



## Kiwa Nederland B.V.

Sir Winston Churchillaan 273  
NL-2288 EA Rijswijk  
Postbus 70  
NL-2280 AB Rijswijk

Tel.: +31 (0)88 998 44 00  
Fax: +31 (0)88 998 44 20  
E-mail: [info@kiwa.nl](mailto:info@kiwa.nl)

Optional:



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# European Technical Assessment

## ETA-24/0498 of 02-07-2024

### General Part

#### Technical Assessment Body issuing the European Technical Assessment:

Kiwa Nederland B.V., Sir Winston Churchillaan 273, 2288 EA Rijswijk, [www.kiwa.nl](http://www.kiwa.nl)

#### Trade name of the construction product

**HADALAN Velo-System**

#### Product family to which the construction product belongs

Liquid applied roof waterproofing kit based on 2K Polyaspartic

#### Manufacturer

Sievert Baustoffe SE & Co. KG  
Mühlenschweg 6  
49090 Osnabrück  
Germany

#### Manufacturing plant(s)

Sievert Baustoffe SE & Co. KG  
Heinrich-Hahne-Weg 11  
45711 Datteln  
Germany

#### This European Technical Assessment contains

8 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

“EAD 030350-00-0402 “Liquid applied roof waterproofing kits”, version August 2018.

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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## Specific parts

### 1. Technical description of the product

The liquid applied roof waterproofing kit HADALAN Velo-System is a kit, which consists of the components:

- Primer, "HADALAN Velo-Base", 2K primer based on Aspartic acid ester
- Primer "HADALAN EBG 13E", 2K primer based on Epoxy
- Leveling layer "HADALAN FGM003 57M" mixed with "HADALAN EBG 13E"
- fleece "DAKORIT DV110 89V", Polyester fleece with a grammage of 110 g/m<sup>2</sup>,
- water proofing membrane "HADALAN Velo-Seal" based on 2K Polyaspartic

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 pre-treatment / primer is required.

The minimum applied layer thickness of the roof waterproofing membrane 2.5 mm.

As an assembled system these components form a homogeneous seamless roof waterproofing kit.

The components and the system build-up of the roof waterproofing kit "HADALAN Velo-System" is given in Annex A.

### 2. Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

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

In the technical file the manufacturer gives information concerning the substrates which the product is suitable for and how these substrates shall be pre-treated. It comprises all necessary information for the production and the installation and repair of the kit and is deposited at Kiwa.

The levels of use categories are given in Annex A.

The verification 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 25 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 specification and conditions given in Annex B and the installation of the manufacture stated in the technical file.

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

**3.1 Mechanical resistance and stability (BWR 1)**

Not applicable

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

| <b>Essential characteristic</b> | <b>Performance</b> |
|---------------------------------|--------------------|
| External fire performance       | See Annex A        |
| Reaction to fire                | See Annex A        |

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

| <b>Essential characteristic</b>                               | <b>Performance</b>      |
|---|-------------------------|
| Content, emission and/or release of dangerous substances      | No performance assessed |
| Resistance to water vapour                                    | See Annex A             |
| Watertightness  | See Annex A             |
| Resistance to wind loads                                      | See Annex A             |
| Resistance to mechanical damage (perforation)                 | See Annex A             |
| Resistance to fatigue movement                                | See Annex A             |
| Resistance to the effects of low and high surface temperature | See Annex A             |
| Resistance to ageing media (heat and water)                   | See Annex A             |
| Resistance to UV radiation in the presence of moisture        | See Annex A             |
| Resistance to plant roots                                     | See Annex A             |
| Effects of variations in kit components and site practices    | No performance assessed |
| Effect of day joints  | See Annex A             |

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

| <b>Essential characteristic</b> | <b>Performance</b> |
|---------------------------------|--------------------|
| 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 are only ensured if the specifications of intended use according to Annex B and the specification of the technical file of the manufacturer are kept.

