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Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
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European Technical Assessment

ETA-22/0840 of 21.12.2022

General part

Technical Assessment Body issuing the European Technical Assessment	Österreichisches Institut für Bautechnik (OIB) Austrian Institute of Construction Engineering
Trade name of the construction product	PROTECT-PROOF LF 1K
Product family to which the construction product belongs	Liquid-applied roof waterproofing using kits based on polyurethane
Manufacturer	Protect-proof Kunststoff Vertriebs GmbH Wacholderweg 11 26133 Oldenburg Germany
Manufacturing plant	Manufacturing plant of Protect-proof Kunststoff Vertriebs GmbH Wacholderweg 11 26133 Oldenburg Germany
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	European Assessment document (EAD) EAD 030350-00-0402 for Liquid applied roof waterproofing kits

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In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the kits falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions).

In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

The ETA will contain the generic specification of the other components of the assembled system, which are not part of the kit.

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Specific part

1. Technical description of the product

"PROTECT-PROOF LF 1K" (PROTECT-PROOF LF 1K for horizontal surfaces and PROTECT-PROOF LF 1K thix for vertical surfaces) is a 1-component liquid applied roof waterproofing kit on the basis of polyurethane. This kit comprising components, which are factory-produced by the manufacturer or component suppliers. The ETA holder is ultimately responsible for all components of the liquid applied roof waterproofing kit specified in this ETA.

The liquid applied roof waterproofing kit "PROTECT-PROOF LF 1K" consists the components:

- liquid applied roof waterproofing on the basis of polyurethane
- polyester fleece as reinforcement with nominal weight 110 g/m², 130 g/m² or 165 g/m²

Depending on the substrate's type to achieve an adequate adhesion of the waterproofing layer a primer is required. In general the primer belonging to the substrate is given in the manufacturer's technical literature. If necessary the manufacturer has to provide guidance which kind of pretreatment or primer is required. As an assembled system these components form a homogeneous seamless roof waterproofing. Further details and a build-up of the kit is given in Annex A.

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

The intended use of this product is the waterproofing of roof surfaces against penetration of atmospheric water.

In the manufacturer's technical literature to this European Technical Assessment the manufacturer has to give any information concerning the suitable substrates and if necessary how these substrates shall be pre-treated.

Detailed information of the use categories-levels are shown in Annex B. The levels of use categories and performances given in this ETA 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.

This European Technical Assessment, based on the provisions, test and assessment methods in EAD 030350-00-0402 have been written based upon the assumed intended working life of the kit for the intended use of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are 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 the performances of the kit can be assumed only, if the installation is carried out according to the installation instructions 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 for details as corners, connections etc.
- 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,
- finding out whether to the given ambient temperature the application with the adjustment has to be accomplished,
- ensuring a thickness of the waterproofing of at least 2,5 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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"PROTECT-PROOF LF 1K" shall be installed and used in accordance with the technical product literature of the manufacturer. The information as to the method of repair on site and handling of waste products shall be observed.

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

Basic requirements for construction works	Characteristics
BWR 2	Safety in case of fire
BWR 3	Hygiene, health and environment
BWR 4	Safety and accessibility in use
BWR 7	Sustainable use of natural resources

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

According to EN 13501-1 "PROTECT-PROOF LF 1K" fulfils the requirements for reaction to fire class E.

3.1.2 External fire performance

According to the Annex of Commission Decision 2000/553/EC the assembled system is tested in accordance with ENV 1187 to the appropriate test method for the corresponding external performance roof class and is classified B_{Roof} (t1) according to EN 13501-5.

3.2 Hygiene, health and environment (BWR 3)

3.2.1 Water vapour diffusion resistance factor

Water vapour diffusion resistance factor (μ): 2.950

3.2.2 Watertightness

The assessed kit is watertight.

3.2.3 Effects of highest and lowest surface temperatures

Lowest surface temperature: TL4 (- 30 °C)
Highest surface temperature: TH4 (90 °C)

3.2.4 Resistance against ageing

Performance and tensile properties, after exposure W3 of accelerated ageing by heat, artificial weathering and accelerated ageing by hot water are kept.

3.2.5 Resistance to plant roots

According to EN 13948 the product is resistant to plant roots.

3.2.6 Content, emission and/or release of dangerous substances

According to with Regulation (EC) No 1272/2008 regarding to CMR-Substances "PROTECT-PROOF LF 1K" does not contain any dangerous substances, which are classified as EU-cat. Carc. 1A and/or 1B, classified as EU-cat. Muta. 1A and/or 1B and classified as EU-cat. Repr. 1A and/or 1B. The assessment is in accordance to detailed datas given by the ETA-holder. Regarding to BWR 3 the release scenario is classified S/W 2.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Resistance to wind load

Bond strength on tear resistant substrates is > 50 kPa
Reinforcement 110 g/m² on concrete substrate, galvanized steel
Reinforcement 110 g/m² on concrete substrate, galvanized steel
Reinforcement 165 g/m² on concrete substrate, galvanized steel, PIR

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3.3.2 Slipperiness

No performance assessed

3.4 Sustainable use of natural resources (BWR 7)

No performance assessed.

