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European Technical Assessment

ETA 18/0296
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General part

Technical Assessment Body issuing the ETA: ITeC

ITeC has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product

MasterSeal Roof 2111

Product family to which the construction product belongs

Product Area Code: 03
Liquid applied roof waterproofing kit based on polyurethane.

Manufacturer

BASF Coatings GmbH

372 Donnerschweer
D-26126 Oldenburg
Germany

Manufacturing plant(s)

BASF Coatings GmbH

372 Donnerschweer
D-26126 Oldenburg
Germany

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) 305/2011, on the basis of

ETAG 005 *Liquid applied roof waterproofing kits. Part 1. General and Part 6: Specific stipulations for kits based on polyurethane* used as European Assessment Document (EAD).

General comments

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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Specific parts of the European Technical Assessment

1 Technical description of the system

MasterSeal Roof 2111 is an in-situ applied liquid roof waterproofing kit based on polyurethane manufactured by BASF Coatings GmbH, which consists of the following components:

Components	Trademark	Consumption	Thickness
Primer	MasterSeal P 770	0,25-0,4 kg/m ²	0,2 mm - 0,35 mm
Waterproofing membrane	MasterSeal M811	≥ 2,3 kg/m ²	Min. 1,9 mm
Coating	MasterSeal TC 269	0,15-0,20 kg/m ²	100 µm - 200 µm

Table 1: Components and application data of MasterSeal Roof 2111 system.

For an adequate adhesion of the waterproofing layer, a primer is required.

The minimum thickness of the assembled waterproofing kit is 2 mm.

As an assembled system, these components form a homogeneous seamless roof waterproofing kit. The system build-up of the roof waterproofing kit MasterSeal Roof 811 is given in Annex 1.

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

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

The kit is applied on concrete support. In the technical documents the manufacturer gives information about the substrate pre-treatment, if needed.

The provisions made in this ETA are based on an assumed working life of at least 10 years for the system MasterSeal Roof 2111. These provisions are based upon the current state of the art and the available knowledge and experience.

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 are given in Annex 1, according to ETAG 005 part 1 and part 6. These categories are only valid if the liquid applied roof waterproofing kit is used in compliance with the specifications and conditions given in Annex 2 and the installation instructions of the manufacturer stated in the technical documents.

3 Performance of the system and reference to the methods used for its assessment

Performances of MasterSeal Roof 2111 related to the basic requirements for construction works (hereinafter (BWR)) were determined according to ETAG 005 part 1 and part 6. Essential characteristics of the LAWRK system are indicated in table 2.

Essential characteristic	Performance
<i>BWR 2 – Safety in case of fire</i>	
External fire performance	Not assessed
Reaction to fire	Not assessed
<i>BWR 3 – Hygiene, health and the environment</i>	
Resistance to water vapour	$\mu = 2519$
Watertightness	Pass (the assembled system remains watertight)
Content, emission and/or release of dangerous substances	Not assessed
Resistance to wind loads	Delamination strength: 1390 kPa (≥ 50 kPa)
Resistance to mechanical damage (perforation)	P4 (I4, L4)
Resistance to fatigue movement	W2
Resistance to low and high surface temperatures.	Resistance to the effects of low temperatures: I4 (P4). Resistance to the effects of extreme low temperatures TL4 (-30 °C): test passed. Resistance to the effects of high temperatures TH4 (+90 °C): L4 (P4)
Resistance to ageing media	W2, S (severe) Resistance to heat ageing: <ul style="list-style-type: none"> - TL4 (-30 °C): L4 (P4) - Resistance to fatigue movement at -10 °C: test passed. - Tensile properties: see table 3. Resistance to UV radiation + moisture ageing: <ul style="list-style-type: none"> - I4 (P4) - Tensile properties: see table 3. Resistance to water ageing: <ul style="list-style-type: none"> - L4 (P4) - Resistance to wind loads (delamination strength): 980 kPa (≥ 50 kPa)
Resistance to plant roots	Not assessed
Effects of variations in kit components and site practice	Not assessed
Effect of day joints	Not relevant
<i>BWR 4- Safety and accessibility in use</i>	
Resistance to wind loads	See BWR 3
Slipperiness	0,39

Table 2: Performance of MasterSeal Roof 2111.

