

## IKO PLC

Appley Lane North  
Appley Bridge  
Wigan  
Lancashire WN6 9AB  
Tel: 01257 256 864 Fax: 01257 252 514  
e-mail: technical.uk@iko.com  
website: www.ikogroup.co.uk



Agrément Certificate  
**86/1640**  
Product Sheet 1

## IKO VAPOUR CONTROL MEMBRANES

### IKO SYSTEMS TORCH-ON VAPOUR CONTROL LAYER

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to IKO Systems Torch-On Vapour Control Layer, an elastomeric bitumen membrane with a non-woven polyester reinforcement and incorporating an aluminium foil laminate for use as a high-resistance vapour control layer in built-up felt roofing systems and other insulated roof waterproofing systems.

(1) Hereinafter referred to as 'Certificate'.

#### CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



#### KEY FACTORS ASSESSED

**Resistance to water and water vapour** — the product provides an effective barrier to the passage of liquid water and water vapour (see section 6).

**Properties in relation to fire** — in the opinion of the BBA the product when used in a suitable specification, will enable a roof to be unrestricted under the Building Regulations (see section 7).

**Resistance to wind uplift** — when correctly specified and installed, the product will resist the effects of wind suction likely to occur in practice (see section 8).

**Resistance to foot traffic** — the product will accept without damage the limited foot traffic and loads associated with installation and maintenance of the roof (see section 9).

**Durability** — under normal service conditions the product will have a life at least as long as that of the roof waterproofing (see section 11).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'John Albon'.

John Albon — Head of Approvals  
Construction Products

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

Claire Curtis-Thomas  
Chief Executive

Date of Fourth issue: 2 March 2016

Originally certificated on 28 May 1986

*The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at [www.bbacerts.co.uk](http://www.bbacerts.co.uk)*

*Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.*

British Board of Agrément  
Bucknalls Lane  
Watford  
Herts WD25 9BA

tel: 01923 665300  
fax: 01923 665301  
[clientservices@bba.star.co.uk](mailto:clientservices@bba.star.co.uk)  
[www.bbacerts.co.uk](http://www.bbacerts.co.uk)

©2016

# Regulations

In the opinion of the BBA, IKO Systems Torch-On Vapour Control Layer, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



## The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to enabling a roof to satisfy the requirements of this Regulation. See section 6 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



## The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The product can satisfy the requirements of this Regulation. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.15	Condensation
Comment:		The product can contribute to enabling a roof to satisfy this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> , 3.15.3 <sup>(1)(2)</sup> , 3.15.5 <sup>(1)(2)</sup> and 3.15.6 <sup>(1)(2)</sup> . See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant Requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for the product under Regulation 9, Standards 1 to 6 also apply to this Regulation with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



## The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(a)(i)(iii)(b)(i)	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	29	Condensation
Comment:		The product can contribute to enabling a roof to satisfy the requirements of this Regulation. See section 6 of this Certificate.

## Construction (Design and Management) Regulations 2015

## Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See sections: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.3) of this Certificate.

# Additional Information

## NHBC Standards 2016

NHBC accepts the use of IKO Systems Torch-On Vapour Control Layer, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 7.1.

## CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13970 : 2004. An asterisk (\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

# Technical Specification

## 1 Description

1.1 IKO Systems Torch-On Vapour Control Layer is a torch-on elastomeric bitumen membrane with a non-woven polyester reinforcement and aluminium foil laminate. The membrane is sand finished on the upper surface and has a thermofusible film on the lower surface, and is installed using torch-on techniques.

1.2 Finished rolls have the following nominal dimensions:

Length (m)	12
Width (m)	1
Weight (kg)	37
Mass per unit area (kg·m <sup>-2</sup> )	3.1.

1.3 The declared values to BS EN 13970 : 2004 for the product are given in Table 1.

Characteristic (unit)	Declared value
Water vapour resistance — $S_d$ value* (m)	2436
Watertightness* (kPa)	50
Tensile strength* (N·50 mm <sup>-1</sup> )	
longitudinal direction	≥ 650
transverse direction	≥ 500
Elongation* (%)	
longitudinal direction	≥ 30
transverse direction	≥ 35
Tear strength — nail* (N)	
longitudinal direction	≥ 250
transverse direction	≥ 300
Flexibility at low temperature* (°C)	
upper	≤ -10
lower	≤ -10

1.4 IKOpro Bitumen Primer is used for preparing substrates prior to the application of the product.

## 2 Manufacture

2.1 The product is manufactured using traditional bitumen coating methods.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of IKO PLC has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by BSI (Certificate Q 05233).

