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# European Technical Assessment ETA-17/0398 of 16.02.2018

General part

<b>Technical Assessment Body issuing the European Technical Assessment</b>	Österreichisches Institut für Bautechnik (OIB) Austrian Institute of Construction Engineering
<b>Trade name of the construction product</b>	IKOprotect Metatec IKOprotect Metatec Detail IKOprotect Metatec Winter
<b>Product family to which the construction product belongs</b>	Liquid applied roof waterproofing kit on the basis of reactive polymethylmethacrylate
<b>Manufacturer</b>	IKO nv D'Herbouvillekaai 80 2020 Antwerpen Belgium
<b>Manufacturing plant</b>	Plant A
<b>This European Technical Assessment contains</b>	7 pages including 2 Annexes which form an integral part of this Assessment
<b>This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of</b>	Guideline for European technical approval (ETAG) Nr. 005 "Liquid applied roof waterproofing kits - Part 4: Specific stipulations for kits based on flexible unsaturated polyester", used as European Assessment Document (EAD)

## General part

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the kits falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions).

In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

The ETA will contain the generic specification of the other components of the assembled system, which are not part of the kit.

## Specific part

### 1. Technical description of the product

This product is a liquid applied roof waterproofing kit on the basis of reactive polymethylmethacrylate. This kit comprising components, which are factory-produced by the manufacturer or component suppliers. The ETA holder is ultimately responsible for all components of the liquid applied roof waterproofing kit specified in this ETA.

#### 1.1 Definition of the construction product

The liquid applied roof waterproofings "IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter" are kits, which consist following components:

- liquid applied roof waterproofing on the basis of a two-component reactive polymethylmethacrylate
- polyester fleece as felt layer for reinforcing

As an assembled system these components form a homogeneous seamless roof waterproofing. For an adequate adhesion of the waterproofing layer, which is depending on the type of the substrate, a primer is required in responsibility of the manufacturer.

The primer "IKOprotect Metaprim" on the basis of reactive polymethylmethacrylate is used in addition for mineral substrates, such as concrete, mortar or screed.

The primer "IKOprotect Metaprim Detail" on the basis of reactive polymethylmethacrylate is used in addition for the substrate asphalt and hot and cold asphalt.

"IKOprotect Metatec Detail" is the thixotropic variation for applications on details, such as up-stands, corners, connections etc.

"IKOprotect Metatec Winter" is a variation with a shorter curing time for applications at low temperatures.

Annex 1 shows the components and the system build-up of the roof waterproofings "IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter".

The minimum layer thickness of the roof waterproofing applied is 1.7 mm. The weight of the polyester fleece is approx. 110 g/m<sup>2</sup>.

Kits based on this ETA cover all components of the assembled system within a set generic specification in accordance to the ETA Holder.

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

### **2.1 Intended use**

The intended use of this construction is the waterproofing of roof surfaces against penetration of atmospheric water. In the manufacturer's technical literature to this European Technical Assessment the manufacturer has to give any information concerning the suitable substrates and how these substrates shall be pre-treated.

### **2.2 Working life**

This European Technical Assessment, based on the provisions, test and assessment methods in the guideline ETAG-005 used as EAD, have been written based upon the assumed intended working life of the liquid applied roof waterproofing kit for the intended use of 25 years, provided that the Kit is subject to appropriate use and maintenance. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### **2.3 General assumptions**

For evaluating roof waterproofing "IKOprotect Metatec,IKOprotect Metatec Detail,IKOprotect Metatec Winter" it is assumed that

- The building shall be sufficiently structurally sound to carry the additional imposed load exerted by the assembled system,
- Roofs shall be properly designed with adequate falls/drainage,
- Regular maintenance of the roof shall be conducted

### **2.4 Manufacturing**

The European Technical Assessment is issued for roof waterproofing "IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter" on the basis of agreed data/information, deposited with the Österreichisches Institut für Bautechnik, which identifies the product/kit that has been assessed and judged. Changes to the product/kit or production process, which could result in this deposited data/information being incorrect, should be notified to the Österreichisches Institut für Bautechnik before the changes are introduced. The Österreichisches Institut für Bautechnik will decide whether or not such changes affect the European Technical Assessment and consequently the validity of the CE marking on the basis of the European Technical Assessment and if so whether further Assessment or alterations to the European Technical Assessment, shall be necessary.

### **2.5 Installation**

The fitness for use of the roof waterproofing can be assumed only, if the installation is carried out according to the installation instructions 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, such as the thixotropic variant "IKOprotect Metatec Detail" for details as upstands, corners, connections etc.
- 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 ("IKOprotect Metatec") or winter ("IKOprotect Metatec Winter") is to be accomplished,
- ensuring a thickness of the 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.

