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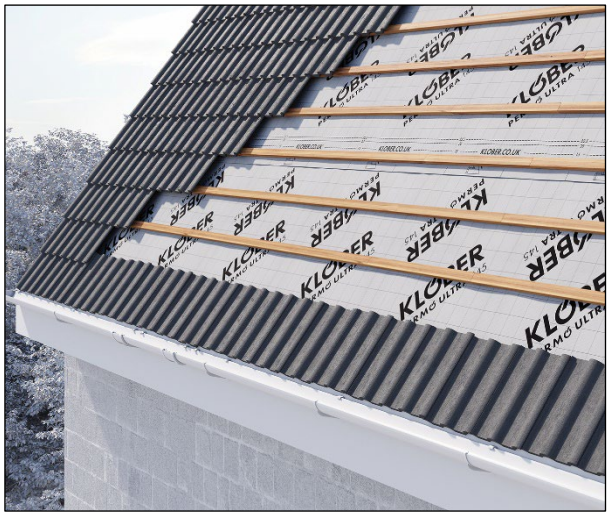
Agrément Certificate
99/3622
Product Sheet 3 Issue 6

PERMO ROOF TILE UNDERLAYS

PERMO ECO 110 MEMBRANE
FOR USE IN COLD VENTILATED AND WARM NON-VENTILATED PITCHED ROOFS

This Agrément Certificate Product Sheet(1) relates to Permo Eco 110 Membrane for use in Cold Ventilated and Warm Non-Ventilated Pitched Roofs, a roof tile underlay for use in pitched roofs of up to 70° pitch.

(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 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

Date of Sixth issue: 15 July 2025
Originally certified on 14 November 2009

Hardy Giesler
Chief Executive Officer

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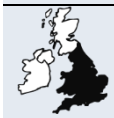
SUMMARY OF ASSESSMENT AND COMPLIANCE

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 Permo Eco 110 Membrane for use in Cold Ventilated and Warm Non-Ventilated Pitched 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**
Comment:		The product can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The product will contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**C2(c)**	**Resistance to moisture**
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The product is 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 product can contribute to satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards - construction**
Comment:	2.4	Cavities The product can contribute to satisfying this Standard with respect to clause 2.4.2[(1)(2)]. See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product will contribute to satisfying this Standard with respect to clauses 3.10.1[(1)(2)] and 3.10.8[(1)(2)]. See section 3 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute satisfying this Standard with respect to clauses 3.15.1[(1)(2)], 3.15.3[(1)(2)] and 3.15.7[(1)(2)]. See section 3 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 - conversion**
Comment:		Comments in relation to the product 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(1)(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The product will contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**29**	**Condensation**
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread - structure**
Comment:		The product can contribute to satisfying this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of BBA, Permo Eco 110 Membrane for use in Cold Ventilated and Warm Non-Ventilated Pitched Roofs, 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 7.2 *Pitched roofs.*

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

Fulfilment of requirements

The BBA has judged Permo Eco 110 Membrane for use in Cold Ventilated and Warm Non-Ventilated Pitched Roofs to be satisfactory for use as described in this Certificate. The product has been assessed for use as a roof tile underlay in pitched roofs of up to 70° pitch.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Permo Eco 110 Membrane for use in Cold Ventilated and Warm Non-Ventilated Pitched Roofs consists of two layers of spunbond polyolefin reinforcing netting and a breathable film.

The product is available with or without a double integral tape on the selvedge edges to allow sealing of overlaps.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Value
Thickness (mm)	0.57
Mass per unit area ($g \cdot m^{-2}$)	110
Roll length (m)	50
Roll width (m)	1.1/1.5
Colour	
Upper	Light grey
Lower	Light grey

Ancillary Items

The following ancillary items are essential to use with the products and have been assessed with the products:

- Tacto — double-sided adhesive tape for sealing lap joints
- Permo TR Plus Tape — single-sided adhesive tape for sealing edges of lap joints. To be used where there is no integral tape.

The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate.