**4. Assessment and verification of constancy of performance (hereinafter 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, p33), 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 uses(s)  | Level or class | System |
|--|---|----------------|--------|
| Liquid applied roof waterproofing kits | For uses subject to external fire performance regulations   | NPA            | 3      |
|  | For uses subject to reaction to fire                        | NPA            |        |
|  | All other roof waterproofing uses all other characteristics | -              |        |

**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 on the control plan deposited at Kiwa.

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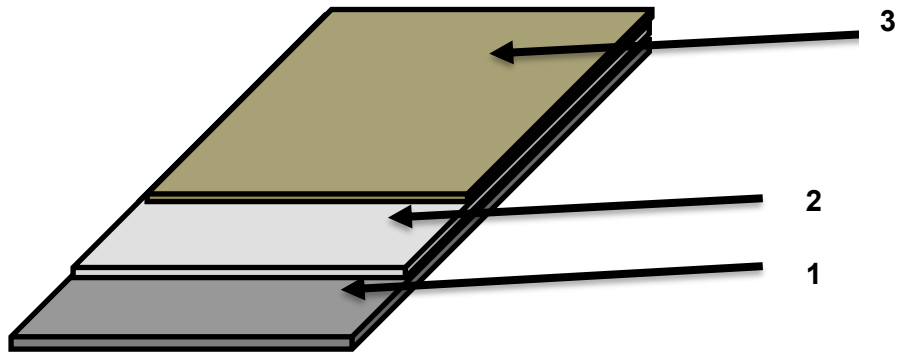


Ron Scheepers

Kiwa Nederland B.V.

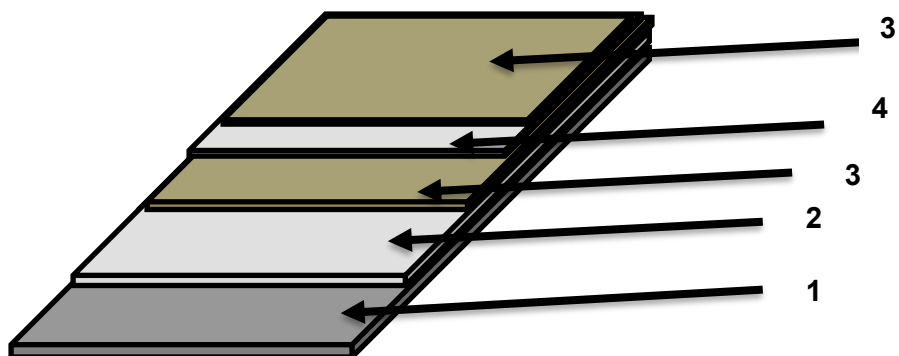
## Annex A

### Version 1.1



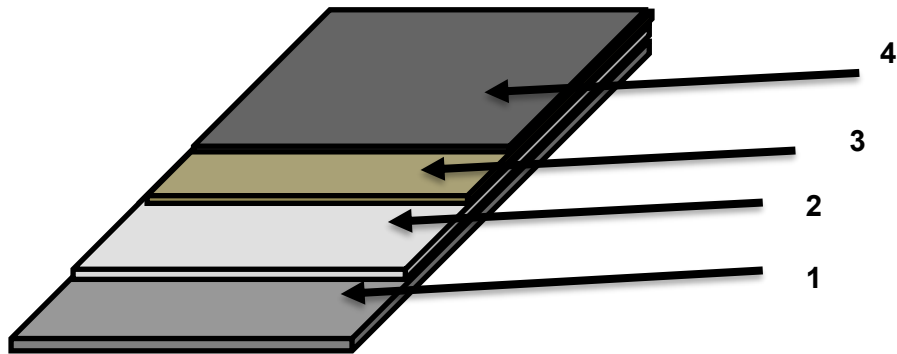
- 1: Substrate concrete
- 2: Primer: HADALAN Velo-Base,
- 3: Membrane: HADALAN Velo-Seal

