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European Technical Assessment

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General Part

Technical Assessment Body issuing the European Technical Assessment:

Kiwa Nederland B.V., Sir Winston Churchilllaan 273, 2288 EA Rijswijk, www.kiwa.nl

Trade name of the construction product

FRANKOSIL® 1K PLUS

Product family to which the construction product belongs

Liquid applied roof waterproofing kit on the basis of polyurethane

Manufacturer

FRANKEN-Systems GmbH
Wörthstraße 9
97318 Kitzingen
Germany

Manufacturing plant(s)

FRANKEN-Systems GmbH
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Germany

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

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, Revision March 2004, used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.

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Specific parts

1. Technical description of the product

The liquid applied roof waterproofing kit “*FRANKOSIL® 1K PLUS*” is a kit, which consists of the components

- Fleece “*FRANKOLON® Polyestervlies 110*” which is a polyester fleece with a grammage of 110 g/m²
- water proofing membrane “*FRANKOSIL® 1K PLUS*” on the basis of a single component moisture curing polyurethane hybrid for waterproofing layers on roofs

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 2.0 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 “*FRANKOSIL® 1K PLUS*” 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
Water vapour permeability	See Annex A
Watertightness	See Annex A
Release of dangerous substances	No performance determined
Resistance to mechanical damage (perforation)	See Annex A, use categories
Resistance to plant roots	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 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} (t1)	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.

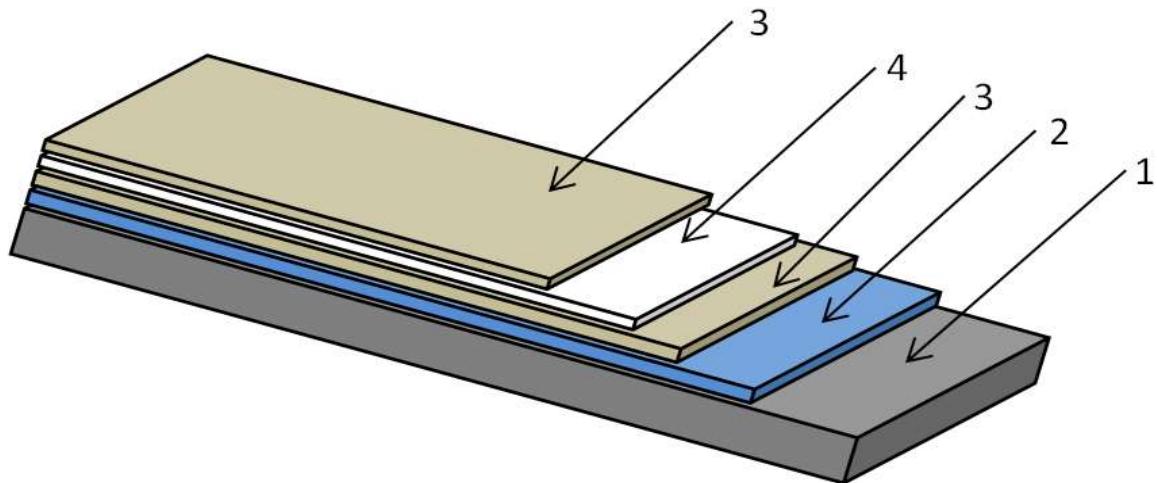
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Annex A



1: Substrate
 2: Primer if needed
 3: Waterproofering layer – FRANKOSIL® 1K PLUS
 4: Inlay – FRANKOLON® Polyestervlies 110

Classification of the roof waterproofing system “FRANKOSIL® 1K PLUS”

Minimum consumption	3.2 kg/m ²
Minimum layer thickness	2.0 mm
<u>Classification to use categories according to ETAG 005:</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 EN 13501-1	Class E
External fire performance EN 13501-5	B _{ROOF} (t1)*
Water vapour diffusion resistance factor	$\mu = 864$
Watertightness	passed
Release of dangerous substances	See chapter 3.3
Root resistance	No penetration of sealing by roots, watertight
Resistance to wind loads	≥ 50 kPa for tear-resistant substrates
Slipperiness	No performance determined

* Class B_{ROOF}(t1)

The classification is valid for the following supporting decks:

- all roof pitches $> 0^\circ$
- any non-combustible continuous decks with a minimum of 10 mm

Any other roof systems for which classification documents for B_{ROOF}(t1) according EN 13501-5 are available.

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 referring to the used reemat,
- inspections during installation and of the finished product and documentation of the results