The information as to the method of repair on site and handling of waste products shall be observed. Roof waterproofing "IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter" shall be installed and used in accordance with the technical product literature of the manufacturer.

### 3. Performance of the product and references to the methods used for its Assessment

Basic requirements for construction works	Characteristics
BWR 2	Safety in case of fire
BWR 3	Hygiene, health and environment
BWR 4	Safety and accessibility in use
BWR 7	Sustainable use of natural resources

#### 3.1 Safety in case of fire (BWR 2)

##### 3.1.1 Reaction to fire

According to EN 13501-1:2010 the waterproofing kit fulfils the requirements for reaction to fire class E.

##### 3.1.2 Resistance to fire

According to the Annex of Commission Decision 2000/553/EC the assembled system is tested in accordance with ENV 1187 to the appropriate test method for the corresponding external performance roof class and is classified B<sub>Roof</sub> (t1) according to EN 13501-5.

#### 3.2 Hygiene, health and environment (BWR 3)

##### 3.2.1 Water vapour permeability

Water vapour permeability factor ( $\mu$ ): 4.330

##### 3.2.2 Watertightness

According to Technical Report EOTA TR 003 the assessed kit is watertight.

##### 3.2.3 Effects of highest and lowest surface temperatures

Lowest surface temperature: TL4 (- 30 °C)

Highest surface temperature: TH4 (90 °C)

##### 3.2.4 Resistance against ageing

Performance and tensile properties, after exposure W3 of accelerated ageing by heat, artificial weathering and accelerated ageing by hot water are kept.

##### 3.2.5 Resistance to plant roots

According to EN 13948 the product is resistant to plant roots.

##### 3.2.6 Release of dangerous substances

According to the manufacturer's declaration roof waterproofing "IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter" does not contain dangerous substances detailed in Council Directive 67/548/EEC and Regulation (EC) no 1272/2008 as well as EOTA TR 034 (General ER 3 Checklist for ETAGs/CUAPs/ETAs- Content and/or release of dangerous substances in products/kits), edition March 2012.

A written declaration in this respect was submitted by the ETA-holder. In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

### **3.3 Safety and accessibility in use (BWR 4)**

#### **3.3.1 Resistance to wind load**

Bond strength on concrete substrate is > 50 kPa.

### **3.4 Sustainable use of natural resources (BWR 7)**

No performance assessed.

## **4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base**

### **4.1 AVCP system**

According to Decision 97/556/EC (Decision of the Commission of 14 July 1997, L 229 of 20.8.1997, p. 15), as amended by Decision 2001/596/EC (Decision of the Commission of 8 January 2001, L 209 of 2.8.2001, p. 33), the systems of AVCP given in the following table apply:

<b>Products</b>	<b>Intended uses</b>	<b>Level or Class</b>	<b>System</b>
Liquid applied roof waterproofing kits	For all roof waterproofing uses	Any	System 3

The systems of AVCP are described in Annex V of Regulation (EU) No 305/2011, as amended by Delegated Regulation (EU) No 568/2014.

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

At the manufacturing plant, the manufacturer has to implement and continuously maintain a factory production control system.

All elements, requirements and provisions adopted by the manufacturer in this respect are documented in a systematic manner in the form of written policies and procedures.

The records shall be kept at least for ten years and presented to Österreichisches Institut für Bautechnik on request.

The factory production control system ensures that the performance of the product is in conformity with the European Technical Assessment.

If test results are unsatisfactory, the manufacturer shall immediately implement measures to eliminate the defects. Construction products not in conformity with the requirements shall not be CE marked.

Technical details of the actions to be undertaken by the manufacturer in relation to the factory production control are laid down in the control plan deposited at Österreichisches Institut für Bautechnik.

