

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-17/0284**  
**of 20 April 2022**

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

Triflex SmartTec

Product family  
to which the construction product belongs

Liquid applied roof waterproofing based on polyurethane

Manufacturer

Triflex GmbH & Co. KG  
Karlstraße 59  
32423 Minden  
DEUTSCHLAND

Manufacturing plant

Triflex GmbH & Co. KG  
Karlstraße 59  
32423 Minden

This European Technical Assessment  
contains

8 pages including 3 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

This version replaces

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## Specific part

### 1 Technical description of the product

The liquid applied roof waterproofing "Triflex SmartTec" is a kit, which consists of the components:

- primer "Triflex Metall Primer" if required
- liquid applied roof waterproofing "Triflex SmartTec" on the basis of a one-component polyurethane
- 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<sup>1</sup>. In single cases the manufacturer is responsible to give guidance which pretreatment/primer is required.

The liquid applied roof waterproofing Materials can be applied by pouring and/or brushing.

The minimum layer thickness of the roof waterproofing applied is 2.0 mm.

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

The liquid applied roof waterproofing "Triflex SmartTec" does not contain any substances that are intended to inhibit or prevent root penetration (root protection agents).

The components and the system build-up of the roof waterproofing "Triflex SmartTec " are given in Annex A.

### 2 Specification of the intended use in accordance with the applicable European Assessment Document

The liquid applied roof waterproofing is used for the waterproofing of roof surfaces, terraces and balconies.

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

The product can be used for new roofs or for upgrading existing roof waterproofing. It can also be used on vertical surfaces (singular details).

The categorisation according to use is 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 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 specifications and conditions given in Annex B and the installation instructions of the manufacturer stated in the technical documents.

<sup>1</sup> The manufacturer's technical documents comprise 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 Performance of the product and references to the methods used for its assessment

#### 3.1 Basic Works Requirement 2: Safety in case of fire

Essential characteristic	Performance
External fire performance	see Annex A1/A2
Reaction to fire	see Annex A1

#### 3.2 Basic Works Requirement 3: Hygiene, health and the environment

Content, emission and/or release of dangerous substances	
Release scenario	S/W2
Substance/s classified as EU-cat. Carc. 1A and/or 1B <sup>a)</sup>	no performance assessed
Substance/s classified as EU-cat. Muta. 1A and/or 1B <sup>a)</sup>	
Substance/s classified as EU-cat. Repr. 1A and/or 1B <sup>a)</sup>	
Essential characteristic	Performance
Water vapour permeability	see annex A1
Watertightness	see annex A1
Resistance to wind loads	see annex A1
Resistance to mechanical damage (perforation)	see annex A1, levels of use categories
Resistance to fatigue movement	see annex A1
Resistance to the effects of low and high surface temperature	see annex A1
Resistance to ageing media (heat and water)	see annex A1
Resistance to UV radiation in the presence of moisture	see annex A1
Resistance to plant roots	see annex A1
Effects of variations in kit components and site practices	see annex A1
Effects of day joints	see annex A1

<sup>a)</sup> In accordance with Regulation (EC) No 1272/2008

<sup>b)</sup> Assessment based on the detailed manufacturer's statements

#### 3.3 Basic Works Requirement 4: Safety and accessibility in use

Essential characteristic	Performance
Slipperiness	see annex A1

#### 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 file 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 EAD 030350-00-0402 the applicable European legal act is: 98/599/EC and amended by Commission Decision 2001/596/EC.

The system to be applied is: 3

With regard to external fire exposure and reaction to fire for products covered by this EAD, the system to be applied is: 3

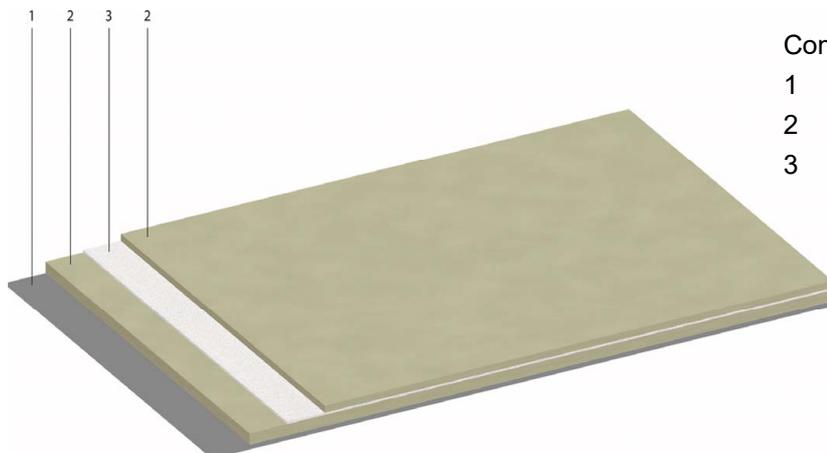
**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

