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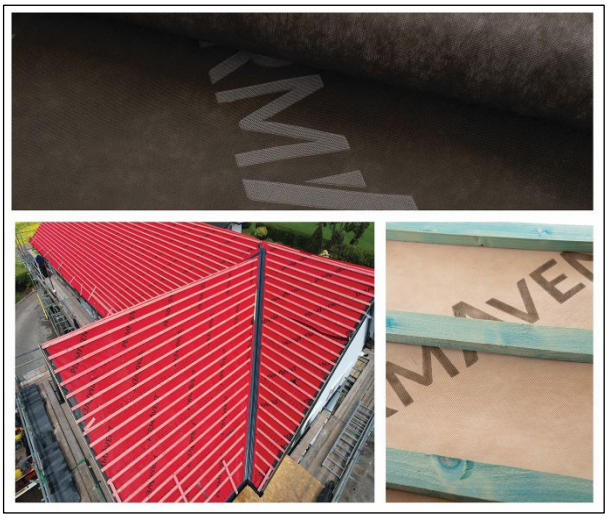
**Agrément Certificate**
**25/7479**
Product Sheet 2 Issue 1

# PERMAVENT BREATHER MEMBRANES

# FOR USE IN COLD NON-VENTILATED ROOFS

This Agrément Certificate Product Sheet(1) relates to Permavent Breather Membranes for use in cold non-ventilated roofs up to 70° pitch, in dwellings.

(1) Hereinafter referred to as 'Certificate'.



## The assessment includes

**Product factors:**

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

**Process factors:**

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

**Ongoing contractual Scheme elements†:**

- regular assessment of production
- formal 3-yearly review

**KEY FACTORS ASSESSED**

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

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 issue: 3 December 2025

Hardy Giesler
Chief Executive Officer

*This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.*

*The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).*

***Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.***

***The Certificate should be read in full as it may be misleading to read clauses in isolation.***

*Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.*

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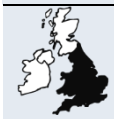
## SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

## Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Permavent Breather Membranes for use in cold non-ventilated roofs, 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 Building Regulations 2010 (England and Wales) (as amended)

| | | |
|---|---|---|
| **Requirement:** | **B3(4)** | **Internal fire spread (structure)** |
| Comment: | | The products can contribute to satisfying this Requirement. See section 2 of this Certificate. |
| **Requirement:** | **C2(b)** | **Resistance to moisture** |
| Comment: | | The products will contribute to satisfying this Requirement. See section 3 of this Certificate. |
| **Requirement:** | **C2(c)** | **Resistance to moisture** |
| Comment: | | The products can contribute to satisfying this Requirement. See section 3 of this Certificate. |
| **Regulation:** | **7(1)** | **Materials and workmanship** |
| Comment: | | The products are acceptable. See sections 8 and 9 of this Certificate. |

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

| | | |
|---|---|---|
| **Regulation:** | **8(1)** | **Fitness and durability of materials and workmanship** |
| Comment: | | The products can contribute to satisfying this Regulation. See sections 8 and 9 of this Certificate. |
| **Regulation:** | **9** | **Building standards – construction** |
| Standard: | 2.4 | Cavities |
| Comment: | | The products can contribute to satisfying this Standard, with reference to clause 2.4.2(1). See section 2 of this Certificate. |
| Standard: | 3.10 | Precipitation |
| Comment: | | The products will contribute to satisfying this Standard, with reference to clauses 3.10.1(1) and 3.10.8(1). See section 3 of this Certificate. |
| Standard: | 3.15 | Condensation |
| Comment: | | The products can contribute to satisfying this Standard, with reference to clauses 3.15.1(1), 3.15.3(1) and 3.15.7(1). See section 3 of this Certificate. |
| Standard: | 7.1(a) | Statement of sustainability |
| Comment: | | The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting at least a bronze level of sustainability as defined in this Standard. |
| **Regulation:** | **12** | **Building standards – conversion** |
| Comment: | | All comments given for the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1(1) and Schedule 6(1). |

(1) Technical Handbook (Domestic).

