

## DuPont de Nemours (Luxembourg) S.à r.l

Rue General Patton  
L-2984  
Luxembourg

Tel: 0117 452 9052/9053

e-mail: tyvek.construction@dupont.com

website: www.dupont.co.uk/building.html



**Agrément Certificate**

**90/2548**

Product Sheet 10 Issue 4

### TYVEK CONSTRUCTION MEMBRANES

### DUPONT AIRGUARD REFLECTIVE E

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to DuPont AirGuard<sup>(2)</sup> Reflective E, for use as an air barrier and vapour control layer (AVCL) in walls and floors.

(1) Hereinafter referred to as 'Certificate'.

(2) AirGuard is a registered trademark of E.I. du Pont de Nemours & Co. or its affiliates.

#### 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 Fourth issue: 6 June 2024  
Originally certified on 30 January 2017

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.*

#### British Board of Agrément

1<sup>st</sup> Floor, Building 3, Hatters Lane  
Croxley Park, Watford  
Herts WD18 8YG

©2024

tel: 01923 665300  
clientservices@bbacerts.co.uk  
www.bbacerts.co.uk

## 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 DuPont AirGuard Reflective E, 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)

<b>Requirement:</b>	<b>B3(4)</b>	<b>Internal fire spread</b>
Comment:		The product can contribute to satisfying this Requirement. See section 2 of this Certificate.
<b>Requirement:</b>	<b>B4(1)</b>	<b>External fire spread</b>
Comment:		The product is restricted by this Requirement. See section 2 of this Certificate.
<b>Requirement:</b>	<b>C2(c)</b>	<b>Resistance to moisture</b>
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
<b>Requirement:</b>	<b>L1(a)(i)</b>	<b>Conservation of fuel and power</b>
Comment:		The product can contribute to satisfying this Requirement. See section 6 of this Certificate.
<b>Regulation:</b>	<b>7(1)</b>	<b>Materials and workmanship</b>
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>25B</b>	<b>Nearly zero-energy requirements for new buildings</b>
<b>Regulation:</b>	<b>26</b>	<b>CO<sub>2</sub> emission rates for new buildings</b>
<b>Regulation:</b>	<b>26A</b>	<b>Fabric energy efficiency rates (applicable to England only)</b>
<b>Regulation:</b>	<b>26A</b>	<b>Primary energy efficiency rates for new buildings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26B</b>	<b>Fabric performance values for new dwellings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26C</b>	<b>Target primary energy rates for new buildings (applicable to England only)</b>
<b>Regulation:</b>	<b>26C</b>	<b>Energy efficiency rating (applicable to Wales only)</b>
Comment:		The product can contribute to satisfying these Regulations. See section 6 of this Certificate.



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

<b>Regulation:</b>	<b>8(1)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The product can contribute to satisfying this Regulation. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>9</b>	<b>Building standards – construction</b>
Standard:	2.4	Cavities
Comment:		The product can contribute to satisfying this Standard, with reference to clause 2.4.2 <sup>(1)(2)</sup> . See section 2 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> and 3.15.5 <sup>(1)(2)</sup> . See section 3 of this Certificate.

Standard: Comment:	6.1(b)(c)(d)	Carbon dioxide emissions The product can contribute to satisfying this Standard, with reference to clauses 6.1.1 <sup>(1)</sup> and 6.1.2 <sup>(2)</sup> . See section 6 of this Certificate.
Standard: Comment:	6.2	Building insulation envelope The product can contribute to satisfying the requirements of these Standards, with reference to clauses 6.2.4 <sup>(1)</sup> , 6.2.5 <sup>(2)</sup> , 6.2.6 <sup>(2)</sup> , 6.2.10 <sup>(1)</sup> , 6.2.11 <sup>(1)(2)</sup> and 6.2.12 <sup>(1)</sup> . See section 6 of this Certificate.
Standard: Comment:	7.1(a)(b)	Statement of sustainability The product can contribute to satisfying 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. In addition, the product can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 <sup>(1)</sup> , 7.1.6 <sup>(1)(2)</sup> , 7.1.7 <sup>(1)</sup> , 7.1.9 <sup>(2)</sup> and 7.1.10 <sup>(2)</sup> . See section 6 of this Certificate.
Regulation: Comment:	12	<b>Building standards – conversion</b> 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: Comment:	23(1)(a)(i) (iii)(b)(i)	<b>Fitness of materials and workmanship</b> The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation: Comment:	29	<b>Condensation</b> The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation: Comment:	35(4)	<b>Internal fire spread – structure</b> The product can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation: Comment:	36(a)	<b>External fire spread</b> The product is restricted by this Regulation. See section 2 of this Certificate.
Regulation: Comment:	39(a)(i)	<b>Conservation measures</b> The product can contribute to satisfying this Regulation. See section 6 of this Certificate.
Regulation: Regulation: Comment:	40(2) 43B	<b>Target carbon dioxide emission rate</b> <b>Nearly zero-energy requirements for new buildings</b> The product can contribute to satisfying these Regulations. See section 6 of this Certificate.

