



SLOVENSKI STANDARD

SIST EN 15814:2011

01-november-2011

Bitumenske debeloslojne prevleke, modificirane s polimeri - Definicije in zahteve

Polymer modified bituminous thick coatings for waterproofing - Definitions and requirements

Kunststoffmodifizierte Bitumendickbeschichtungen zur Bauwerksabdichtung - Begriffe und Anforderungen

Revêtements bitumineux épais modifiés aux polymères pour imperméabilisation - Définitions et exigences

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ICS:

91.100.50 Veziva. Tesnilni materiali Binders. Sealing materials

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EUROPEAN STANDARD

EN 15814

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2011

ICS 91.100.50

English Version

Polymer modified bituminous thick coatings for waterproofing - Definitions and requirements

Revêtements bitumineux épais modifiés aux polymères
pour imperméabilisation - Définitions et exigences

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Bauwerksabdichtung - Begriffe und Anforderungen

This European Standard was approved by CEN on 14 July 2011.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (EN 15814:2011) has been prepared by Technical Committee CEN/TC 361 "Project Committee - Thick synthetic modified bitumous coating masses - Definitions and requirements/Test methods", 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 February 2012, and conflicting national standards shall be withdrawn at the latest by February 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 15814:2011 (E)**1 Scope**

This European Standard specifies the definitions and requirements of prefabricated polymer modified bituminous thick coatings used for the waterproofing of below ground structures. It applies to both one-component and two-component products. These products can be used with or without inlay.

This European Standard does not apply to products that are to be used for roof waterproofing.

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 459-2:2010, *Building lime - Part 2: Test methods*

EN 1931, *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of water vapour transmission properties*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13823, *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 15812, *Polymer modified bituminous thick coatings for waterproofing — Determination of crack bridging ability*

EN 15813, *Polymer modified bituminous thick coatings for waterproofing — Determination of flexibility at low temperatures*

EN 15815, *Polymer modified bituminous thick coatings for waterproofing — Resistance to compression*

EN 15816, *Polymer modified bituminous thick coatings for waterproofing — Resistance to rain*

EN 15817, *Polymer modified bituminous thick coatings for waterproofing — Water resistance*

EN 15818, *Polymer modified bituminous thick coatings for water proofing — Determination of dimensional stability at high temperature*

EN 15819, *Polymer modified bituminous thick coatings for waterproofing — Reduction of the thickness of the layer when fully dried*

EN 15820, *Polymer modified bituminous thick coatings for waterproofing — Determination of watertightness*

ISO 1183-1: 2004, *Plastics - Methods for determining the density of non-cellular plastics - Part_1: Immersion method, liquid pycnometer method and titration method*

EN ISO 2811-1:2011, *Paints and varnishes — Determination of density — Part 1: Pycnometer method (ISO 2811-1:1997)*

EN ISO 2811-2, *Paints and varnishes — Determination of density — Part 2: Immersed body (plummet) method (ISO 2811-2:1997)*

EN ISO 3251, *Paints, varnishes and plastics — Determination of non-volatile-matter content (ISO 3251:2008)*

EN ISO 3451-1, *Plastics — Determination of ash — Part 1: General methods (ISO 3451-1:2008)*

EN ISO 3923-1, *Metallic powders — Determination of apparent density — Part 1: Funnel method (ISO 3923-1:2008)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO/FDIS 11925-2:2010)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

crack bridging ability

ability of a product to bridge a crack that originates below ground under specified conditions and without damage

3.2

free film

cured polymer modified bituminous coating emulsion based, which is tested without being applied to a substrate

3.3

inlay

industrially produced material, which is incorporated as an intermediate layer when applying the coating

3.4

PMBC

prefabricated polymer modified bituminous thick coating emulsion based, with or without admixtures, such as additives and mineral aggregates, comprising of one or two components.

NOTE In case of two component PMBC the component A is the liquid bitumen emulsion and the component B is a reactive liquid or powder component.

3.5

pressure water

water in ground with hydrostatic pressure

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4 Requirements

All PMBC according to this European Standard have to fulfil the general requirements of Table 1.

Table 1 — General requirements

Column	1	2				3
Line	Characteristic	Requirement				Test method
1	Crack bridging ability	Class CB 0 No requirement	Class CB 1 No damage Crack width ≥ 1 mm dry layer thickness ≥ 3 mm (MLV)	Class CB 2 No damage Crack width ≥ 2 mm dry layer thickness ≥ 3 mm (MLV)		EN 15812 Method A or B NOTE The test method has to be declared with the classification.
2	Resistance to rain	Class R0 No requirement	Class R1 ≤ 4 h wet layer thickness ≥ 3 mm (MLV)	Class R2 ≤ 8 h wet layer thickness ≥ 3 mm (MLV)	Class R3 ≤ 24 h wet layer thickness ≥ 3 mm (MLV)	EN 15816
3	Water resistance	1.No colouration of the water 2.No debonding from inlay, if used dry layer ≥ 4 mm No changes to the material according to EN 15817,				EN 15817
4	Flexibility at low temperature ^a	No cracks				EN 15813
5	Dimensional stability at high temperature ^a	No sliding or draining down				EN 15818

Table 1 (continued)

Column	1	2			3	
Line	Characteristic	Requirement			Test method	
6	Reduction of layer thickness when fully dried	≤ 50 % (MLV)			EN 15819	
7	Reaction to fire	Class to be declared according to EN 13501-1			Testing in accordance with the specifications in the classification standard EN 13501-1 and Annex A.	
8	Watertightness ^a	Class W1 ≥ 24 h at 0,0075 N/mm ² dry layer thickness without inlay ≥ 3 mm (MLV)	Class W2A ≥ 72 h at 0,075 N/mm ² dry layer thickness with inlay ≥ 4 mm with inlay (MLV)	Class W2B ≥ 72 h at 0,075 N/mm ² dry layer thickness without inlay ≥ 4 mm without inlay (MLV)	EN 15820	
9	Resistance to compression ^a	Class C0 No requirement	Class C1 Stabilization at ≤ 50 % (change maximum 3 % within 3 subsequent days) 0,06 MN/m ² dry layer thickness ≥ 3 mm (MLV)	Class C2A Stabilization at ≤ 50 % (change maximum 3 % within 3 subsequent days) 0,30 MN/m ² dry layer thickness ≥ 4 mm with inlay (MLV)	Class C2B Stabilization at ≤ 50 % (change maximum 3 % within 3 subsequent days) 0,30 MN/m ² dry layer thickness ≥ 4 mm without inlay (MLV)	EN 15815
^a These characteristics are also related to durability aspects. manufacturer's limiting value (MLV) value stated by the manufacturer to be met during testing. The manufacturer's limiting value can be a minimum or a maximum value according to statements made under product characteristics of this document						

When required, the water vapour diffusion resistance shall be tested in accordance with EN 1931.