- Butylon — butyl adhesive tape for sealing lap joints
- Klober Underlay Support Tray — a PVC-U detail used to protect the edge of the underlay from the effect of ultraviolet light ageing, and as a run-off into gutters
- Klober Eaves Closer — a mesh-reinforced PVC-U unit acting as a barrier against destructive pests while allowing natural air movements and moisture run-off from the batten space.

Applications

The product has been assessed for use as fully supported (and secured with counter battens and tiling battens) or unsupported underlays (installed by draping over rafters and securing with tiling battens), in tiled and slated cold ventilated and warm non-ventilated pitched roof systems, constructed in accordance with the relevant clauses of BS 5534 : 2014.

The product may be used over suitable timber-based sarking (Type 3 particleboard, Type 3 OSB or Type 2 plywood), either with continuous insulation or insulation placed between the rafters (warm roofs).

Definitions for products and applications inspected

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

Product assessment – key factors

The product was 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 assessed	≤345 mm batten gauge with battened laps[1]	≤250 mm batten gauge with battened laps[1][2]	≤345 mm batten gauge with Permo TR Plus Tape[1]
Permo Eco 110	1140	2334	1573

(1) Mean of test results.

(2) Underlays with a wind uplift resistance at a 250 mm batten gauge that satisfies 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 according to BS 5534 : 2014, clause A.8 with battened laps and laps with counter battens

Product assessed	≤345 mm batten gauge with battened laps	≤250 mm batten gauge with battened laps	≤345 mm batten gauge with Permo TR Plus Tape
Permo Eco 110	Zones 1 to 2	Zones 1 to 5	Zones 1 to 4

1.1.2 On the basis of data assessed, the product is satisfactory for use in unsupported systems in the geographical Wind Zones given in Table 3 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 of ≤15 m, a pitch between 12.5 and 70°, and a site altitude of ≤100 m, and where topography is not significant. For all other cases, the required uplift resistance must be determined using BS 5534 : 2014 and the Certificate holder's declared wind uplift resistances given in Table 2 of this Certificate.

Supported

1.1.3 The product, when fully supported, has adequate resistance to wind uplift forces.

1.1.4 The product 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. It 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, are not considered to be airtight and the underlay is treated as unsupported.

1.2 Resistance to mechanical damage

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

Table 4 Results of mechanical damage

Product assessed	Assessment method	Requirement	Result
Permo Eco 110	Nail tear to DIN EN 13859-1 : 2005[1]	≥ 50 N	
	Longitudinal direction		Pass
	Transverse direction		Pass

(1) Tested prior to the harmonised technical specification EN 13859-1 : 2010.

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

2 Safety in case of fire

Data was assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The result of a reaction to fire test is given in Table 5.

Table 5 Reaction to fire

Product assessed	Assessment method	Requirement	Result[1]
Permo Eco 110	Reaction to fire tested to BS EN ISO 11925-2 : 2010 and classified to BS EN 13501-1 : 2007[1][2]	Value achieved	Classification E

(1) Report no H.K 037/14 issued by FIW München is available from the Certificate holder on request.

(2) The specimens were tested unsupported with no backing board.

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 product is 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 product is 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
Permo Eco 110	Resistance to water penetration to BS EN 1928 : 2000 and modified by EN 13859-1: 2010	No leakage	Pass

3.1.2 On the basis of data assessed, the product can be used supported without affecting its water resistance.

3.1.3 The product is classified as Class W1 in accordance with BS EN 13859-1 : 2014 and will resist the passage of water, 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 product resists the penetration of liquid water and consequently may be used as temporary waterproofing prior to the installation of slates or tiles. The period of such use must, however, be kept to a minimum. Further information is 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

Product assessed	Assessment method	Requirement	Result
Permo Eco 110	Water vapour transmission rate to BS 3177 : 1959[1]	Value achieved	1429 $g \cdot m^{-2} \cdot day^{-1}$
Permo Eco 110	Water vapour resistance	Value achieved	0.14 $MNs \cdot g^{-1}$

(1) Tested prior to the harmonised technical specification of EN 13859-1 : 2010.