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

| | | |
|---|---|---|
| **Regulation:** | **23(1)(a)(i) (iii)(b)(i)** | **Fitness of materials and workmanship** |
| Comment: | | The products are acceptable. See sections 8 and 9 of this Certificate. |
| **Regulation:** | **28(b)** | **Resistance to moisture and weather** |
| Comment: | | The products will contribute to satisfying this Regulation. See section 3 of this Certificate. |
| **Regulation:** | **29** | **Condensation** |
| Comment: | | The products can contribute to satisfying this Regulation. See section 3 of this Certificate. |
| **Regulation:** | **35(4)** | **Internal fire spread – structure** |
| Comment: | | The products can contribute to satisfying this Regulation. See section 2 of this Certificate. |

## Fulfilment of Requirements

The BBA has judged Permavent Breather Membranes for use in cold non-ventilated roofs to be satisfactory for use as described in this Certificate. The products have been assessed as vapour permeable roof tile underlays in cold non-ventilated pitched roofs of up to 70° pitch in domestic buildings.

## ASSESSMENT

## Product description and intended use

The Certificate holder provided the following description for the products under assessment. Permavent Breather Membranes for use in cold non-ventilated roofs are three-layer polypropylene composites. The membranes are available with or without an integral self-adhesive tape to allow sealing of overlaps.

The products have the nominal characteristics given in Table 1.

*Table 1 Nominal characteristics*

| Characteristic (unit) | Permavent Breather Membranes | | | | |
|---|---|---|---|---|---|
| | Eco | Black | Graphite | Max | Red |
| Thickness (mm) | 0.40 | 0.45 | 0.50 | 0.60 | 0.70 |
| Mass per unit area ($g \cdot m^{-2}$) | 100 | 120 | 130 | 150 | 160 |
| Roll length (m)(1) | 50 | 50 | 50 | 50 | 50 |
| Roll width (m)(1) | 1.0 and 1.5 | 1.0 and 1.5 | 1.0 and 1.5 | 1.0 and 1.5 | 1.0 and 1.5 |
| Colour | | | | | |
| upper face | various | various | various | various | various |
| lower face | various | various | various | various | various |

(1) Other lengths/widths are available.

Ancillary Items

The Certificate holder recommends the use of a suitable single-sided tape for sealing the overlaps, but this has not been assessed by the BBA and is outside the scope of this Certificate.

Applications

The products are intended for use in dwellings with cold non-ventilated tiled or slated roofs of any conventional plan and size. Features(1) successfully assessed include:

- duo pitched
- verges
- timber sarking planks(3)(4)(5)
- gable ends
- dormers
- mansard
- room-in-roof(2)
- hipped
- valleys.
- mono-pitched
- abutments

(1) For roofs incorporating other features, or unconventional roof geometries or construction materials, the advice of the Certificate holder should be sought, but such advice is outside the scope of this Certificate.
(2) Where a room-in-roof results in part of a pitch being insulated (ie a warm roof), design and detailing of that part of the roof should comply with the relevant guidance given in Product Sheet 1 of this Certificate.
(3) Timber sarking planks, Scottish practice: the membrane is laid over open-jointed timber planks (nominally 150 mm wide with a 2 mm gap) and fixed with galvanized clout nails. Slates are nailed through the membrane onto the sarking without battens.
(4) Timber sarking planks, tiled roofs: counter battens of 12 mm minimum thickness should be used to provide a drainage path beneath the tiling/slating battens. The membrane may be laid directly over the timber planks or draped over the counter battens.
(5) Sheet sarking materials should not be used in non-ventilated cold pitched roof situations.

Definitions for products and applications inspected

Pitched roofs are defined for the purposes of this Certificate as those having a fall in excess of 10° and a maximum pitch of 70°.

## Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessments is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

## 1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Resistance to wind uplift

1.1.1 Results of resistance to wind uplift tests to BS 5534 : 2014 Annex A, and consequent zones of applicability, are given in Tables 2 and 3 of this Certificate.

*Table 2 Declared wind uplift resistance (Pa)*

| Product | ≤ 250 mm batten gauge with battened lap(1)(2) | ≤ 345 mm batten gauge with battened lap(1) | ≤ 250 mm batten gauge with integral taped lap(1) | ≤ 345 mm batten gauge with integral taped lap(1) | ≤ 345 mm batten gauge with single-sided taped lap(1) |
|---|---|---|---|---|---|
| Permavent Eco | 1510 | 854 | — | 1828 | 1828 |
| Permavent Black | 2698 | 1132 | — | 2556 | 2556 |
| Permavent Graphite | 1914 | 1196 | ≤ 3790 | 1832 | 1887 |
| Permavent Max | 2698 | 1664 | — | 2691 | 2691 |
| Permavent Red | — | 1716 | — | 2826 | 2826 |

(1) Mean of test results.
(2) Underlays, with a wind uplift resistance at a 250 mm batten gauge that satisfy the minimum design wind pressure of 820 Pa for Zone 1, are deemed to satisfy the requirements for use at 100 mm batten gauge in all Wind Zones.

*Table 3 Zones of applicability of Permavent underlays according to BS 5534 : 2014, clause A.8, with battened, integral and taped laps*

| Product | ≤ 250 mm batten gauge with battened laps | ≤ 345 mm batten gauge with battened laps | ≤ 250 mm batten gauge with integral taped laps | ≤ 345 mm batten gauge with integral taped laps | ≤ 345 mm batten gauge with single-sided taped laps |
|---|---|---|---|---|---|
| Permavent Eco | Zones 1 to 5 | Zone 1 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 |
| Permavent Black | Zones 1 to 5 | Zones 1 to 2 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 |
| Permavent Graphite | Zones 1 to 5 | Zones 1 to 3 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 |
| Permavent Max | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 |
| Permavent Red | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 | Zones 1 to 5 |

1.1.2 On the basis of data assessed, the products are satisfactory for use in unsupported systems, in the geographical Wind Zones given in Table 2 of this Certificate, where a well-sealed ceiling, as defined in BS 9250 : 2007, Clause 3.7, is present and the roof has a ridge height ≤ 15 m, a pitch between 12.5 and 75° and a site altitude ≤ 100 m, and where topography is not significant. For all other cases, the required uplift resistance must be determined using BS 5534 : 2014.

1.1.3 The products, when fully supported, have adequate resistance to wind uplift forces.

1.1.4 The products may be used at any batten gauge in all Wind Zones when laid over nominally airtight timber-based sarking (Type 3 particleboard, Type 3 OSB or Type 2 plywood), and insulation for warm-roof design. They may also be used in applications where slates are nailed directly onto sarking boards.

1.1.5 Timber sarking, such as square-edged butt jointed planks, is not considered to be airtight and the underlay is treated as unsupported. Counter battens must be used in fully supported applications.

