

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-16/0981  
of 7 February 2017

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

Enkolan Abdichtung 1K LF

Product family  
to which the construction product belongs

Liquid applied roof waterproofing Kits based on  
polyurethane

Manufacturer

ENKE-WERK  
Johannes Enke GmbH & Co. KG  
Hamburger Straße 16  
40221 Düsseldorf  
DEUTSCHLAND

Manufacturing plant

ENKE-WERK  
Johannes Enke GmbH & Co. KG  
Hamburger Straße 16  
40221 Düsseldorf

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

Guideline for European technical approval of "Liquid  
applied roof waterproofing kits", ETAG 005 Part 6:  
"Specific stipulations for kits based on polyurethane",  
used as European Assessment Document (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 "Enkolan Abdichtung 1K LF" is a kit, which consists of the components:

- Primer if required
- liquid applied roof waterproofing on the basis of a 1-component polyurethane "Enkolan Abdichtung 1K LF"
- Polyester fleece as reinforcement

For an adequate adhesion of the waterproofing layer – depending on the type of substrate – a primer is required. In general the primer belonging to the substrate is given in the manufacturer technical documents. In single cases the manufacturer is responsible to give guidance which pretreatment/primer is required.

The minimum layer thickness of the roof waterproofing applied is 2.3 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 "Enkolan Abdichtung 1K LF" are given in Annex A.

### 2 Specification of the intended use in accordance with the applicable EAD

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

The product is suitable for compressible substrates (e.g. insulation boards) and non compressible substrates (e.g. steel, concrete).

In the technical file the manufacturer give information concerning the substrates which the product is suitable for and on how these substrates shall be pre-treated.

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 product 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 performances 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 Mechanical resistance and stability (BWR 1)

Not applicable

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

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

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

| Essential characteristic                      | Performance   |
|---|---|
| Water vapour permeability                     | See Annex A   |
| Watertightness                                | See Annex A   |
| Release of dangerous substances               | The chemical composition of the product has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt).<br>The product does not contain dangerous substances according to EOTA TR 034 (Version October 2014), except for<br>- A biocide, containing active agent: 2-octyl-2H-isothiazol-3-on (CAS: 26530-20-1). |
| Resistance to mechanical damage (perforation) | See Annex A, Levels of use categories   |
| Resistance to plant roofs                     | See Annex A   |

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

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

### 3.5 Protection against noise (BWR 5)

Not applicable

### 3.6 Energy economy and heat retention (BWR 6)

Not applicable

### 3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

### 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 specifications of the technical file of the manufacturer are kept.

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

According to Decision of the Commission of 12 October 1998 (98/599/EC) (OJ L 287 of 24.10.98, p. 30), as amended by Decision of the Commission of 8 January 2001 (2001/596/EC) (OJ L 209 of 02.08.2001, p. 33), the system of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) given in the following table applies.

| Product                                | Intended use(s)   | Level or class         | System |
|--|---|------------------------|--------|
| Liquid applied roof waterproofing kits | For uses subject to external fire performance regulations     | B <sub>ROOF</sub> (t1) | 3      |
|  | For uses subject to reaction to fire                          | E                      | 3      |
|  | All other roof waterproofing uses (all other characteristics) | —                      | 3      |

