

Sikalastic®-851

DECLARATION OF PERFORMANCE

No. 92194792

1	UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE:	92194792
2	INTENDED USE/S	ETA 18/1105/ ETAG 033, edition 2010, used as EAD Waterproofing of concrete bridge deck against the water
3	MANUFACTURER:	Sika Services AG Tüffenwies 16-22 8064 Zürich
4	AUTHORISED REPRESENTATIVE:	
5	SYSTEM/S OF AVCP:	System 2+
6b	EUROPEAN ASSESSMENT DOCUMENT:	ETAG 033 "Liquid applied Bridge Deck waterproofing Kits", edition 2010, used as European Assessment Document (EAD)
	European Technical Assessment:	ETA 18/1105 of 31/12/2018
	Technical Assessment Body:	Kiwa Nederland B.V.
	Notified body/ies:	0620

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7 DECLARED PERFORMANCE/S

3. Performance of the product and references to the methods used for its assessment

The identification tests and the assessment for the intended use of this kit according to the Essential Requirements were carried out in compliance with the ETA Guidance n.033: Guideline for European Technical Approval of n° 033 "Liquid applied Bridge Deck waterproofing Kits (called ETAG 033, in this ETA).

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Bond strength to support	>1 MPa
Bond strength to support after heat impact	>1 MPa
Tensile stress (initial/heat impact, heat ageing 10mm/min 23°C / 1mm/m -10°C) N/mm ²	9,0 / > 15,9
Elongation (initial/heat impact, heat ageing 10mm/min 23°C / 1mm/m -10°C) %	407 / > 340
Resistance to compaction (160°C)	Passed
Resistance to perforation (23°C)	Passed (I3)
Resistance shear to support/overlay (coarse bituminous mixture 160°C)	1.3 MPa
Water-tightness (23°C)	Passed

3.2 Hygiene, health and the environment (BWR 3)

Statement of dangerous substances. According to the manufacturer's declaration, the product installed does not contain and release any dangerous substance.

3.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Bond strength to overlay (>220°)	≥ 1 MPa
Bond strength to Coarse bituminous mixture (160°C)	≥ 1 MPa

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Aspects of durability

Essential characteristic	Performance
Water	
Variation in mass (edges sealed/ edges not sealed)	<2,5%
Micro hardness Initial/ageing	85.2° / 87.8°
Alkali	
Variation in mass	1,0 %
Micro hardness Initial/ageing	85.3° / 85.6°
Bitumen	
Micro hardness Initial/ageing	85.3°/ 81.1°
Heat ageing	
Capacity to bridge cracks (-20°C) after heat impact	Passed
Tensile stress (initial /heat impact, heat ageing 10mm/min 23°C / 1mm/m -10°C	7.2 / > 11.6
Elongation (initial /heat impact, heat ageing 10mm/min 23°C / 1mm/m -10°C	478 / > 304
Bond strength to support	≥ 1 MPa
Freeze-Thaw	
Bond strength to support	≥ 1 MPa
Resistance to shear (to support/overlay) (<250°C) after Freeze-Thaw	1.4 MPa
Resistance to shear (to support/overlay) 160°C (CBM) after Freeze-Thaw	1.3 MPa

Aspects of serviceability

Essential characteristic	Performance
High/low service temperature	≥ 1 MPa
Capacity to penetrate pores in the support	≥ 1 MPa
Resistance to flow	passed
Minimum thickness	2.3 mm
The effects of climatic conditions on application (Minimum application temperature: 5°C, Maximum application temperature: 40°C) Bond strength to support	≥1 MPa
Bond strength to moisture support	≥ 1 MPa
Bond strength to day joints, (24h, 48h)	≥ 1 MPa
Bond strength to section joints (7d UV)	≥ 1 MPa

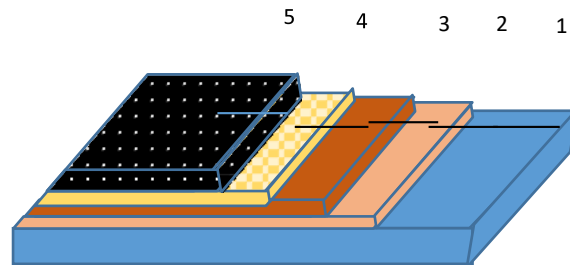
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3.8 General aspects

The verification of durability and serviceability is part of testing the essential characteristics. Durability and serviceability is only ensured if the specifications of intended use according to Annex B and the specification of the technical file of the manufacturer are kept.

Annex A: Structure of the waterproofing kit and use categories



1	concrete	
2	primer – concrete	Sikadur-188 or Sikadur-188 Rapid (300 – 400 g/m ²) with sprinkling Quartz sand size 0,3 – 0,8 mm (800 g/m ²)
3	waterproofing	Sikalastic-851 (2 mm wet layer thickness) In case of day or section joints: adhesion primer Sikalastic-810 between the two layers of Sikalastic-851
4	compound layer	Sikalastic-8902 (600 g/m ²) and Sikalastic-827 HT Pellets (about 800g/m ²)
5	asphalt	

Use categories according ETAG 033:

(A) with overlay and intended to receive vehicular traffic:

- A.1 Overlay coarse bituminous mixture applied at (160 ± 10) °C (CBM).
- A.2 Overlay coarse bituminous mixture applied at 220°C to 250°C (MA).
- A.3 Overlay of low temperature mastic asphalt at a maximum temperature of >160°C (LMA_{min}) and <250°C (LMA_{max}).

The asphalt overlay has an additional waterproofing function.