1.2 Resistance to mechanical damage

1.2.1 Results of resistance to mechanical damage tests are given in Table 4.

*Table 4 Resistance to mechanical damage*

| Product assessed | Assessment method | Requirement | Result | |
|---|---|---|---|---|
| Permavent Eco<br>Permavent Graphite | Nail tear to STN EN 12310-1 : 2000 with modifications as per STN EN 13859-1 : 2010 Annex B | ≥ 50 N | | |
| | Longitudinal direction | | Pass | |
| | Transverse direction | | Pass | |
| Permavent Eco | Mullen burst strength to | Value achieved | Face 1 | Face 2 |
| Permavent Black | BS 3137 : 1972 (1995) | | 330 kN·m$^{-2}$ | 326 kN·m$^{-2}$ |
| Permavent Max | | | 392 kN·m$^{-2}$ | 382 kN·m$^{-2}$ |
| Permavent Red | | | 429 kN·m$^{-2}$ | 429 kN·m$^{-2}$ |
| | | | 499 kN·m$^{-2}$ | 502 kN·m$^{-2}$ |
| | Tensile strength to | Declared values | | |
| Permavent Eco | STN EN 12311-1 : 2002 | 260 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Black | with modifications as per | 280 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Graphite | STN EN 13859-1 : 2010 Annex A | 245 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Max | longitudinal direction | 300 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Red | | 350 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Eco | transverse direction | 170 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Black | | 155 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Graphite | | 175 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Max | | 200 N·(50 mm)$^{-1}$ | Pass | |
| Permavent Red | | 240 N·(50 mm)$^{-1}$ | Pass | |
| | Elongation to | Values achieved | | |
| Permavent Eco | STN EN 12311-1 : 2002 | | 60% | |
| Permavent Black | with modifications as per | | 70% | |
| Permavent Graphite | STN EN 13859-1 : 2010 Annex A | | 60% | |
| Permavent Max | Control – | | 60% | |
| Permavent Red | longitudinal direction | | 70% | |
| Permavent Eco | transverse direction | | 70% | |
| Permavent Black | | | 60% | |
| Permavent Graphite | | | 60% | |
| Permavent Max | | | 70% | |
| Permavent Red | | | 70% | |

1.2.2 On the basis of data assessed, the products have adequate strength to resist the loads associated with the installation of the roof.

## 2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 Results of reaction to fire tests are given in Table 5.

*Table 5 Reaction to fire*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Permavent Eco<br>Permavent Red | Reaction to fire – classified in accordance with EN 13501-1 : 2018 | Classification achieved | E(1)(2) |
| Permavent Black<br>Permavent Max | Reaction to fire – classified in accordance with EN 13501-1 : 2007 | | E(1) |
| Permavent Graphite | Reaction to fire – classified in accordance with PN EN 13501-1 : 2019 | | E(1) |

(1) This classification is valid for the following end-use applications: the edges of the product must be protected against flame attack; without air-gap – cavity between product and substrate; with substrate – wood substrates with density min 338 kg·m$^{-3}$ used in Practice and any substrate of classes A1 and A2-s1, d0; underlay sheet mechanically fastened by using commercial steel staples.

(2) Classification is also valid for the following product parameters: change in thickness is allowed within production parameters; change in product composition is not allowed; and change in mass per unit area is allowed within production tolerances.

2.1.2 Designers must refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers, service penetrations and combustibility limitations for other materials and components used in the overall construction.

2.1.3 When the products are used unsupported, there is a risk that fire can spread if it is accidentally ignited during maintenance works, eg by a roofer's or plumber's torch. As with all types of underlay, care must be taken during building and maintenance to avoid ignition.

2.1.4 When the products are used with timber sarking, such as square-edged butt-jointed planks, the reaction to fire will be primarily determined by the sarking.

## 3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 6.

*Table 6 Weathertightness*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Permavent Eco<br>Permavent Black<br>Permavent Max<br>Permavent Red | Water resistance to STN EN 1928 : 2001 2 kPa for 2 hours | No leakage | Pass |
| Permavent Eco | Resistance to streaming water to MOAT 69 : 4.2.2 : 2004<br>Unsupported<br>Supported | No traces of dampness or formation of drips on the underside of the underlay | <br>Pass<br>Pass |
| Permavent Eco<br>Permavent Black<br>Permavent Max<br>Permavent Red | Hydrostatic head to BS EN 20811 : 1992 | Value achieved | > 200 mm<br>> 200 mm<br>> 200 mm<br>> 200 mm |

3.1.2 On the basis of data assessed, the products can be used unsupported and supported without affecting their water resistance.

3.1.3 The products are Class W1 in accordance with BS EN 13859-1 : 2014 and will resist the passage of water and wind-blown snow and dust into the interior of a building, under all conditions to be found in a roof constructed in accordance with the relevant clauses of BS 5534 : 2014.

