

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-03/0043
of 27. Mai 2015

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Roof waterproofing "KEMPEROL 1K-PUR"
Roof waterproofing "KEMPEROL 1C"
Roof waterproofing "KEMPEROL Kombi-Dach"

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
DEUTSCHLAND

Manufacturing plant

KEMPER SYSTEM GmbH & Co. KG
Holländische Str. 32-36
34246 Vellmar
DEUTSCHLAND

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

Guideline for European technical approval of "Liquid
applied roof waterproofing kits", ETAG 005 Part 6:
"Specific stipulations for kits based on polyurethane",
Version March 2000, amended March 2004,
used as European Assessment Document (EAD)
according to Article 66 Paragraph 3 of Regulation (EU)
No 305/2011.

This version replaces

ETA-03/0043 issued on 3 January 2012

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Specific Part

1 Technical description of the product

The liquid applied roof waterproofings "KEMPEROL 1K-PUR", "KEMPEROL 1C" and "KEMPEROL Kombi-Dach" are kits, which consist 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 documents¹. 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 components and the system build-up of the roof waterproofing "KEMPEROL 1K-PUR", "KEMPEROL 1C" and "KEMPEROL Kombi-Dach" 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.

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

In the technical file the manufacturer give information concerning the substrates which the product is suitable for and on 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 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.

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 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)

Essential characteristic	Performance
External fire performance	See Annex A
Reaction to fire	See Annex A

3.3 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 chemical composition of the product has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt). The product does not contain dangerous substances according to EOTA TR 034 (version Mai 2014)
Resistance to mechanical damage (perforation)	See Annex A, Levels of use categories
Resistance to plant roofs	See Annex A

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Resistance to wind loads	See Annex A
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 is 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

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, p. 33), 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 use(s)	Level or class	System
Liquid applied roof waterproofing kits	For uses subject to external fire performance regulations	B _{ROOF} (t1)	3
	For uses subject to reaction to fire	E	3
	All other roof waterproofing uses (all other characteristics)	—	3

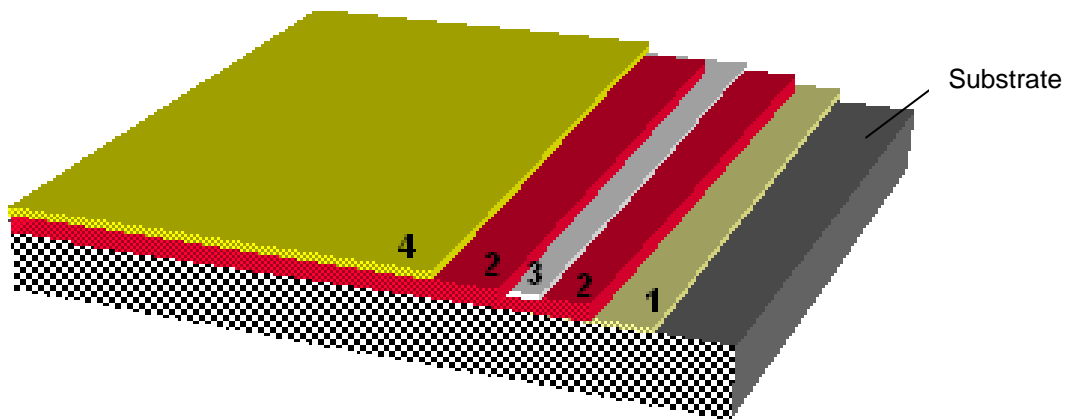
5 Technical details necessary for the implementation of the AVCP system, as provided for the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 27 May 2015 by Deutsches Institut für Bautechnik

Dirk Brandenburger
Head of Section

beglaubigt:
Hemme



Components:

- 1 Primer (where required)
- 2 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 "KEMPEROL 1K-PUR", "KEMPEROL 1C" und KEMPEROL Kombi-Dach"

Minimum layer thickness: 1.7 mm
(minimum quantity consumed: 3.4 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 climatic)
Resistance to mechanical damage (perforation): P1 to P4 (non-compressible substrate, e.g. concrete/steel and compressible substrate, e.g. insulation boards)
Roof slope: S1 to S4 (from ≤ 5° to ≥ 30°)
Lowest surface temperature: TL4 (-30 °C)
Highest surface temperature: TH4 (90 °C)
Use category related to BWR 3: S/W 2

Performance of the product:

External fire performance	EN 13501-5	class B _{ROOF} (t ₁)*
Reaction to fire	EN 13501-1	class E
Water vapour diffusion resistance factor μ		≈ 2300
Watertightness		pass
Statement on dangerous substances		see section 3.3
Resistance to plant roots		root resistant
Resistance to wind loads		≥ 50 kPa
Resistance to slipperiness		no performance determined

*Class B_{ROOF} (t₁)

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} (t₁) according to EN 13501-5 are available.

Roof waterproofing "KEMPEROL 1K-PUR"
Roof waterproofing "KEMPEROL 1C"

System built-up, levels of use categories and performances of the product

Annex A

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 th 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.

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Roof waterproofing "KEMPEROL 1K-PUR" Roof waterproofing "KEMPEROL 1C"	Annex B
Intended use Specifications	