## 3 Delivery and site handling

3.1 The membrane is delivered in taped packaging bearing the Certificate holder's name and the BBA logo incorporating the number of this Certificate.

3.2 Rolls should be stored on end on a clean, level surface and under cover.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the product under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on IKO Systems Torch-On Vapour Control Layer.

## Design Considerations

### 4 Use

4.1 IKO Systems Torch-On Vapour Control Layer is satisfactory for use as a vapour control layer in roof systems where a high resistance to water vapour is required, as defined in the relevant recommendations of BS 6229 : 2003, in either of the following waterproofing or insulation specifications:

- built-up felt roofing to the relevant recommendations of BS 8217 : 2005
- roof waterproofing or insulation systems covered by a current Agrément Certificate when laid in accordance with, and within the limitations imposed by, that Certificate.

4.2 Suitable decks must be designed in accordance with the relevant recommendations of BS 8217 : 2005, the relevant British Standards listed in BS 6229 : 2003, clause 5.3, and where appropriate, *NHBC Standards 2016*, Chapter 7.1.

### 5 Practicability of installation

The product is designed to be installed only by competent roofing contractors.

### 6 Resistance to water and water vapour



The product provides an effective control to the passage of liquid water and water vapour and contributes to limiting the risk of interstitial condensation.

### 7 Properties in relation to fire

The fire rating of a roof containing the vapour control membrane will depend on the insulation and/or roof waterproofing and is unlikely to be adversely affected by the presence of the vapour control layer.

### 8 Resistance to wind uplift

8.1 The adhesion of the bonded product is sufficient to resist the effects of wind suction, elevated temperature and thermal shock conditions likely to occur in practice.

8.2 On tall buildings or in areas subject to higher wind forces, mechanical fixings should be used as specified by the Certificate holder.

### 9 Resistance to foot traffic

The product can accept, without damage, the limited foot traffic associated with installation and roof maintenance operations. Reasonable care should be taken to avoid sharp objects or concentrated loads.

### 10 Maintenance

As the product is part of a built-up roof specification and has suitable durability (see section 11), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 14).

### 11 Durability



Accelerated laboratory tests confirm that satisfactory retention of physical properties is achieved. The product will have a life at least as long as that of the roof waterproofing.

## Installation

### 12 General

12.1 Installation of IKO Systems Torch-On Vapour Control Layer is carried out in accordance with the Certificate holder's instructions and the relevant clauses of BS 8217 : 2005.

12.2 Deck surfaces must be dry, clean and free from sharp projections such as nail heads and concrete nibs.

12.3 The product has satisfactory low temperature flexibility and may be laid in all weather normal to roofing work.

12.4 The product is applied with minimum side and end laps of 75 mm. All laps must be fully sealed.

12.5 The product should always line up with the waterproofing system to ensure that the insulation is enveloped at all times.

### 13 Procedure

#### Timber boarded decks

13.1 A preparation layer of high-performance membrane is random-nailed to the substrate in accordance with BS 8217 : 2005. The product is then fully bonded to the preparation layer.

## Plywood, OSB particle board and wood wool decks

13.2 The membrane is not suitable for use with a wood wool deck.

13.3 Joints in the board are taped with loose-laid strips of polyester-based membranes.

13.4 The product is fully bonded to the substrate using the appropriate bonding method.

## Concrete and screeded concrete decks

13.5 Surfaces are primed with the appropriate IKOpro Bitumen Primer, and the product is fully bonded to the primed deck using the appropriate bonding method.

## Metal decks

13.6 The upper profile of the decking is primed with the appropriate IKOpro Quick Dry Primer, and the product fully bonded to the primed upper profile of the metal deck using the appropriate bonding method.

## 14 Repair

In the event of damage, the product can be effectively repaired, prior to the installation of the upper layers of the system, using traditional installation methods.

# Technical Investigations

## 15 Tests

An assessment was made of test data in relation to:

### coating mass

- softening point (ring and ball)
- penetration
- fines content
- heat ageing at 70°C for 84 days

### membrane

- mass per unit area
- tensile strength
- elongation at break
- dimensional stability
- water vapour properties
- static indentation — hard substrate
- dynamic indentation — hard substrate
- low temperature flexibility
- heat ageing at 70°C for 56 days.

## 16 Investigations

16.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

16.2 A visit was made to a site in progress to assess the practicability of installation.

16.3 Visits were made to established sites to assess the performance in use.

# Bibliography

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

BS EN 13970 : 2004 *Flexible sheets for waterproofing — Bitumen water vapour control layers — Definitions and characteristics*

BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

## 17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

17.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

17.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

17.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.