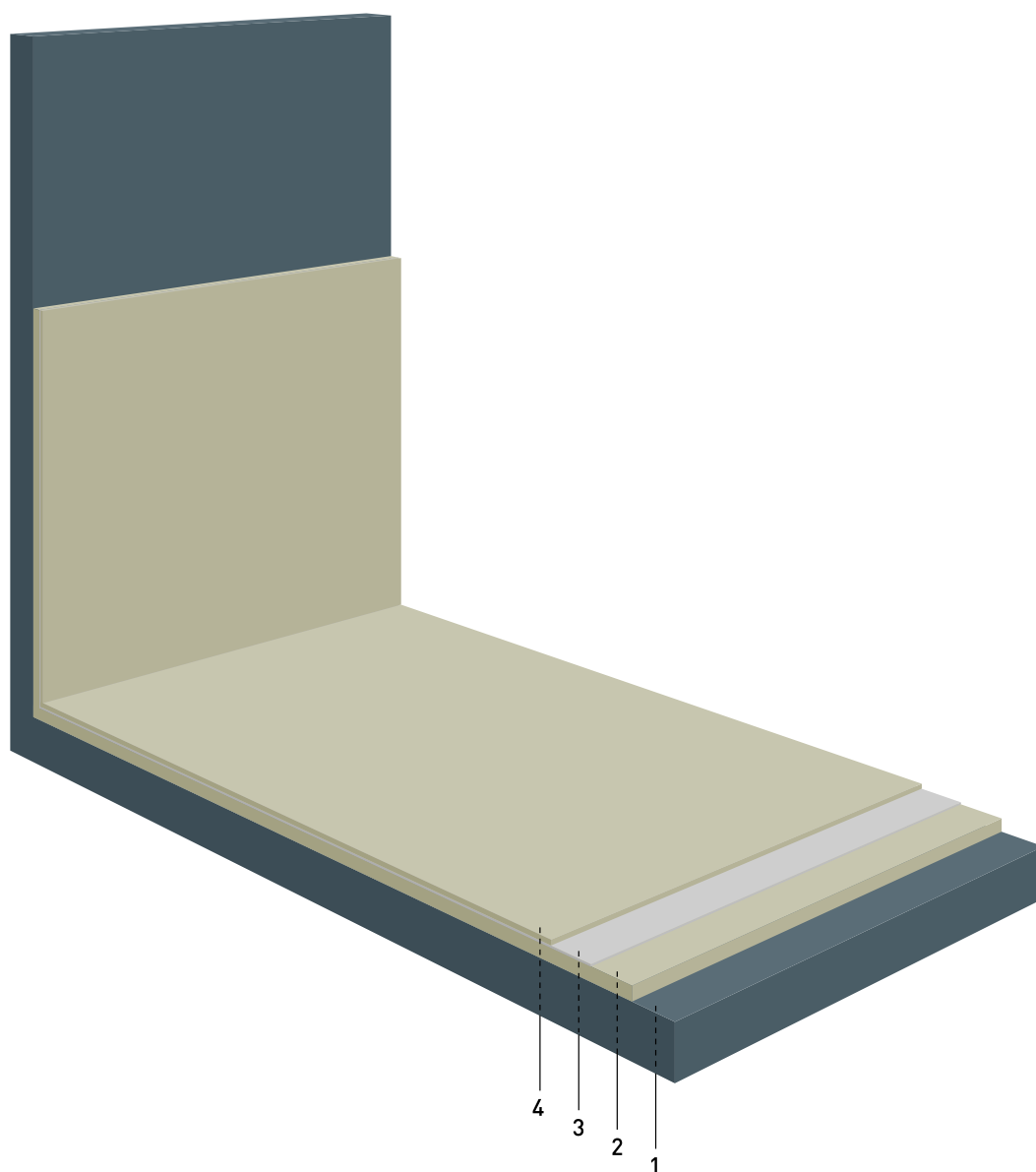
When all criteria of the assessment and verification of constancy of performance are met, the manufacturer shall issue a declaration of performance.

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by Österreichisches Institut für Bautechnik

Rainer Mikulits  
Managing Director

## ANNEX 1

### Schematic detail of the product



- 1 Substrate (with primer, if required)
- 2 IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter
- 3 Polyester fleece layer (nominal weight 110 g/m<sup>2</sup>)
- 4 IKOprotect Metatec, IKOprotect Metatec Detail, IKOprotect Metatec Winter

## **ANNEX 2**

### **Characteristics of the product**

Minimum layer thickness	1.7 mm
Minimum quantity consumed	2.5 kg/m <sup>2</sup>

#### **Levels of use categories according to ETAG 005 with relation to :**

Working life	W3 (25 years)
Climatic zones	M and S (moderate and severe climate)
Imposed loads	P1 to P4 (non-compressible and compressible substrate)
Roof slope	S1 to S4
Lowest surface temperature	TL4 (-30 °C)
Highest surface temperature	TH4 (90 °C)
Use category related to BWR 3	S/W 2

#### **Performance of the kit :**

Resistance to spreading fire and radiant heat	B <sub>roof</sub> (t1) (EN 13501-5)
Reaction to fire	class E (EN 13501-1)
Water vapour diffusion resistance factor	$\mu \approx 4.330$
Watertightness	watertight
Statement on dangerous substances	does not contain any
Resistance to plant roots	resistant (EN 13948)
Resistance to wind loads	$\geq 50$ kPa on concrete substrate

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