3.1.4 The products resist penetration of liquid water and consequently may be used as temporary weatherproofing prior to the installation of slates or tiles. The period of such use must, however, be kept to a minimum as given in BBA Information Bulletin No. 2 *Permeable Roof Tile Underlay – Guide to Good Site Practice*.

3.2 Condensation

3.2.1 Results of water vapour resistance tests are given in Table 7.

*Table 7 Water vapour resistance* (1)

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Permavent Eco | Water vapour diffusion equivalent air layer thickness ($s_d$) to STN EN ISO 12572 : 2003 | $s_d \leq 0.02$ m | Pass |
| Permavent Black | | | Pass |
| Permavent Graphite | | | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |

(1) Water vapour resistance, in $MN \cdot s \cdot g^{-1}$, may be taken as 5 x $s_d$ value.

3.2.2 A condensation risk analysis was carried out based on the result given in Table 7 and satisfactory conclusions were drawn.

3.2.3 For roofs designed in accordance with BS 5534 : 2014 and BS 5250 : 2021, the products may be regarded as Type LR underlays.

## 4 Safety and accessibility in use

Data were assessed for the following characteristics.

4.1 Slip resistance

4.1.1 Results of slip resistance tests are given in Table 8.

*Table 8 Slip resistance*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Permavent Eco | Slip resistance to BBA Internal Test Specification T1/10 | Mean pendulum test value (PTV) ≥ 36 | |
| | dry | | |
| | Longitudinal direction | | Pass |
| | Transverse direction | | Pass |
| | wet | | |
| | Longitudinal direction | | Pass |
| | Transverse direction | | Pass |

4.1.2 On the basis of data assessed, the products have a high slip-resistant surface for increased safety during the installation of the covering.

## 5 Protection against noise

Not applicable.

## 6 Energy economy and heat retention

Not applicable.

## 7 Sustainable use of natural resources

The products comprise polypropylene, which can be recycled.

## 8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 Specific test data were assessed as given in Table 9.

*Table 9 Durability test*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Permavent Eco | Dimensional stability to STN EN 1107-2 : 2002 | ≤ 2% | Pass |
| Permavent Black | Longitudinal direction | | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Transverse direction | | Pass |
| Permavent Black | | | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Tensile strength to STN EN 12311-1 : 2002 with modifications as per STN EN 13859-1 : 2010 Annex A 24 hours water immersion | Change < 20% | |
| | Longitudinal direction | | Pass |
| | Transverse direction | | Pass |
| Permavent Eco | Aged in accordance with | Change < 30% | Pass |
| Permavent Black | STN EN 13859-1 : 2010 Annex C | | Pass |
| Permavent Max | Longitudinal direction | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Transverse direction | Change < 30% | Pass |
| Permavent Black | | | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Elongation to STN EN 12311-1 : 2002 with modifications as per STN EN 13859-1 : 2010 Annex A 24 hours water immersion | Value achieved | |
| | Longitudinal direction | | 48% |
| | Transverse direction | | 60% |
| Permavent Eco | Aged in accordance with | ≥ 50% of initial | Pass |
| Permavent Black | STN EN 13859-1 : 2010 Annex C | tested value | Pass |
| Permavent Max | Longitudinal direction | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Transverse direction | ≥ 50% of initial | Pass |
| Permavent Black | | tested value | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |
| Permavent Eco | Resistance to water penetration to | No leakage | Pass |
| Permavent Black | STN EN 1928 : 2001 (2 kPa for 2 hours) aged in | | Pass |
| Permavent Max | accordance with | | Pass |
| Permavent Red | STN EN 13859-1 : 2010 Annex C | | Pass |
| Permavent Eco | Flexibility at low temperature to | -40°C | Pass |
| Permavent Black | STN EN 1109 : 2002 | | Pass |
| Permavent Max | | | Pass |
| Permavent Red | | | Pass |

8.3 Service life

8.3.1 Under normal service conditions, the products will have a life comparable to that of traditional roof tile underlays, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 The exposure of the products prior to completion of the roof must be kept to a minimum. Advice regarding exposure must be obtained from the Certificate holder, but such advice is outside the scope of this Certificate.

## PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

## 9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance specified in this Certificate.

9.1.2 Project-design wind speeds for the roof in which the products are installed must be determined, and wind uplift forces calculated, by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-4 : 2005 and its UK National Annex.

9.1.3 Designers, planners, contractors and/or installers must ensure that the roof and ceiling are constructed in accordance with the Certificate holder's instructions and the information given in this Certificate.

9.1.4 When used in direct contact with treated timber, the advice of the Certificate holder must be sought on compatibility, but such advice is outside the scope of this Certificate.

9.1.5 Energy loss by ventilation in conventionally ventilated cold roofs will be significantly reduced by the non-ventilated system.

9.1.6 In non-ventilated roof systems, the risk of condensation is equivalent to, or less than, that for conventionally ventilated cold roof systems.

9.1.7 The complete roof construction, ceiling boards to roof tiles, must be considered as a total system with regard to condensation risk. It is important that the products are laid in accordance with the Certificate holder's instructions and this Certificate to minimise the risk of condensation.

9.1.8 The risk of condensation is highest in new-build construction during the first heating period, where there is high moisture loading owing to wet trades, such as in-situ cast concrete slabs or plaster. The risk of condensation diminishes as the building dries out. See BBA Information Bulletin No. 1 *Roof Tile Underlays in Cold Roofs during the Drying-out Period.*

9.1.9 All penetrations into and out of the roof space must be properly sealed in accordance with the Certificate holder's instructions which include the use of the Certificate holder's recommended sealing tape. In addition, such features as vent stacks and boiler flues passing through the roof space must be sealed.

9.1.10 It is essential to minimise water vapour transfer into the loft space from the dwelling below, with a well-sealed ceiling as defined in BS 9250 : 2007, Clause 3.7. Appropriate measures include:

- ventilating the dwelling below in accordance with national Building Regulations and Standards for the dispersal and rapid dilution of water vapour, particularly from rooms that may experience high humidity (such as kitchens, utility rooms and bathrooms)
- covering all water tanks in the loft space and lagging pipework
- sealing penetrations in the ceiling and making loft hatches convection-tight by using a compressible draught seal
- ensuring that there is continuity of jointing with walls (and behind wall linings) at ceiling perimeters
- ensuring that masonry wall cavities do not interconnect with roof cavities.

9.1.11 For additional protection, the use of a vapour control layer/vapour check plasterboard must be considered.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate, the Certificate holder's instructions and the relevant recommendations of BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023. Installation can be carried out under all conditions normal to roofing work. A summary of additional instructions and guidance is provided in Annex A of this Certificate.

9.2.3 The products must be installed with the coloured or printed side uppermost and lapped to shed water out and down the slope.

9.2.4 Overlaps must be provided with the minimum dimensions given in Table 10. The Certificate holder's advice must be sought when using tapes for sealing overlaps, but such advice is outside the scope of this Certificate.

*Table 10 Minimum overlaps*

| Roof pitch (°) | Horizontal lap (mm) untaped and taped | | Vertical laps (mm) |
|---|---|---|---|
| | Unsupported | Fully supported | |
| 12.5 to < 15 | 225 | 150 | 100 |
| ≥ 15 | 150 | 100 | 100 |

9.2.5 The products, when installed as part of an unsupported system, must be fixed using the traditional method for roof tile underlays, ie draped between the rafters.

9.2.6 When installed taut, the membrane must be stapled or nailed to hold securely in position prior to the counter battens being fixed. Counter battens (minimum thickness 25 mm) are then fixed to the rafters.

9.2.7 For fully supported roofs (traditional Scottish practice), the slates must be nailed through the products into the timber plank sarking, normally 150 mm wide with a 2 mm gap. The underlay must be fixed to the sarking board using galvanized clout nails.

