

Table 1 — Types of primers for joint sealants

Primer (standards.iteh.ai)	Type
Bitumen based for hot applied joint sealants	PBH
Resin based for hot applied joint sealants	PRH
Resin based for cold applied joint sealants (Single component primer)	PRC-s
Resin based for cold applied joint sealants (Multi component primer)	PRC-m

5 Requirements

5.1 Shelf life

When stored in the original unopened containers and within the temperature range and expiry date recommended by the manufacturer, the primer shall be capable of being applied to the joint and shall conform to this European Standard.

5.2 Homogeneity

The homogeneity after homogenization shall be determined in accordance with prEN 15466-1 and the results shall conform to the values given in Table 2.

5.3 Density

The density shall be determined in accordance with EN ISO 2811-2 and the results shall lie within the declared tolerance of the MDV. The tolerance of the MDV shall lie within -3% and $+3\%$.

5.4 Viscosity

The viscosity shall be determined in accordance with EN ISO 2431 and the results shall lie within the declared tolerance of the MDV. The tolerance of the MDV shall lie within -10% and $+10\%$.

5.5 Resistance against alkali

The resistance against alkali shall be determined in accordance with prEN 15466-2 and the results shall conform to the values given in Table 2.

5.6 Drying behaviour

The drying behaviour shall be determined in accordance with prEN 15466-3 and the results shall conform to the values given in Table 2.

5.7 Solid content

The solid content shall be determined in accordance with prEN 15466-3 and the results shall lie within the declared tolerance of the MDV. The tolerance of the MDV shall lie within -2% and $+5\%$.

5.8 Flash point

The flash point shall be determined in accordance with EN ISO 2719 and the results shall conform to the values given in Table 2.

5.9 Softening point of solids (standards.iteh.ai)

5.9.1 Bitumen based primers: The softening point shall be determined in accordance with EN 1427 and the results shall conform to the values in Table 2, line 8.

5.9.2 Resin based primers: The determination of this property is not applicable.

5.10 Dangerous substances

The manufacturer shall ensure that there are no emissions of any substances hazardous to health or the environment in excess of the legally permitted level in the member state of destination.

Table 2 — Requirements and test methods for primers for joint sealants

Column	1	2	3	4	5	6
Line	Material properties	Type of primer for joint sealant				Test method
		Bitumen based	Resin based	Resin based	Resin based	EN
		PBH	PRH	PRC-s	PRC-m	
1	Homogeneity	homogeneous	homogeneous	homogeneous	homogeneous	prEN 15466-1
2	Density	NR	NR	NR	NR	EN ISO 2811-2
3	Viscosity, in mm ² /s	NR	NR	NR	NR	EN ISO 2431
4	Resistance against alkali	resistant	resistant	resistant	resistant	prEN 15466-2
5	Drying behaviour					prEN 15466-3
5.1	Drying behaviour after 60 min, in % by mass	≥90	≥90	≥90	≥90	
5.2	Drying behaviour after 90 min, in % by mass	≥95	≥95	≥95	≥95	
6	Solid content, in % by mass	—	-	-	-	prEN 15466-3
7	Flash point, °C	≥21	≥21	≥21	≥21	EN ISO 2719
8	Softening point solids, softening point ring and ball in °C	53 to 63	NA	NA	NA	EN 1427
NR	no requirement					
NA	not applicable					

NOTE The system related properties (primer and joint sealant) of primers are given by testing the hot applied and cold applied joint sealant in accordance with EN 14188-1 and EN 14188-2.

6 Evaluation of conformity

6.1 General

The compliance of the product with the requirements of this standard shall be demonstrated by:

- Initial Type Testing;
- Factory Production Control by the manufacturer, including product assessment.

The characteristics indicated in clause 5 shall be determined within 3 months of the date of delivery from the manufacturer.

For the purposes of testing, the product may be grouped into families, where it is considered that the selected property is common to all products within that family.

6.2 Type testing

6.2.1 Initial Type Testing

Initial Type Testing shall be performed to show conformity with this document. Tests previously performed in accordance with the provisions of this document (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account. In addition, Initial Type Testing shall be performed at the beginning of the production of a new product type (unless a member of the same family) or at the beginning of a new method of production (where this may affect the stated properties).

All characteristics in clause 5 shall be subject to Initial Type Testing.

6.2.2 Further type testing

Whenever a change occurs in the product design, the raw material or supplier of the components, or the production process (subject to the definition of a family), which would change significantly one or more of the characteristics, the type tests shall be repeated for the appropriate characteristic(s).

6.3 Factory Production Control (FPC)

6.3.1 General

The manufacturer shall establish, document and maintain a FPC system to ensure that the products placed on the market conform with the stated performance characteristics. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product.

A FPC system conforming with the requirements of EN ISO 9001 and made specific to the requirements of this standard, is considered to satisfy the above requirements.

The results of inspections, tests or assessments requiring action shall be recorded, as shall any action taken. The action to be taken when control values or criteria are not met shall be recorded and retained for the period specified in the manufacturer's FPC procedures.

6.3.2 Frequency of testing

Minimum frequencies of testing for Factory Production Control shall be as shown in Table A.1.

6.3.3 Equipment

Testing - All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documents procedure, frequencies and criteria.

Manufacturing - All equipment used in the manufacturing process shall be regularly inspected and maintained to ensure use, wear or failure does not cause inconsistency in the manufacturing process. Inspections and maintenance shall be carried out and recorded in accordance with the manufacturer's written procedures and the records retained for the period defined in the manufacturer's FPC procedures.

6.3.4 Raw materials and components

The specifications of all incoming raw materials and components shall be documented, as shall the inspection scheme for ensuring their conformity.

prEN 14188-4:2006 (E)**6.3.5 Design process**

The Factory Production Control system shall document the various stages in the design of products, identify the checking procedure and those individuals responsible for all stages of design.

During the design process itself, a record shall be kept of all checks, their results, and any corrective actions taken. This record shall be sufficiently detailed and accurate to demonstrate that all stages of the design phase, and all checks, have been carried out satisfactorily.

6.3.6 Non-conforming products

The manufacturer shall have written procedures which specify how non-conforming products shall be dealt with. Any such events shall be recorded as they occur and these records shall be kept for the period defined in the manufacturer's written procedures.

7 Marking, labelling and packaging**7.1 General**

Each container of the primer for joint sealant shall be clearly and indelibly marked, giving as a minimum requirement the following information:

Where clause ZA.3 covers the same information as required by this clause, the requirements of this clause are met.

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7.2 Primer

- a) manufacturer's name and address; [oSIST prEN 14188-4:2006
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- b) designation and batch number and date of manufacture;
- c) expiry date;
- d) type of sealant with which it is to be used;
- e) directions for use;
- f) directions for storage and disposal.
- g) labelling according to national regulations related to dangerous substances and/or health and safety.

Where clause ZA.3 covers the same information as required by this clause, the requirements of this clause are met. The location of marking in accordance with this clause shall not lead to confusion with the regulatory marking.

7.3 Containers

Primers shall be supplied in sealed packages which allow the primer to be stored without detriment for the full shelf life under the manufacturer's recommended conditions.