Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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European Technical Assessment ETA-24/0338 of 18 June 2024

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	KEMPERLASTIC 1K-PU
Product family to which the construction product belongs	Liquid applied roof waterproofing on the basis of polyurethane
Manufacturer	KEMPER SYSTEM GmbH & Co. KG Holländische Str. 32-36 34246 Vellmar
Manufacturing plant	KEMPER SYSTEM GmbH & Co. KG Holländische Str. 32-36 34246 Vellmar
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	EAD 030350-00-0402

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Specific part

1 Technical description of the product

The liquid applied roof waterproofing "KEMPERLASTIC 1K-PU" is a kit, which consists of the components:

- liquid applied roof waterproofing on the basis of polyurethane (one-component),
- 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[1]. 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 1.7 mm.

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

The liquid applied roof waterproofing "KEMPERLASTIC 1K-PU" 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 "KEMPERLASTIC 1K-PU" are given in Annex A.

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

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 for hard substrates (e.g. steel, concrete).

The manufacturer´s technical documents contain information on how to pre-treat the suitable substrates.

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 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.

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 of roofs	See Annex A
Reaction to fire	See Annex A

[1] 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.

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content, emission and/or release of dangerous substances	See Annex A
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, levels of use categories
Resistance to fatigue movement	See Annex A, levels of use categories
Resistance to the effects of low and high surface temperature	See Annex A, levels of use categories
Resistance to ageing media (heat and water)	See Annex A, levels of use categories
Resistance to UV radiation in the presence of moisture (climatic zone)	See Annex A
Resistance to plant roots	See Annex A
Effects of variations in kit components and site practices	See Annex A, levels of use categories
Effects of day joints	See Annex A

3.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
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 EAD No. 030350-00-0402, the applicable European legal act is: 98/599/EC as amended by Commission Decision 2001/596/EC.

The system to be applied is: 3

In addition, with regard to external fire performance of roofs and reaction to fire for products covered by this EAD the system to be applied is: 3

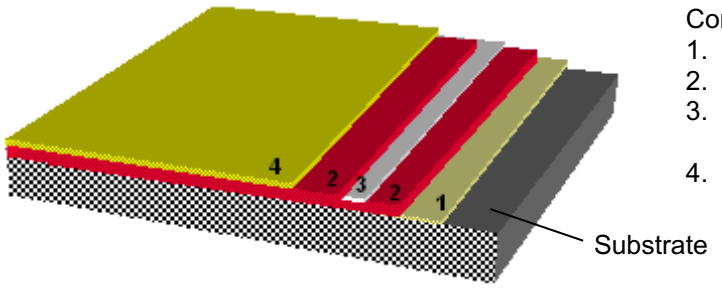
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

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 18 June 2024 by Deutsches Institut für Bautechnik

Jürgen Banzer
Head of Section (acting)

beglaubigt:
Hannoun



Components:
1. Primer (where required)
2. Waterproofing: liquid synthetic material
3. Polyester fleece with a nominal weight of 120 g/m² or 165 g/m²
4. Top coat (optional: decorative finish)

Applicable to the roof waterproofing "**KEMPERLASTIC 1K-PU**":

Description of the product			
Minimum layer thickness			1.7 mm
Minimum quantity consumed			3.4 kg/m²
Roof slope			S1 to S4 (each slope)
Essential characteristics			**Performance**
External fire performance of roofs	EN 13501-5		Class B_{ROOF} (t1) *
Reaction to fire	EN 13501-1		Class E
Content, emission and/or release of dangerous substances			No performance assessed
Water vapour diffusion resistance factor μ			μ ≈ 2300
Watertightness			Watertight
Resistance to wind loads			≥ 50 kPa
Resistance to mechanical damage (perforation) (hard substrate, e.g., concrete/steel, and compressible substrate, e.g., insulation boards)			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)
UV resistance in presence of moisture (climatic zones)			M and S (moderate and severe climate)
Resistance to plant roots			Root resistant
Effects of variations in kit components and site practices	at +8 °C	Maximum tensile strength	7 MPa
		Elongation	30 %
		Dynamic indentation	P4
	at +40 °C	Maximum tensile strength	5 MPa
		Elongation	40 %
		Dynamic indentation	P4
Effects of day joints			≥ 1250 kPa
Resistance to slipperiness			No performance assessed

* Class **B_{ROOF} (t_1)**
The classification is valid for the following supporting decks:
- all roof pitches
- any non-combustible continuous deck with a minimum thickness of 10 mm
- roof pitches ≤ 20°
- any wooden continuous deck with a minimum thickness of 16 mm and with gaps not exceeding 0.5 mm

Any other roof systems for which classification documents for B_{ROOF} (t_1) according EN 13501-5 are available.

KEMPERLASTIC 1K-PU KEMPER SYSTEM GmbH & Co. KG	Annex A
System built-up, levels of use categories and performances of the product	

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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;
- 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 cured waterproofing of at least 1.7 mm by processing appropriate minimum quantities of material;
- inspections during installation and of the finished product and documentation of the results.

KEMPERLASTIC 1K-PU KEMPER SYSTEM GmbH & Co. KG	Annex B
Intended use Specifications for the installation	