### Version 1.2



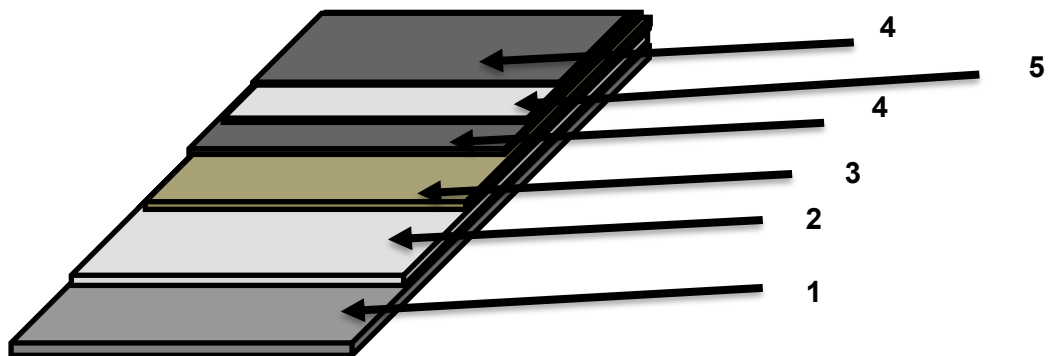
- 1: Substrate concrete
- 2: Primer: HADALAN Velo-Base
- 3: Membrane: HADALAN Velo-Seal
- 4 Fleece: DAKORIT DV110 89V

### Version 2.1



- 1: Substrate concrete
- 2: Primer: HADALAN EBG 13E
- 3. levelling layer: HADALAN EBG 13E + HADALAN FGM003 57M
- 4: Membrane: HADALAN Velo-Seal

### Version 2.2



- 1: Substrate concrete
- 2: Primer: HADALAN EBG 13E
- 3. levelling layer: HADALAN EBG 13E + HADALAN FGM003 57M
- 4: Membrane: HADALAN Velo-Seal
- 5 Fleece: DAKORIT DV110 89V

Classification of the roof waterproofing system "HADALAN Velo-System"

|  | <b>HADALAN Velo-Seal</b>                              |
|--|---|
| Minimum consumption membrane   | 2.9 kg/m <sup>2</sup>                                 |
| Minimum layer thickness  | 2,5 mm  |
| <u>Classification to use categories according to EAD 030350-00-0402:</u> |   |
| Working life   | W3 (25 years)   |
| Climatic zones   | M and S (moderate and severe climate)                 |
| Resistance to mechanical damage (perforation)                            | Non-compressible substrates: P4 (from low to special) |
| Roof slope   | S1 to S4 (10-30 %)                                    |
| Lowest surface temperature   | TL4 (-30 °C)  |
| Highest surface temperature  | TH4 (90 °C)   |
| Use category regarding BWR 3   | S/W 2   |
| <u>Performances of the product:</u>                                      |   |
| Reaction to fire: EN 13501-1   | No performance assessed                               |
| External fire performance EN 13501-5                                     | No performance assessed                               |
| Water vapour diffusion resistance factor                                 | $\mu = 6484$  |
| Water tightness  | passed  |
| Resistance to fatigue movement   | W3  |
| Resistance to ageing media (heat and water)                              | W3  |
| Resistance to plant roots  | No performance assessed                               |
| Release of dangerous substances  | See chapter 3.3                                       |
| Root resistance  | No performance assessed                               |
| Resistance to wind loads   | $\geq 50$ kPa for tear-resistant substrates           |
| Slipperiness   | No performance assessed                               |

The classification is valid for the following supporting decks:

- all roof pitches < 20°
- any non-combustible continuous decks with a minimum of 10 mm

## **Annex B**

### Installation

The levels of use categories and the performance 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 required tools and adjuvants,
- precautions during installation,
- inspecting the roof surface for cleanliness and correct preparation,
- inspecting compliance with suitable weather and curing conditions,
- ensuring a thickness of the waterproofing of at least 2.5 mm by processing of appropriate minimum quantities of material,
- inspections during installation and of the finished product and documentation of the results