3.2.2 A condensation risk analysis was carried out based on the results 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 product may be regarded as a Type LR underlay.

4 Safety and accessibility in use

Data were assessed for the following characteristics.

4.1 Slip resistance

4.1.1 Slip resistance of the product is assessed on the basis of existing test data of a representative product.

4.1.2 On the basis of data assessed, the product has a high coefficient of friction, giving a slip-resistant surface for increased safety during 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 product comprises polypropylene, which can be recycled.

8 Durability

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

8.2 Specific test data were assessed as given in Table 8.

Table 8 Results of durability tests

Product assessed	Assessment method	Requirement	Result
Permo Eco 110	Tensile strength to DIN EN 13859-1 : 2005(1)	Value achieved	
	Control:		
	Longitudinal direction		214 N·(50 mm)$^{-1}$
	Transverse direction		175 N·(50 mm)$^{-1}$
	Tensile strength to DIN EN 13859-1 : 2005(1)	Change < 30%	
	Heat aged at 70°C for 56 days		
	Longitudinal direction		Pass
	Transverse direction		Pass
	Elongation to DIN EN 13859-1 : 2005(1)	Value achieved	
	Unaged:		
	Longitudinal direction		73%
	Transverse direction		36%
	Elongation to DIN EN 13859-1 : 2005(1)	No significant	
	Heat aged at 70°C for 56 days	loss of	
	Longitudinal direction	properties	Pass
	Transverse direction	following ageing	Pass
Permo Eco 110	Dimensional stability to DIN EN 1107-1 : 1999	≤ 2%	
	Longitudinal direction		Pass
	Transverse direction		Pass
Permo Eco 110	Resistance to water penetration to To DIN EN 13859-1 : 2005 Heat aged to EN 13859-1 : 2005, Annex C	No leakage	Pass
Permo Eco 110	Low temperature flexibility to DIN EN 1109 : 1999	Value achieved	
	Longitudinal direction		≤ -20°C
	Transverse direction		≤ -20°C

(1) Tested prior to the harmonised technical specification of EN 13859-1 : 2010.

8.3 Service life

8.3.1 Under normal service conditions, the product will have a service life comparable with that of traditional roof tile underlays, provided it is not exposed to sunlight for long periods, and it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 The exposure of the product prior to completion of the roof must be kept to a minimum. Advice regarding exposure can 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 Project design wind speeds for the roof in which the product is 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.

9.1.2 In common with all roofs, care must be taken in the overall design and installation to minimise the risk of water vapour coming into contact with cold parts of the construction. Factors to be considered and minimised include moisture diffusion through the ceiling, infiltration through unsealed openings/penetrations in the ceiling and services evaporating or venting moisture into cold spaces.

9.1.3 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.

9.2 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 and 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 instructions and guidance is provided in Annex A of this Certificate.

9.2.3 The product must be installed with the printed light grey coloured 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 9.

Table 9 Minimum overlaps

Roof pitch (°)	Horizontal laps (mm)		Vertical laps (mm)
	Not fully supported	Fully supported	
12.5 < 15	225	150	100
> 15	150	100	100

9.2.5 Vertical laps must be staggered a minimum of 300 mm and detailed to occur along the rafter lines. All horizontal laps can be taped and sealed using a double-sided tape, if required.

Procedure

Unsupported

9.2.6 The product, when installed as part of an unsupported system, is fixed in the traditional method for roof tile underlays, ie draped between the rafters to allow drainage of liquid water under the tiling battens with the printed light grey coloured side uppermost.

Fully supported

9.2.7 The product may be used over suitable traditional boards with 2 mm gaps, and over rigid insulation where no sarking board is present, either with continuous insulation or insulation placed between the rafters. The product may also be used over suitable timber-based sarking (Type 3 particleboards, Type 3 OSB or Type 2 plywood). In such cases where non breathable boarding is used a gap must be maintained between the insulation and the boarding and ventilated in accordance with BS 5250 : 2021.

