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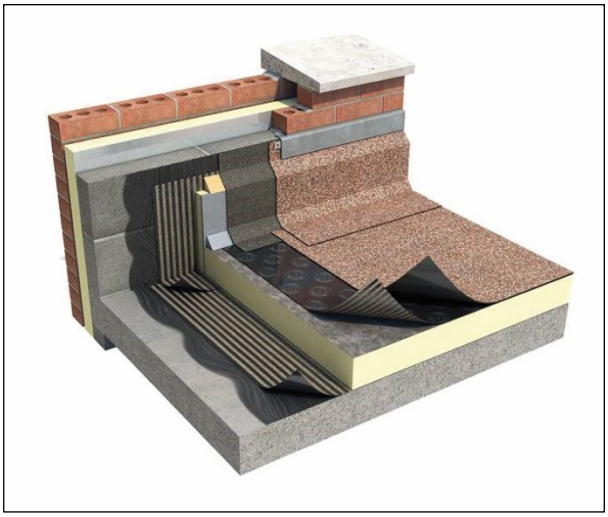
Agrément Certificate
07/4409
Product Sheet 3 Issue 3

ICOPAL HIGH PERFORMANCE TORCH-ON ROOF WATERPROOFING MEMBRANES

ICOPAL HIGH PERFORMANCE TORCH-ON VAPOUR CONTROL LAYERS

This Agrément Certificate Product Sheet(1) relates to Icopal High Performance Torch-on Vapour Control Layers, a range of reinforced styrene-butadiene-styrene (SBS) modified bitumen membranes for use on flat and pitched roofs.

(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 moisture — the products will provide 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 products, when used in a suitable specification, will enable a roof to be unrestricted under the national Building Regulations (see section 7).

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

Resistance to mechanical damage — the products will accept without damage the limited foot traffic and loads associated with installation and maintenance (see section 9).

Durability — under normal service conditions, the products will have a service 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 products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Third issue: 19 September 2019

John Albon
Chief Scientific Officer

Claire Curtis-Thomas
Chief Executive

Originally certificated on 23 May 2007

Certificate amended on 20 July 2023 to change company name and website address.

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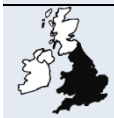
Regulations

In the opinion of the BBA, Icopal High Performance Torch-on Vapour Control Layers, 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 products can contribute to enabling a roof to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	**7**	**Materials and workmanship (applicable to Wales only)**
Regulation:	**7(1)**	**Materials and workmanship (applicable to England only)**
Comment:		The products are acceptable. See section 11 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Durability, workmanship and fitness of materials**
Comment:		The use of the products satisfies the requirements of this Regulation. See section 11 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	3.15	Condensation
Comment:		The products can contribute to enabling a roof to satisfy this Standard, with reference to clauses 3.15.1(1)(2), 3.15.3(1)(2), 3.15.5(1)(2) and 3.15.6(1)(2). See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The products 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:		Comments in relation to the products under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1(1)(2) and Schedule 6(1)(2).

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

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

Regulation:	**23(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The products are acceptable. See section 11 and the *Installation* part of this Certificate.
Regulation:	**29**	**Condensation**
Comment:		The products 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) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) 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 2019

In the opinion of the BBA, Icopal High Performance Torch-on Vapour Control Layers, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs and balconies*.

CE marking

The Certificate holder has taken the responsibility of CE marking the products 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 Icopal High Performance Torch-on Vapour Control Layers are reinforced, SBS modified bitumen membranes. The products within the scope of this Certificate are:

- Profiles Vapour-Vent XL — a polyester-reinforced membrane with an aluminised polyethylene terephthalate (PET) core. The upper surface is finished with low-melt bitumen in a striped pattern and a thermofusible film, and the lower surface with a continuous coating of SBS-modified bitumen and a thermofusible film
- Total Torch Vapour Control Layer — a glass fibre-reinforced membrane with a PET core. The upper surface is finished with low-melt bitumen in a striped pattern and a thermofusible film and the lower surface is finished with a continuous coating of SBS-modified bitumen and a thermofusible film.