9.2.8 For fully supported roofs (where battens are used) counter battens of minimum thickness 12 mm should be installed either above or beneath the underlay for drainage purposes.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information and BS 5534 : 2014. To achieve the performance described in this Certificate, installation of the products must be carried out by a competent general builder, or a contractor, experienced with these types of products.

9.4 Maintenance and repair

9.4.1 As the products are confined within the roof structure and have suitable durability, maintenance is not required. However, any damage occurring before enclosure must be repaired.

9.4.2 Damage to the products must be repaired prior to the installation of slates or tiles by patching and sealing the damaged areas. Care must be taken to ensure that the watertightness of the roof is maintained.

## 10 Manufacture

10.1 The production processes for the products have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.
10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

## 11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site individually wrapped in polythene with a label bearing the product name, mass per unit area and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 Rolls must be stored flat on their sides, on smooth, clean, dry surface, under cover and protected from sunlight.

## † ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the 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.

### UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the products in accordance with Designated Standard EN 13859-1 : 2010.

### CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard EN 13859-1 : 2010.

### Additional information on installation

A.1 Eaves guards must be used to protect the products from sunlight and to direct water into the gutter.

A.2 Detailing of abutments, verges and hips must be in accordance with the Certificate holder's instructions.

A.3 To achieve a convection-tight loft space, it is important that the following details are maintained:

- all penetrations, eg pipework, electrical fittings to the loft space, must be sealed
- the loft hatch must be securely sealed to ensure a draught-free fit
- the insulation must be pushed into the eaves and against the underlay to avoid gaps.

A.4 Tiling and slating must be carried out in accordance with the relevant clauses of BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023 and the Certificate holder's instructions, especially when using tightly jointed slates or tiles.

## Bibliography


BS 3137 : 1972 (1995) *Methods for determining the bursting strength of paper and board*

BS 5250 : 2021 *Management of moisture in buildings — Code of practice*

BS 5534 : 2014 + A2 : 2018 *Slating and tiling for pitched roofs and vertical cladding — Code of practice*

BS 8000-0 : 2014 + A1 : 2024 *Workmanship on construction sites — Introduction and general principles*
BS 8000-6 : 2023 *Workmanship on construction sites — Code of practice for slating and tiling of roofs and walls*

BS 9250 : 2007 *Code of practice for design of the airtightness of ceilings in pitched roofs*

BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1: Actions on structures — General actions — Wind actions*
NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1: Actions on structures — General actions — Wind actions*

BS EN 13859-1 : 2014 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Underlays for discontinuous roofing*

BS EN 20811 : 1992 *Determination of resistance to water penetration — Hydrostatic pressure test*

EN 13501-1 : 2007 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*
EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

EN 13859-1 : 2010 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Underlays for discontinuous roofing*

MOAT 69 : 2004 - *UEAtc Technical Report for the Assessment of Discontinuous Roofing Underlay Systems*

PN EN 13501-1 : 2019 *Fire classification of construction products and building elements — Part 1: Classification based on reaction to fire tests*

STN EN 1107-2 : 2002 *Flexible sheets for waterproofing — Determination of dimensional stability — Plastic and rubber sheets for roof waterproofing*

STN EN 1109 : 2002 *Flexible sheets for waterproofing — Bitumen sheets for waterproofing — Determination of flexibility at low temperature*

STN EN 1928 : 2001 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

STN EN 12310-1 : 2000 *Flexible sheets for waterproofing — Determination of resistance to tearing (nail shank) — Bitumen sheets for roof waterproofing*

STN EN 12311-1 : 2002 *Flexible sheets for waterproofing — Determination of tensile properties — Bitumen sheets for roof waterproofing*

STN EN 13859-1 : 2010 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Underlays for discontinuous roofing*

STN EN ISO 12572 : 2003 *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties — Cup method*

## 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
- 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
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

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 marking and 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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