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

4.1 AVCP system

According to Decision of the Commission of 12 Oct 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 § 2 to Regulation (EU) No 305/2011) given in the following table applies.

Products	Intended uses	Level or Class	System
Liquid applied roof waterproofing kits	For uses subject to external fire performance regulations		System 3
	For uses subject to reaction to fire	E	System 3
	All other characteristics	-	System 3

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

At the manufacturing plant, the manufacturer has to implement and continuously maintain a factory production control system. All elements, requirements and provisions adopted by the manufacturer in this respect are documented in a systematic manner.

The factory production control system ensures that the performance of the product is in conformity with the European Technical Assessment. If test results are unsatisfactory, the manufacturer shall immediately implement measures to eliminate the defects. Technical details of the actions to be undertaken by the manufacturer in relation to the factory production control are laid down in the control plan deposited at Österreichisches Institut für Bautechnik.

When all criteria of the assessment and verification of constancy of performance are met, the manufacturer shall issue a declaration of performance.

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by Österreichisches Institut für Bautechnik

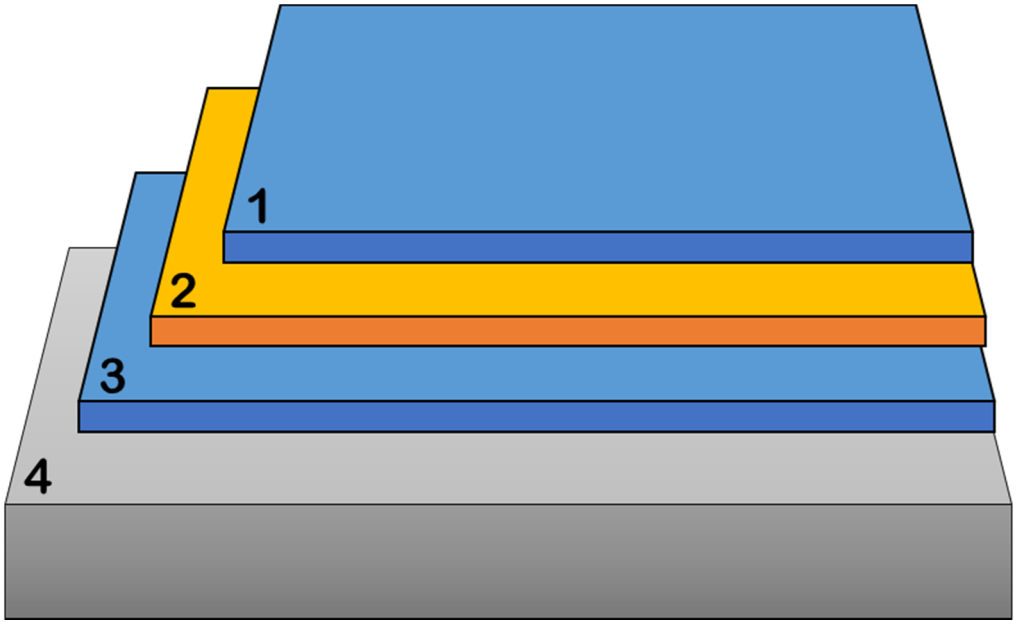
The original document is signed by:

Rainer Mikulits
Managing Director

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ANNEX A

Schematic detail of the product and general aspects



1 liquid applied roof waterproofing “PROTECT-PROOF LF 1K” (2nd layer)

2 polyester fleece as reinforcement (nominal weight 110 g/m², 130 g/m² 165 g/m²)

3 liquid applied roof waterproofing “PROTECT-PROOF LF 1K” (1st layer)

4 substrate (with primer, if required)

General aspects

The verification of durability and serviceability is part of testing of the essential characteristics.

Durability and serviceability is only ensured if the specifications of intended use according to the ETA and the specifications of the technical literature of the manufacturer are kept.

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ANNEX B

Characteristics of the product

Minimum layer thickness	2,5 mm
Minimum quantity consumed	3,5 kg/m²

Levels of use categories according to ETAG 005 with relation to :

Working life	W3 (25 years)
Climatic zones	M and S (moderate and severe climate)
Imposed loads	P1 to P4 (non-compressible and compressible substrate)
Roof slope	S1 to S4 (all slopes)
Lowest surface temperature	TL4 (-30 °C)
Highest surface temperature	TH4 (90 °C)
Use category related to BWR 3	S/W 2

Performance of the kit :

Resistance to spreading fire and radiant heat	B_{roof}(t1) (EN 13501-5)
Reaction to fire	class E (EN 13501-1)
Water vapour diffusion resistance factor	μ ≈ 2.950
Watertightness	watertight
Statement on dangerous substances	see clause 3.2.6
Resistance to plant roots	resistant (EN 13948)
Resistance to wind loads	≥ 50 kPa (on concrete substrate, galvanized steel, PIR)