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 20 April 2022 by Deutsches Institut für Bautechnik

Bettina Hemme  
Head of Section

*beglaubigt:*  
Gnamou



Components:

- 1 Primer "Triflex Metall Primer" (if required)
- 2 liquid synthetic material "Triflex SmartTec"
- 3 Polyester fleece with a nominal weight of 110 g/m<sup>2</sup>

Description of the product				
Minimum layer thickness		2.0 mm		
minimum quantity consumed:		3.0 kg/m <sup>2</sup>		
Roof slope		S1 to S4 (each slope)		
<b>Performance of the product:</b>		<b>Description / Class / Level</b>		
External fire performance	EN 13501-5	* B <sub>ROOF</sub> (t1), B <sub>ROOF</sub> (t2), B <sub>ROOF</sub> (t3) & B <sub>ROOF</sub> (t4)		
Reaction to fire	EN 13501-1	E		
Content, emission and/or release of dangerous substances		see section 3.2		
resistance to water vapour (Water vapour diffusion resistance factor)		μ ≈ 993		
Watertightness		watertight		
Resistance to wind loads		≥ 50 kPa for tear resistant substrates		
Resistance to mechanical damage (perforation) (non-compressible substrates)		P1 to P4 (from low to high)		
Resistance to fatigue movement		W3		
Resistance to the effects of	low surface temperature	TL4 (-30 °C)		
	high surface temperature	TH4 (90 °C)		
Working life according to the resistance to ageing media (heat and water)		W3 (25 years)		
Resistance to UV radiation in the presence of moisture (climatic zones)		M and S (moderate and severe climatic)		
Resistance to plant roots		no performance assessed		
Effects of variations in kit components and site practices	at 8 °C	Maximum tensile strength(N/mm <sup>2</sup> )	longitudinal: 77.5	transversal: 85.4
		Elongation (%)	longitudinal: 50.5	transversal: 60.8
		Dynamic indentation	P4	
	at 35 °C	Maximum tensile strength(N/mm <sup>2</sup> )	longitudinal: 73.8	transversal: 79.4
		Elongation(%)	longitudinal: 46.7	transversal: 59.9
		Dynamic indentation	P4	
Effects of day joints		> 20 kPa		
Slipperiness		no performance assessed		

\* The classification is valid for supporting decks see annex A2

<b>Triflex SmartTec</b> Triflex GmbH & Co. KG	Annex A1
<b>System built-up, categorisation of use and classifications</b>	

* The classification is valid for the following supporting decks:			
Class B <sub>ROOF</sub> (t1)	Class B <sub>ROOF</sub> (t2)	Class B <sub>ROOF</sub> (t3)	Class B <sub>ROOF</sub> (t4)
<ul style="list-style-type: none"> <li>• For pitches &lt; 20° on                             <ul style="list-style-type: none"> <li>– any not combustible decks with a maximum gap of 5 mm</li> <li>– any continuous wooden decks underlay</li> <li>– insulation (EPS 100 mm) covered with two layers SBS bitumen</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• All pitches with                             <ul style="list-style-type: none"> <li>– combustible and non-combustible substrates, e.g. wood deck 18 mm with</li> <li>– vapour barrier and</li> <li>– Insulation (EPS 50 mm) covered with two layers SBS bitumen</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• For pitches &lt; 10° on                             <ul style="list-style-type: none"> <li>– any wooden continuous deck a minimum thickness of 12 mm</li> <li>– any deck made of wooden planks with plain edges</li> <li>– any non-combustible deck with gap not exceeding 5 mm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• For pitches &lt; 10° by roof consisting of                             <ul style="list-style-type: none"> <li>– plywood deck (18 mm)</li> <li>– vapour control layer</li> <li>– PIR-insulation (120 mm)</li> </ul> </li> </ul>

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

**Triflex SmartTec**  
Triflex GmbH & Co. KG

**Reaction to external fire**

Annex A2

### 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 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 for summer or winter is to be accomplished
- ensuring a thickness of the waterproofing of at least 2.0 mm by processing appropriate minimum quantities of material
- inspections during installation and of the finished product and documentation of the results

<b>Triflex SmartTec</b> Triflex GmbH & Co. KG	Annex B
<b>Intended use</b> Specifications	