9.2.8 The product is secured to the support with counter battens at least 12 mm thick, to create drainage and vapour dispersal space(1) between the product and the tiles or slates, or when using timber sarking, the traditional Scottish practice is employed, with the tiles or slates fixed directly into the boards. Counter battens must be a minimum of 12 mm for drainage and vapour dispersal, but consideration must be given to the minimum fixing requirements of the batten nails.

(1) This space must be ventilated in accordance with BS 5250 : 2021 when using tight fitting roof covering.

9.2.9 The counter battens are fixed with galvanized clout nails at a maximum of 300 mm centres coinciding with the rafters. Tiling battens are secured to the counter battens and rafters with appropriate fixings.

9.2.10 Care must be taken to minimise the risk of interstitial condensation, particularly for timber sarking which may be below the dew-point for extended periods during winter months.

9.2.11 For Permo Eco 110 Membranes with integral tape, the overlap is 150 mm wide, with the tape on the upper and lower membranes. Once the tape is in the correct position, the joint must be consolidated.

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

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, the product must be installed by competent slater/tiler, experienced with this type of product.

9.4 Maintenance and repair

9.4.1 As the product is confined in a roof structure and has suitable durability, maintenance is not required. However, any damage occurring before enclosure must be repaired.

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

10 Manufacture

10.1 The production processes for the product 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 product is delivered to site individually wrapped in polythene packaging, along with a label bearing the Certificate holder's name and product name. A label bearing the BBA logo incorporating the number of this Certificate is applied to the outer polythene wrapper.

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 on a clean level surface, under cover and protected from sunlight.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the product 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 product, in accordance with Designated Standard EN 13859-1 : 2010.

CE marking

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

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of ISO 9001 : 2015 by TÜV Hessen (Certificate 73100176).

Additional information on installation

General

A.1 Where possible, eaves guards should be used to protect the product from sunlight and to direct water into the gutter.

Condensation

A.2 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.*

Horizontal ceiling and insulation (cold roof)

A.3 Roofs designed and constructed in accordance with BS 5250 : 2021 will adequately limit the risk of interstitial condensation. Alternatively, ridge or high level ventilation(1) equivalent to a continuous opening of 5 mm may be used. If this approach is adopted, users must take additional care to limit opportunities for vapour migration and accumulation in the loft spaces. See section 3.2.1 of this Certificate.

(1) The provision of high-level ventilation, when using a Type LR underlay in cold pitched roofs, is a requirement under *NHBC Standards* 2025, Chapter 7.2.

Ceiling and insulation inclined (warm roof)

A.4 For roofs with an insulated inclined ceiling, ventilation above or below the underlay will not be required provided that the passage of moisture by diffusion and by convection is controlled, eg by a vapour control layer or a continuous envelope of insulation with a high vapour resistance. Ventilation may be required if specified by the tile manufacturer, or where the roof covering is airtight, as described in BS 5250 : 2021.

Partially inclined ceiling and insulation (warm and cold roof)

A.5 Where an insulated ceiling spans only part of the roof line, resulting cold roof spaces must be in accordance with BS 5250 : 2021, Section 4, Subsection 12.

Bibliography

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*

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 *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 1928 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

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 ISO 11925-2 : 2010 *Reaction to fire tests. Ignitability of products subjected to direct impingement of flame. Single-flame source test*

BS EN 13501-1 : 2007 + A1 : 2009 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

DIN EN 1107-1 :1999 Flexible sheets for waterproofing –Determination of dimensional stability- Bitumen sheets for roof waterproofing

DIN EN 1109 : 1999 *Flexible sheets for waterproofing — Bitumen sheets for roof waterproofing — Determination of flexibility at low temperature*

DIN EN 13859-1 : 2005 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Underlays for discontinuous roofing*

EN 13859-1 : 2005 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Part 1 Underlays for discontinuous roofing*

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

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

ISO 9001 : 2015 *Quality management systems — Requirements*

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 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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