

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-16/0736  
of 19 March 2019

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the  
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

HADALAN<sup>®</sup> DS91 13P

Product family  
to which the construction product belongs

Liquid applied roof waterproofing on the basis of  
polyurethane

Manufacturer

Heinrich Hahne GmbH & Co. KG  
Heinrich-Hahne-Weg 11  
45711 Datteln  
DEUTSCHLAND

Manufacturing plant

Heinrich Hahne GmbH & Co. KG  
Heinrich-Hahne-Weg 11  
45711 Datteln  
DEUTSCHLAND

This European Technical Assessment  
contains

7 pages including 2 annexes which form an integral part  
of this assessment

This European Technical Assessment is  
issued in accordance with Regulation (EU)  
No 305/2011, on the basis of

ETAG 005 Part 6: "Specific stipulations for kits based on  
polyurethane",  
used as EAD according to Article 66 Paragraph 3 of  
Regulation (EU) No 305/2011.

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## Specific part

### 1 Technical description of the product

The liquid applied roof waterproofing "HADALAN<sup>®</sup> DS91 13P" is a kit, which consists of the components:

- Primer "HADALAN<sup>®</sup> EBG 13E"
- surface filler "HADALAN<sup>®</sup> EBG 13E with HADALAN<sup>®</sup> FGM003 57M"
- liquid applied roof waterproofing on the basis of a polyurethane "HADALAN<sup>®</sup> DS91 13P"
- UV protection coat "HADALAN<sup>®</sup> PUR TOP 32P" (if required)

Depending on the type of substrate is a primer required for an adequate adhesion of waterproofing layer. In general the primer belonging to the substrate is given in the manufacturer's technical documents<sup>1</sup>. In single cases the manufacturer is responsible to give guidance which pre-treatment/primer is required

The minimum layer thickness of the roof waterproofing applied is 1.9 mm

As an assembled system applied on the substrate these components form a homogeneous, seamless roof waterproofing.

The components and the system build-up of the roof waterproofing "HADALAN<sup>®</sup> DS91 13P" are given in Annex A.

### 2 Specification of the intended use in accordance with the applicable European Assessment Document

The product is used for the waterproofing roof surfaces against penetration of atmospheric water.

The product is suitable for non-compressible substrates (e.g. concrete).

The levels of use categories are given in Annex A.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the roof waterproofing of at least 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

The levels of use categories and performance given in Section 3 are only valid if the liquid applied roof waterproofing is used in compliance with the specifications and conditions given in Annex B and the installation instructions of the manufacturer stated in the technical documents.

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

#### 3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
External fire performance	See Annex A
Reaction to fire	See Annex A

<sup>1</sup> The manufacturer's technical documents comprises all information necessary for the production and the installation of the product as well as for repair of the roof waterproofing made from that and it is deposited with DIBt.

### 3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Water vapour permeability	See Annex A
Watertightness	See Annex A
<b>Content of dangerous substances</b>	
Substance/s classified as EU-cat. Carc. 1A and/or 1B <sup>a)</sup>	The kit does not contain these dangerous substances. <sup>b)</sup>
Substance/s classified as EU-cat. Muta. 1A and/or 1B <sup>a)</sup>	
Substance/s classified as EU-cat. Repr. 1A and/or 1B <sup>a)</sup>	
Release scenario regarding BWR 3: S/W 2	
Resistance to mechanical damage (perforation)	See Annex A, Levels of use categories
Resistance to plant roots	See Annex A

<sup>a)</sup> In accordance with Regulation (EC) No 1272/2008

<sup>b)</sup> Assessment based on the detailed manufacturer's statements

### 3.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Resistance to wind loads	See Annex A
Slipperiness	See Annex A

### 3.4 General aspects

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

## 4 Assessment and verification of constancy of performance (AVCP) system applied with reference to its legal base

In accordance with ETAG 005 used as EAD, the applicable European legal act is: 98/599/EC.

