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European Technical Assessment

ETA 18/0161 Of 07-12-2022

General Part

Technical Assessment Body issuing the ETA: Kiwa Nederland B.V., Sir Winston Churchilllaan 273, 2288 EA Rijswijk, www.kiwa.nl	
Trade name of the construction product	KEMPEROL® 1K KEMPEROL® PU Aqua
Product family to which the construction product belongs	Liquid applied roof waterproofing kit on the basis of polyurethane
Manufacturer	KEMPER SYSTEM GmbH & Co. KG Holländische Straße 32 - 36 34246 Vellmar Germany
Manufacturing plant(s)	KEMPER SYSTEM GmbH & Co. KG Holländische Straße 32 - 36 34246 Vellmar Germany KEMPER SYSTEM Italia s. r. l. Via A. Meucci, 9 20060 – Pozzo d’Adda (Milano) Italy
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 “Liquid applied roof waterproofing kits”, version August 2018

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Specific parts

1. Technical description of the product

The liquid applied roof waterproofing kit “KEMPEROL® 1K / KEMPEROL® PU Aqua” is a kit, which consists of the components

- “KEMCO® POX 2K-Primer” which is a 2-component, solvent free primer for dry and moist ceramic and mineral substrates
- Waterproofing membrane “KEMPEROL® 1K / KEMPEROL® PU Aqua” which is a 1-component, pigmented waterproofing on the basis of polyurethane dispersion

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. In single cases the manufacturer is responsible to give guidance which pre-treatment / primer is required.

The minimum applied layer thickness of the roof waterproofing membrane is 1.4 mm.

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

The components and the system build-up of the roof waterproofing kit “KEMPEROL® 1K / KEMPEROL® PU Aqua” are given in Annex A.

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

The product is used for the waterproofing of roof surfaces against penetration of atmospheric water.

In the technical file the manufacturer give information concerning the substrates which the product is suitable for and how these substrates shall be pre-treated. It comprises all necessary information for the production and the installation and repair of the kit and is deposited at Kiwa.

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 a working life of the product of at least 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 specification and conditions given in Annex B and the installation of the manufacture stated in the technical file.

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
Content, emission and/or release of dangerous substances	No performance assessed
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
Resistance to fatigue movement	See Annex A
Resistance to the effects of low and high surface temperature	See Annex A
Resistance to ageing media (heat and water)	See Annex A
Resistance to UV radiation in the presence of moisture	See Annex A
Resistance to plant roots	See Annex A
Effects of variations in kit components and site practices	No performance assessed
Effect of day joints	See Annex A

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
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 specification of the technical file of the manufacturer are kept.

4. Assessment and verification of constancy of performance (hereinafter 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, p33), 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 uses(s)	Level or class	System
Liquid applied roof waterproofing kits	For uses subject to external fire performance regulations	B _{Roof} (t ₁)	3
	For uses subject to reaction to fire	E	
	All other roof waterproofing uses all other characteristics	-	

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

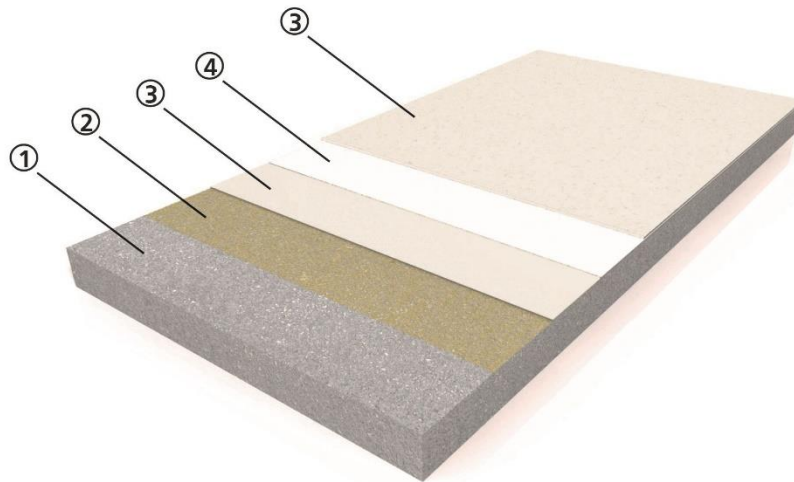
Technical details necessary for the implementation of the AVCP system are laid down on the control plan deposited at Kiwa.

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Ron Scheepers
Kiwa Nederland B.V.

Annex A



- ① Substrate
- ② Primer - KEMCO® POX 2K Primer
- ③ Waterproofing layer - KEMPEROL® 1K / KEMPEROL® PU Aqua
- ④ Reinforcement - KEMPEROL® 120 Fleece or KEMPEROL® 165 Fleece
- ③ Waterproofing layer - KEMPEROL® 1K / KEMPEROL® PU Aqua

Classification of the roof waterproofing system “KEMPEROL® 1K / KEMPEROL® PU Aqua”

	KEMPEROL® 120 Fleece	KEMPEROL® 165 Fleece
Minimum consumption	2.4 kg/m ²	
Minimum layer thickness	1.4 mm	
<u>Classification to use categories according to EAD 030350-00-0402:</u>		
Working life	W3 (25 years)	
Climatic zones	M and S (moderate and severe climate)	
Resistance to mechanical damage (perforation)	Compressible and non-compressible substrates: P1 to P4 (from low to special)	
Roof slope	S1 to S4 (each roof slope)	
Lowest surface temperature	TL4 (-30 °C)	
Highest surface temperature	TH4 (90 °C)	
Use category regarding BWR 3	S/W 2	
<u>Performances of the product:</u>		
Reaction to fire	E	
External fire performance	B _{Roof} (t ₁)	B _{Roof} (t ₁)
Water vapour diffusion resistance factor	μ = 2870	
Watertightness	passed	

Release of dangerous substances	See chapter 3.3
Root resistance	No performance determined
Resistance to wind loads	≥ 50 kPa for tear-resistant substrates
Slipperiness	No performance determined

Annex B

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 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 required tools and adjuvants,
- precautions during installation,
- inspecting the roof surface for cleanliness and correct preparation,
- inspecting compliance with suitable weather and curing conditions,
- ensuring a thickness as stated above of the cured waterproofing
- inspections during installation and of the finished product and documentation of the results