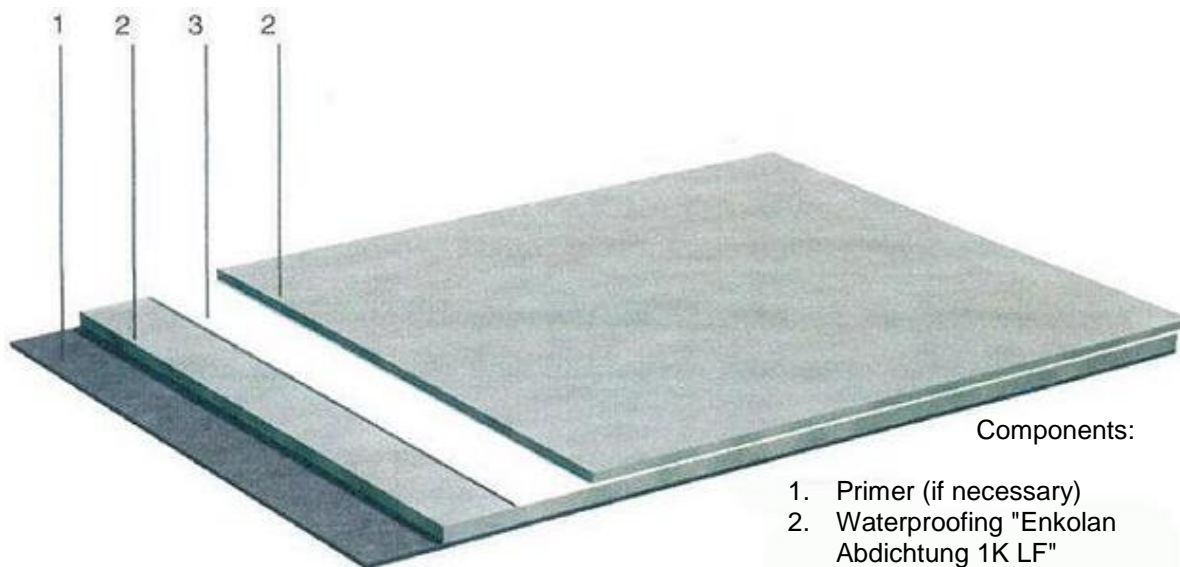
**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

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 7 February 2017 by Deutsches Institut für Bautechnik

Uwe Bender  
Head of Department

*beglaubigt:*  
Gnamou



Components:

1. Primer (if necessary)
2. Waterproofing "Enkolan Abdichtung 1K LF"
3. polyester fleece

Applicable to the roof waterproofing "**Enkolan Abdichtung 1K LF**"

|   |  |                                      |
|---|--|--------------------------------------|
| Minimum layer thickness   | 2.3 mm   |                                      |
| minimum quantity consumed:  | 3.0 kg/m <sup>2</sup>  |                                      |
| <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)                           | Compressible substrates and non-compressible substrates<br>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:  | I/A 3, S/W 2   |                                      |
| <u>Performance of the product:</u>                                      |  |                                      |
| External fire performance   | EN 13501-5   | B <sub>Roof</sub> (t <sub>1</sub> )* |
| Reaction to fire  | EN 13501-1   | E                                    |
| Water vapour diffusion resistance factor $\mu$                          |  | $\mu \approx 3200$                   |
| Watertightness  |  | pass                                 |
| Statement on dangerous substances                                       |  | see section 3.3                      |
| Resistance to plant roots   |  | no performance assessed              |
| Resistance to wind loads  |  | $\geq 50$ kPa                        |
| Resistance to slipperiness  |  | no performance assessed              |

\*Class **B<sub>ROOF</sub> (t<sub>1</sub>)**

The classification is valid for the following supporting decks:

- all slope
- any wooden continuous deck with a minimum thickness of 16 mm and gaps not exceeding 5 mm
- wooden continuous deck with insulation (EPS,  $\geq 50$  mm) covered with bitumen sheets with a mass per unit of 60 g/m<sup>2</sup>

Any other roof systems for which classification documents for B<sub>ROOF</sub> (t<sub>1</sub>) according EN 13501-5 are available.

**Enkolan Abdichtung 1K LF**  
ENKE-WERK

**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 file 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 2.3 mm by processing appropriate minimum quantities of material,
- inspections during installation and of the finished product and documentation of the results.

|  |         |
|--|---------|
| <b>Enkolan Abdichtung 1K LF</b><br>ENKE-WERK | Annex B |
| <b>Intended use</b><br>Specifications        |         |