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Annex B: Characteristics

Characteristic	Proved under test conditions (P,S,T) ⁽¹⁾	Value, Passed or npd
Bond strength to support	P1, S0, T5	3,66 MPa
	P1, S3, T5	3,15 MPa
	P1, S3, T6	3,74 MPa
	P2 _{min} , S0, T5	3,52 MPa
	P2 _{max} , S0, T5	3,37 MPa
	P3, S0, T5, (reference)	4,16 MPa
	P3, S0, T5, (56 days water)	2,33 MPa 2,29 MPa
		> LV = 1.0 MPa
Capacity to bridge cracks	P1, S1.1 / S2, T2	passed
	P1, S1.3 / S2, T2	passed
Resistance to Cl penetration	-	npd
Resistance to compaction	P1, S1.3, T5	passed
Resistance to perforation	P1, S0, T5	passed I3
Resistance to shear to support	P1, S1.2, T5	1,31 MPa,
	P1, S1.3, T5	1,00 MPa
Resistance to shear to overlay	P1, S1.3, T5	not relevant for (A)
Watertightness	P1, S0, T5	watertight
Bond strength to overlay	P1, S1.1, T5	1,15 MPa
	P1, S1.3, T5	1,35 MPa
	P1, S3, T5	1.41 MPa 1,27
	P1, S1.3, S3, T5	MPa
Slipperiness	P1, S0, T5	npd

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Specimens with special primer SikaDur-188 Rapid:

Characteristic	Proved under test conditions (P,S,T) ⁽¹⁾	Value, Passed or npd
Bond strength to support	P1, S3, T5 P3, S0, T5, (reference) P3, S0, T5, (56 days water)	2,46 MPa 2,53 MPa 2,30 MPa > LV = 1.0 MPa
Resistance to Materials in contact: Change of micro hardness Change of mass	P1, T5 Water (Wa) S5.1 Alkalinity (Al) S5.2 Bitumen (Bi) S5.3 Water (Wa) S5.1 Alkalinity (Al) S5.2	 +2,6 IHRD +0,3 IHRD - 4,2 IHRD +2,5 % -1,0 %
Resistance to Materials in contact:	Oil, petrol, diesel, de-icing salt	npd
Resistance to Heat aging Change of tensile strength Change of elongation Change of tensile strength Change of elongation	P1, S2, T5 P1, S2, T3	-1,8 MPa, +71 % -4,3 MPa -36 %
Aspects of serviceability: High / low service temperature Capacity to penetrate pores Resistance to flow Effects of climate conditions Moisture content of substrate Effects of day joints Effects of section joints	 P1, S0, T5 P4, S0, T5 P4, S4, T5	 npd npd 3,52MPa 4,09MPa
Minimum thickness		2,3 mm
Release of dangerous substances		does not contain any

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**8 APPROPRIATE TECHNICAL DOCUMENTATION AND/OR -
SPECIFIC TECHNICAL DOCUMENTATION**

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name: Stamatis Antonakos
Function: TMM Waterproofing &
Roofing
At Athens on 04 June 2019

Name: Alexandros Melissourgos
Function: Technical Manager
At Athens on 04 June 2019



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End of information as required by Regulation (EU) No 305/2011

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FULL CE MARKING

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Sika Services AG, Zurich, Switzerland
92194792
ETAG 033, edition 2010, used as EAD
Notified Body 0620
Waterproofing of concrete bridge deck against the water

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3.3 Safety and accessibility in use (BWR 4)

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Aspects of durability

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Aspects of serviceability

Essential characteristic	Performance
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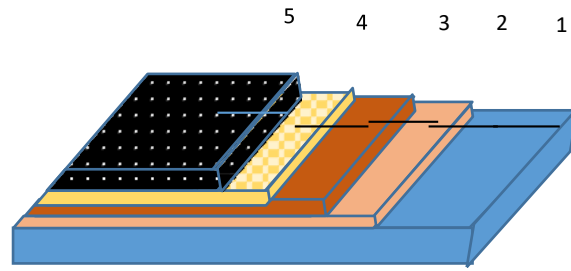
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	adhesion primer	In case of day or section joints: Sikalastic-810 between the two layers of Sikalastic-851
4	compound layer	Sikalastic-8902 (600 g/m ²) and Sikalastic-827 HT Pellets (about 800g/m ²)
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Use categories according ETAG 033:

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Resistance to shear to overlay	P1, S1.3, T5	not relevant for (A)
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	P1, S1.2, S3, T5	1.41 MPa 1,27
	P1, S1.3, S3, T5	MPa
Slipperiness	P1, S0, T5	npd

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Specimens with special primer SikaDur-188 Rapid:


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Resistance to Materials in contact: Change of micro hardness Change of mass	P1, T5 Water (Wa) S5.1 Alkalinity (Al) S5.2 Bitumen (Bi) S5.3 Water (Wa) S5.1 Alkalinity (Al) S5.2	 +2,6 IHRD +0,3 IHRD - 4,2 IHRD +2,5 % -1,0 %
Resistance to Materials in contact:	Oil, petrol, diesel, de-icing salt	npd
Resistance to Heat aging Change of tensile strength Change of elongation Change of tensile strength Change of elongation	P1, S2, T5 P1, S2, T3	-1,8 MPa, +71 % -4,3 MPa -36 %
Aspects of serviceability: High / low service temperature Capacity to penetrate pores Resistance to flow Effects of climate conditions Moisture content of substrate Effects of day joints Effects of section joints	 P1, S0, T5 P4, S0, T5 P4, S4, T5	 npd npd 3,52MPa 4,09MPa
Minimum thickness		2,3 mm
Release of dangerous substances		does not contain any

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CE MARKING TO BE PLACED ON THE LABEL

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ETAG 033, edition 2010, used as EAD
Notified Body 0620
Waterproofing of concrete bridge deck against the water
For details see accompanying documents
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ECOLOGY, HEALTH AND SAFETY INFORMATION (REACH)

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

LEGAL NOTE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the products suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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