1.2 The products are manufactured to the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Membrane type	
	Profiles Vapour-Vent XL	Total Torch Vapour Control Layer
Width (m)	1	1
Length (m)	7	8
Mass per unit area* ($kg \cdot m^{-2}$)	4.40	3.87
Watertightness*	pass	pass
Equivalent air thickness* – s_d (m)	>80	>14
Tensile strength* (N per 50 mm)		
longitudinal	850	840
transverse	600	450
Elongation at break* (%)		
longitudinal	20	3.5
transverse	30	3.0
Dimensional stability* (%)	≤0.5	≤1.0
Low temperature flexibility* (°C)	≤-15	≤-15

1.3 Other materials for use with the products include:

- capsheets and vapour control membranes covered under the other Product Sheets of this Certificate
- Siplast Primer and Icopal SF Bitumen Primer — used, when required, to prepare non-membrane roof substrates prior to application of the products. The primer is supplied in 25 litre containers.

2 Manufacture

2.1 The products are manufactured using conventional continuous bitumen coating techniques.

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 Icopal Limited has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 and BS EN ISO 14001 : 2015 by BSI (Certificates Q05556 and EMS 535978 respectively).

3 Delivery and site handling

3.1 The products are delivered to site in rolls secured with three printed banding tapes bearing the product name, type of surface finish, roll length, colour coding, batch sticker and the BBA logo incorporating the number of this Certificate.

3.2 Rolls must be stored upright on a clean, dry, level surface, under cover and protected from excessive heat and mechanical damage.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the products 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 Icopal High Performance Torch-on Vapour Control Layers.

Design Considerations

4 General

4.1 Icopal High Performance Torch-on Vapour Control Layers are satisfactory for use in roof systems where a high resistance to water vapour is required, as defined in the relevant recommendations of BS 6229 : 2018, in either of the following waterproofing insulation specifications:

- built-up felt roofing to the relevant recommendations of BS 8217 : 2005, or
- roof waterproofing or insulation systems covered by a current BBA 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 : 2018, Clause 5.2, and, where appropriate, *NHBC Standards* 2019, Chapter 7.1.

5 Practicability of installation

The products are designed to be installed only by competent roofing contractors experienced with these types of products.

6 Resistance to water and water vapour

The products provide an effective control to the passage of liquid water and water vapour and contribute to limiting the risk of interstitial condensation.

7 Properties in relation to fire

The fire rating of a roof containing the products 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

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

9 Resistance to mechanical damage

The products can accept the limited foot traffic associated with installation and maintenance. Reasonable care should be taken to avoid sharp objects or concentrated loads.

10 Maintenance

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

11 Durability

When used under normal service conditions, in conjunction with the other products covered by this Certificate, the products will have a service life at least as long as that of the roof waterproofing.

Installation

12 General

12.1 Installation of Icopal Performance Torch-on Vapour Control Layers is carried out in accordance with the Certificate holder's instructions and the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989 and 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 Where required, substrates should be primed with either Siplast Primer or Icopal SF Bitumen Primer.

12.4 The products may be laid in conditions normal to roofing work and must not be laid in rain, snow or heavy fog, nor if the temperature falls below 5°C. At low temperatures precautions must be taken against the formation of condensation on the substrate.

12.5 When torching the products adjacent to insulation boards, guards must be used and the flame directed away from the boards to avoid damage to the installation.

13 Procedure

13.1 Bonding is achieved by melting the lower surface of the products using a standard roofer's torch.

13.2 The products must be heated carefully, ensuring that the thermofusible film is completely removed as work proceeds, and the product pressed down onto the prepared substrate, ensuring that a continuous 5 mm bead of bitumen is extruded from all edges and fully bonded.

13.3 Side laps must be a minimum of 75 mm following the manufactured selvedge and end laps a minimum of 100 mm.

13.4 At features such as roof perimeters and upstands, the product must be dressed up to ensure a minimum 100 mm overlap with the waterproofing to envelope the insulation.

14 Repair

In the event of damage, the products can be effectively repaired, after cleaning, using traditional methods for bonding bituminous felts. The Certificate holder should be consulted for details.

Technical Investigations

15 Tests

Tests were carried out on samples of the products to determine:

- thickness
- width
- mass per unit area
- tensile strength and elongation (unaged and heat aged)
- resistance to nail tear
- water vapour transmission
- dimensional stability.

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 The manufacturer's installation instructions were evaluated.

Bibliography

BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — Code of practice*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

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 : 2015 *Quality management systems — Requirements*

BS EN ISO 14001 : 2015 *Environmental management systems — Requirements*

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product 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.

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.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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.

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

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

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product 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.

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