Conditions of testing	Tensile strength (MPa)	Elongation at break (%)
Before ageing	4,6	67
After heat ageing	4,3	43
After UV radiation + moisture ageing	5,2	33

Table 3: Tensile properties of MasterSeal Roof 2111.

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 2 and specifications of technical documents 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 the European Commission¹ Decision 98/599/EC, amended Decision 2001/596/EC², the system of AVCP (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the following table applies.

System	Intended use(s)	Level or class	System
MasterSeal Roof 2111	Liquid applied roof waterproofing kit not subjected to fire regulations	Any	3

Table 4: Applicable AVCP system.

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

All the necessary technical details for the implementation of the AVCP system are laid down in the *Control Plan* deposited with the ITeC³, with which the factory production control shall be in accordance.

Any change in the manufacturing procedure which may affect the properties of the system shall be notified and the necessary type-testing revised according to the *Control Plan*.

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by the Catalonia Institute of Construction Technology.

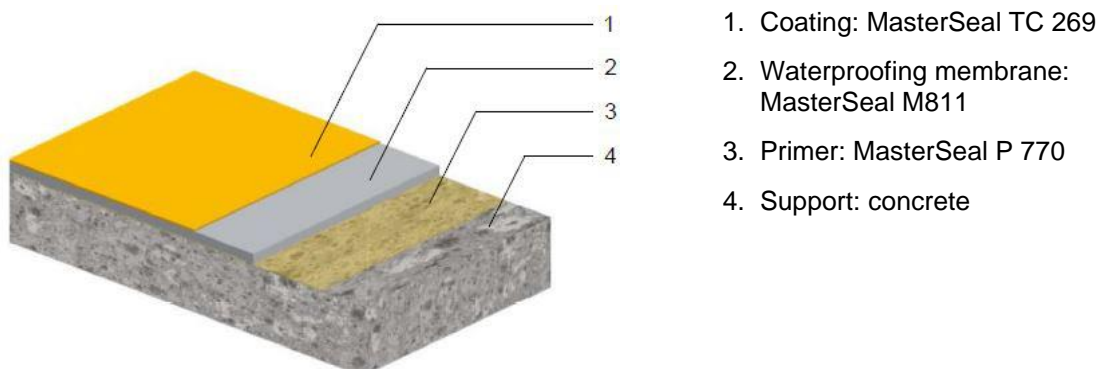


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¹ Official Journal of the European Union (OJEU) L287 of 24/10/1998.

² Official Journal of the European Union (OJEU) L209 of 02/08/2001.

³ The *Control Plan* is a confidential part of the ETA and is only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

ANNEX 1: Classification of the roof waterproofing system MasterSeal Roof 2111**Figure 1:** Components of the LARWK MasterSeal Roof 2111.

Minimum consumption	See Table 1
Minimum thickness of the assembled kit	2 mm
Classification to use categories	
Working life	W2 (10 years)
Climatic zone	S (severe)
Resistance to mechanical damage (perforation)	P4
Roof slope	S1-S4
Maximum temperature	TH4 (90°C)
Minimum temperature	TL4 (-30°C)
Performances of the system	
Reaction to fire	Not assessed
External fire performance	Not assessed
Water vapour diffusion resistance factor	$\mu = 2519$
Watertightness	Pass
Release of dangerous substances	Not assessed
Root resistance	Not assessed
Resistance to wind loads	≥ 50 kPa
Slipperiness	0,39

Table 5: Level of use categories.

ANNEX 2: 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,
- Precautions during installation,
- Inspecting the roof surface for cleanliness and correct preparation,
- Inspecting compliance with suitable weather and curing conditions,
- Ensuring a thickness of the assembled waterproofing kit of at least 2 mm by processing of appropriate minimum quantities of material,
- Inspections during installation and of the finished product and record of the results.