The system to be applied is: 3

In addition, with regard to reaction to fire for products covered by this ETAG the applicable European legal act is: 2001/596/EC

The system to be applied is: 3

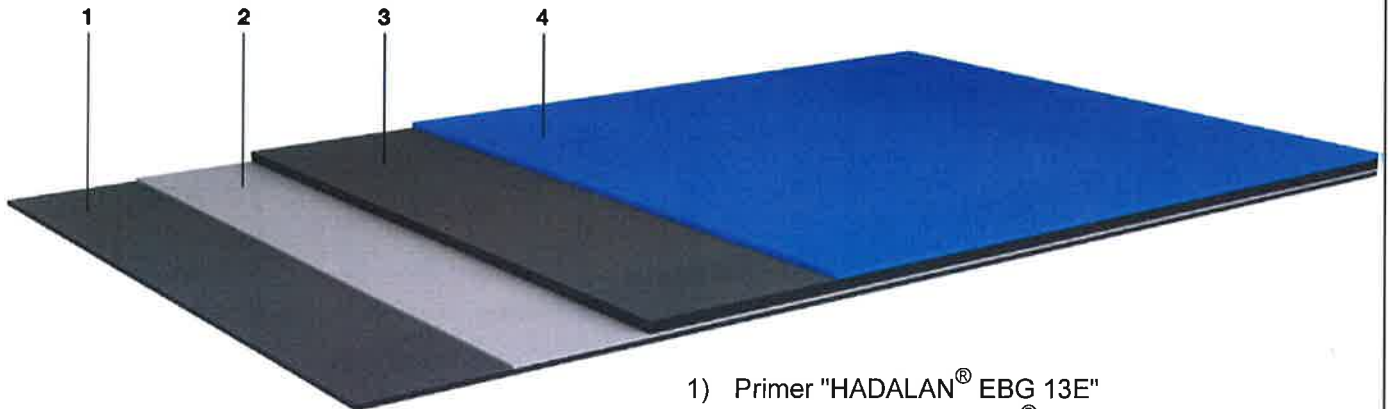
**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 19 March 2019 by Deutsches Institut für Bautechnik

BD Dipl.-Ing. Andreas Kummerow  
Head of Department

*beglaubigt:*  
Gnamou



- 1) Primer "HADALAN<sup>®</sup> EBG 13E"
- 2) surface filler "HADALAN<sup>®</sup> EBG 13E with HADALAN<sup>®</sup> FGM003 57M"
- 3) liquid applied roof waterproofing "HADALAN<sup>®</sup> DS91 13P"
- 4) UV protection coat "HADALAN<sup>®</sup> PUR TOP 32P" (if required)

Applicable to the roof waterproofing "HADALAN<sup>®</sup> DS91 13P"

Minimum layer thickness	1.9 mm	
minimum quantity consumed:	1.8 kg/m <sup>2</sup> component A, 0.2 kg/m <sup>2</sup> component B	
<u>Levels of use categories according to ETAG 005 with relation to:</u>		
Working life:	W2 (10 years)	
Climatic zones	M and S (moderate and severe climatic)	
Resistance to mechanical damage (perforation) for non-compressible substrates e.g. concrete	P1 to P4 (from low to high)	
Roof slope	S1 to S4 (each roof pitch)	
Lowest surface temperature	TL4 (-30 °C)	
Highest surface temperature	TH4 (90 °C)	
Use category related to BWR 3:	S/W 2	
<u>Performance of the product:</u>		
External fire performance	EN 13501-5	F <sub>Roof</sub>
Reaction to fire	EN 13501-1	E
Water vapour diffusion resistance factor $\mu$		$\mu \approx 1700$
Watertightness		pass
Statement on dangerous substances		see section 3.2
Resistance to plant roots		no performance assessed
Resistance to wind loads		$\geq 50$ kPa
Resistance to slipperiness		no performance assessed

**HADALAN<sup>®</sup> DS91 13P**  
Heinrich Hahne GmbH & Co KG

**System built-up, levels of use categories and performances of the product**

Annex A

## Installation

The levels of use categories and the performances of the roof waterproofing can be assumed only, if the installation is carried out according to the installation instructions stated in the technical documents of the manufacturer, in particular taking account of the following points:

- installation by appropriately trained personnel
- installation of only those components which are marked components of the kit
- installation with the required tools and adjuvants
- precautions during installation
- inspecting the roof surface for cleanliness and correct preparation, if need be, applying a primer before applying the product
- inspecting compliance with suitable weather and curing conditions
- ensuring a thickness of the cured waterproofing of at least 1.9 mm by processing appropriate minimum quantities of material
- inspections during installation and of the finished product and documentation of the results

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**Intended use**  
Specifications

Annex B