

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-20/0019
of 16 January 2020

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

4F-Abdichtung 1K-PUR
4F-Abdichtung 1K-PUR V

Product family
to which the construction product belongs

Liquid applied roof waterproofing on the basis of
polyurethane

Manufacturer

BTI Befestigungstechnik GmbH & Co. KG
Salzstraße 51
74653 Ingelfingen
DEUTSCHLAND

Manufacturing plant

BTI-MP

This European Technical Assessment
contains

6 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 waterproofings "4F-Abdichtung 1K-PUR" and "4F-Abdichtung 1K-PUR V" are kits, which consist of the components:

- primer (if required),
- liquid applied roof waterproofing on the basis of a one-component reactive polyurethane,
- polyester fleece "4F-Vlies" 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's technical documents¹. In single cases the manufacturer is responsible to give guidance which pretreatment/primer is required.

Depending on the levels the minimum layer thickness of the roof waterproofing applied is 1.6 mm respectively 2.9 mm.

As an assembled system these components form a homogeneous seamless roof waterproofing. The components and the system build-up of the roof waterproofings "4F-Abdichtung 1K-PUR" and "4F-Abdichtung 1K-PUR V" 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.

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

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 working life of the product of 10 respectively 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 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.

3.2 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 product does not contain dangerous substances specified in TR 034 (Version March 2012)
Resistance to mechanical damage (perforation)	See Annex A, Levels of use categories
Resistance to plant roots	See Annex A

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 e.g. 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

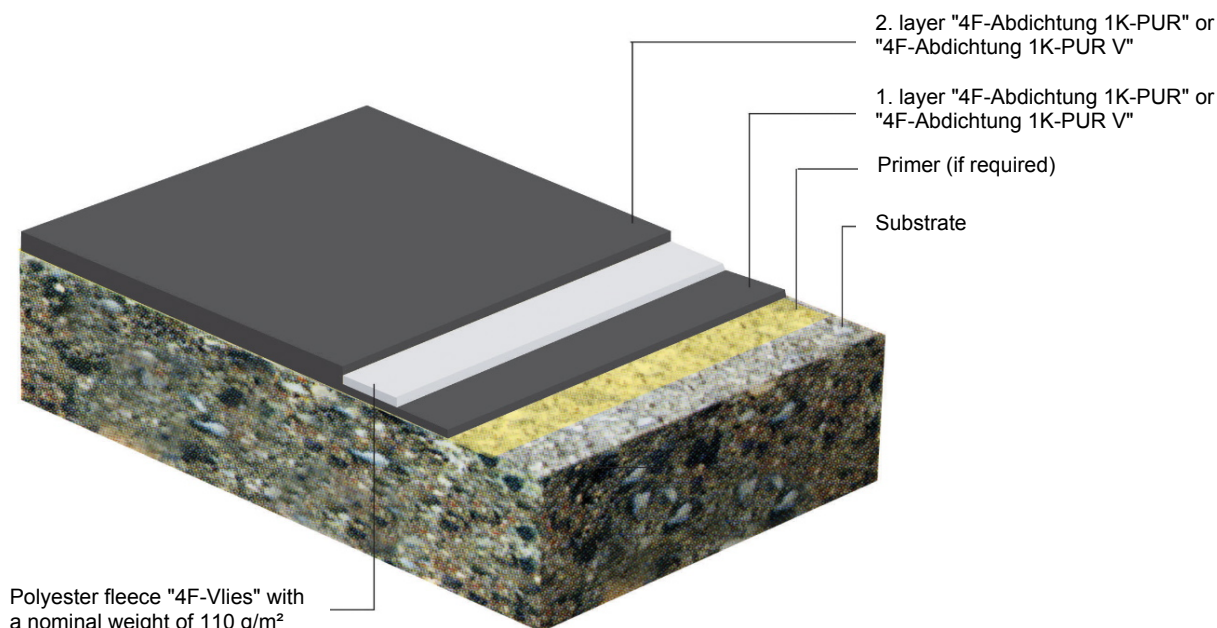
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

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 16 January 2020 by Deutsches Institut für Bautechnik

BD Dipl.-Ing. Andreas Kummerow
Head of Department

beglaubigt:
Hannoun



Applicable to the roof waterproofings "4F-Abdichtung 1K-PUR" and "4F-Abdichtung 1K-PUR V"

Minimum layer thickness	1.6 mm	2.9 mm
Minimum quantity consumed:	2.4 kg/m ²	4.1 kg/m ²
<u>Levels of use categories according to ETAG 005 with relation to:</u>		
Working life:	W2 (10 years)	W3 (25 years)
Climatic zones	M and S (moderate and severe climatic)	
Resistance to mechanical damage (perforation) (compressible and non-compressible substrates)	P1 to P3 (from low to normal)	P1 to P4 (from low to high)
Roof slope	S1 to S4 (each slope)	
Lowest surface temperature	TL3 (-20 °C)	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	F _{ROOF}
Reaction to fire	EN 13501-1	E
Water vapour diffusion resistance factor μ	μ ≈ 1830	
Watertightness	pass	
Statement on dangerous substances	see section 3.2	
Resistance to plant roots	no performance assessed	
Resistance to wind loads	≥ 50 kPa for tear resistant substrates	
Resistance to slipperiness	no performance assessed	

4F-Abdichtung 1K-PUR / 4F-Abdichtung 1K-PUR V
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System built-up, levels of use categories and performance of the product

Annex A

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 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, e.g. "4F-Abdichtung 1K-PUR V" for vertical and strong pitched areas,
- 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 1.6 mm respectively 2.9 mm by processing appropriate minimum quantities of material,
- inspections during installation and of the finished product and documentation of the results.

4F-Abdichtung 1K-PUR / 4F-Abdichtung 1K-PUR V
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Intended use
Specifications

Annex B