Deutsches Institut für Bautechnik
DIBt

Member of EOTA
www.eota.eu

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

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® 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.

electronic copy of the eta by dibt: eta-16/0736

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

electronic copy of the eta by dibt: eta-16/0736

Specific part

1 Technical description of the product

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

- Primer "HADALAN® EBG 13E"
- surface filler "HADALAN® EBG 13E with HADALAN® FGM003 57M"
- liquid applied roof waterproofing on the basis of a polyurethane "HADALAN® DS91 13P"
- UV protection coat "HADALAN® 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[1]. 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® 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

[1] 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.

electronic copy of the eta by dibt: eta-16/0736

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	**Performance**
Water vapour permeability	See Annex A
Watertightness	See Annex A
Content of dangerous substances	
Substance/s classified as EU-cat. Carc. 1A and/or 1B [a)]	The kit does not contain these dangerous substances.[b)]
Substance/s classified as EU-cat. Muta. 1A and/or 1B [a)]	
Substance/s classified as EU-cat. Repr. 1A and/or 1B [a)]	
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

a) In accordance with Regulation (EC) No 1272/2008
b) 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

electronic copy of the eta by dibt: eta-16/0736

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.

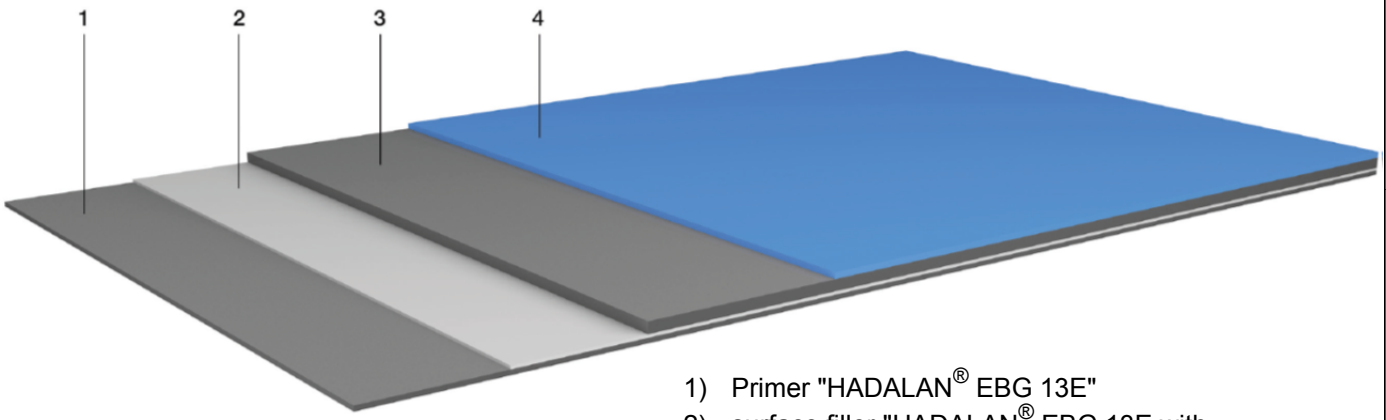
Issued in Berlin on 19 March 2019 by Deutsches Institut für Bautechnik

BD Dipl.-Ing. Andreas Kummerow
Head of Department

beglaubigt:
Gnamou

electronic copy of the eta by dibt: eta-16/0736

Deutsches Institut für Bautechnik DIBt



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

Applicable to the roof waterproofing **"HADALAN® DS91 13P"**

Minimum layer thickness		1.9 mm
minimum quantity consumed:		1.8 kg/m² component A, 0.2 kg/m² component B
Levels of use categories according to ETAG 005 with relation to:		
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
Performance of the product:		
External fire performance	EN 13501-5	F_{Roof}
Reaction to fire	EN 13501-1	E
Water vapour diffusion resistance factor μ		μ ≈ 1700
Watertightness		pass
Statement on dangerous substances		see section 3.2
Resistance to plant roots		no performance assessed
Resistance to wind loads		≥ 50 kPa
Resistance to slipperiness		no performance assessed

electronic copy of the eta by dibt: eta-16/0736

HADALAN® DS91 13P
Heinrich Hahne GmbH & Co KG

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

Annex A

Deutsches Institut für Bautechnik DIBt

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

electronic copy of the eta by dibt: eta-16/0736