



ETA-Danmark A/S
Göteborg Plads 1
DK-2150 Nordhavn
Tel. +45 72 24 59 00
Internet www.etadanmark.dk

Authorised and notified
according to Article 29 of the
Regulation (EU)
No 305/2011 of the European
Parliament and of the Council
of 9 March 2011

MEMBER OF EOTA



European Technical Assessment ETA-22/0465 of 2022/09/06

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

IKO metatech

Product family to which the above construction product belongs:

Liquid applied roof waterproofing kit on the basis of reactive polymethylmethacrylate

Manufacturer:

IKO NV
D'Herbouvillekaai 80
BE-2020 Antwerpen

Manufacturing plant:

IKO NV
D'Herbouvillekaai 80
BE-2020 Antwerpen

This European Technical Assessment contains:

8 pages including 1 annex which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

European Assessment document (EAD) no. European Assessment Document EAD 030350-00-0402 for Liquid applied roof waterproofing kits

This version replaces:

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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1 Technical description of the product

1.1 IKO metatech is a roof waterproofing kit consisting of a two-component liquid waterproofing system based on PMMA, and polyester reinforcing scrim. As an assembled system, the kit forms a homogeneous roof waterproofing. The kit is used to produce a system to a minimum specification of:

- Primer — IKO metatech Bitumen Primer (where required) 0.4 to 0.8 kg/m² or IKO metatech Porous Primer (where required) 0.4 to 0.8 kg/m²
- IKO metatech – a PMMA liquid applied roof waterproofing 3.0 kg/m².
- Reinforcement – IKO polyester Fleece 110 polyester fleece of 110 g/m²

1.2 The minimum total dry film thickness of the system must be 2.00 mm.

1.3 The kit has been assessed for use on substrates of:

- Primed concrete
- Primed bitumen carrier membrane over insulation

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

The kit is for use as a liquid-applied roof waterproofing to resist the passage of water to the building's internal structure, where Essential Requirements 2 *Safety in the case of fire*, 3 *Hygiene, health and the environment* and 4 *Safety in use*, including the aspect of durability, apply.

The provisions made in this European Technical Assessment are based on an assumed working life for the roof of 25 years. The indications given in the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, 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.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

| Characteristic | Classification |
|---------------------------|---|
| External fire performance | B roof (t1) and B roof (t4) – see annex A |
| Reaction to fire | No performance assessed |

3.2 Health, hygiene, and the environment (BWR 3)

| Characteristic | Performance |
|--|-------------------------------------|
| Content, emission and/or release of dangerous substances | No performance assessed |
| Water vapour resistance factor – μ (mean) Water vapour diffusion – equivalent air layer thickness – Sd (m) (mean) | 6841 8.77 |
| Watertightness | Watertight |
| Resistance to wind loads Resistance to delamination (kPa) (mean) – concrete – bitumen carrier membrane on PIR insulation | > 50 Pa 1285 kPa 48 kPa |
| Resistance to mechanical damage (perforation) Dynamic indentation at 23°C – steel – bitumen carrier membrane/ PIR insulation Static indentation at 23°C – steel – bitumen carrier membrane/ PIR insulation | I4 I3 L4 L4 |
| Resistance to fatigue movement – 1000 cycles | W3 |
| Resistance to the effects of low and high temperatures Low temperatures – Dynamic indentation – Steel substrate at –30°C Crack bridging Effects of high surface temperature on steel at 90°C | I4 Pass Not relevant for PMMA |

| Characteristic | Performance |
|---|---|
| Resistance to ageing media Resistance to heat ageing - 200 days at 70°C Tensile strength (N per 50 mm) - control, mean - aged, mean Resistance to heat ageing (cont) Elongation at maximum load (%) - control - aged | I4 527 N 635 N 55 % 52 % |
| Resistance to water exposure 180 days at 60°C Delamination (kPa) - concrete - bitumen carrier membrane on PIR insulation Static indentation at 90°C – steel | 1574 kPa 111 kPa L4 |
| UV radiation in the presence of water 1000 MJ/m ² (50°C) Dynamic indentation – steel at –10°C Tensile strength (N per 50 mm) – control, mean – aged, mean Elongation at maximum load (%) – control, mean – aged, mean | I4 527 N 598 N 55 % 36 % |
| Resistance to root penetration | No performance assessed |
| Effects of variation in kit components and site practices Tensile strength (N per 50 mm) - control, mean - prepared at +5°C, mean - prepared at +30°C, mean Elongation at maximum load (%) - control, mean - prepared at +5°C, mean - prepared at +30°C, mean Dynamic indentation – steel - prepared at +5°C, mean - prepared at +30°C, mean | 527 N 641 N 571 N 55 N 71 N 67 N I4 I4 |
| Effects of day joints | 1205 kPa |

3.3 Safety in use (BWR4)

| Characteristic | Performance |
|-----------------------|-------------------------|
| Slipperiness | No performance assessed |

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

According to Decision 98/599/EC of the European Commission⁽¹⁾ and amended by Decision 2001/596/EC of the European Commission⁽²⁾, the AVCP system (see Annex V to Regulation (EU) No 305/2011) given in the following table applies.

| Product | Intended use | Level or class | System |
|--|---------------------------------|----------------|--------|
| Liquid-applied roof waterproofing kits | For all roof waterproofing uses | – | 3 |

(1) Official Journal of the European Communities L 287 of 24.10.1998.

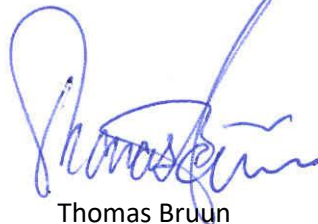
(2) Official Journal of the European Communities L 209 of 02.08.2001.

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

5.1 Tasks of the Manufacturer

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark A/S prior to CE marking.

Issued in Copenhagen on 2022-09-06 by



Thomas Bruun

Managing Director, ETA-Danmark A/S

ANNEX A CATEGORISATION OF LEVELS OF PERFORMANCE OF IKO METATECH

| | |
|---------------------------|-----------------------|
| Minimum layer thickness | 2.00 mm |
| Minimum quantity consumed | 3.0 kg/m ² |

Levels of use categories according to EAD 030350-00-0402 with relation to:

| | |
|-----------------------------|--|
| Expected working life | W3 (25 years) |
| Climatic zones | M (moderate climate) |
| Imposed user loads | P4 non-compressible substrate and P3 compressible substrate |
| Roof slope | S1 to S4 |
| Lowest surface temperature | TL4 (-30°C) |
| Highest surface temperature | TH4 (+90°C) |

The kit has the following characteristics:

| | |
|-----------------------------------|-------------------------------------|
| External fire performance | Broof(t1)* and Broof(t4)** |
| Reaction to fire | No performance assessed |
| Watertightness | watertight |
| Water vapour resistance factor | $\mu \approx 6841$ |
| Water vapour diffusion | equivalent air layer thickness 7.77 |
| Resistance to wind loads | >50 kPa |
| Root resistance | No performance assessed |
| Statement on dangerous substances | No performance assessed |

* The classification is valid for the system described in this ETA for the following conditions

- Range of pitches < 20°
- Range of supporting decs:
 - Any continuous timber deck.
 - Any non-combustible deck with gaps not exceeding 5 mm (including non-perforated steel deck)

** The classification is valid for the system described in this ETA for the following conditions

- Range of pitches $\leq 10^\circ$
- Deck: Plywood (18 mm or more, 450 kg/m³)