## Additional Information

### NHBC Standards 2024

In the opinion of the BBA, DuPont AirGuard Reflective E, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 6.2 *External timber framed walls*, 6.9 *Curtain walling and cladding*, 6.10 *Light steel framed walls and floors* and 9.2 *Wall and ceiling finishes*.

## Fulfilment of Requirements

The BBA has judged, DuPont AirGuard Reflective E to be satisfactory for use as described in this Certificate. The product has been assessed for use as an AVCL in timber-frame, masonry and steel-frame walls and floor structures.

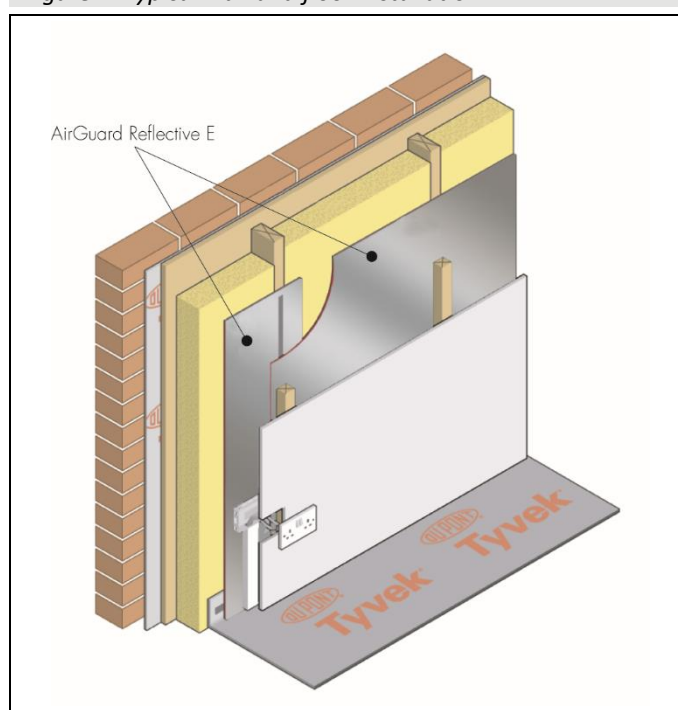
## ASSESSMENT

### Product description and intended use

The Certificate holder provided the following description for the product under assessment. DuPont AirGuard Reflective E consists of a spunbond polypropylene, laminated with an aluminium foil.

DuPont AirGuard Reflective E is an AVCL with a low-emissivity aluminium foil face on one side. It is placed on the warm side of the insulation, with the foil surface facing the interior of the building. A typical wall and floor installation is shown in Figure 1.

Figure 1 Typical wall and floor installation



The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of DuPont AirGuard Reflective E

Characteristic (unit)	Value
Thickness (mm)	0.31
Mass per unit area ( $\text{g}\cdot\text{m}^{-2}$ )	122
Roll length (m)	50
Roll width (m)	1.5
Colour	Grey

## Ancillary Items

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

- Tyvek<sup>(1)</sup> Metallised Tape (2060M) — to close laps between the membrane and for making good where cuts are made
- Tyvek Double-sided Tape (1310D) — an acrylic tape for sealing overlaps and bonding membrane to smooth surfaces
- Tyvek Butyl Tape (1311B) — a double-sided tape for sealing penetrations, eg behind metal brackets and timber battens under compression.

(1) Tyvek is a registered trademark of E.I. du Pont de Nemours & Co. or its affiliates.

## 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

Not applicable.

### 2 Safety in case of fire

Data were 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 2.

*Table 2 Results of Reaction to fire test*

Product assessed	Assessment method	Requirement	Result
DuPont AirGuard Reflective E	Reaction to fire classification in accordance with EN 13501-1 : 2018 <sup>(1)</sup> tested in accordance with EN ISO 11925-2 : 2020	Value achieved	Class E

(1) Classification report FIRES-CR-217-22-AUPE issued by FIRES s.r.o. A copy of the report is available from the Certificate holder on request.

2.1.2 On the basis of data assessed, the product will be restricted in use under the documents supporting the national Building Regulations in some cases.

2.1.3 In England, Wales and Northern Ireland, the product must not be used on buildings that have a storey at least 18 m above ground level and which contain one or more dwellings, an institution, a room for residential purposes (excluding, in Wales and Northern Ireland only, any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools and, additionally in Northern Ireland, nursing homes and places of lawful detention.

2.1.4 In Scotland, the use of the product is unrestricted in terms of height and proximity to a relevant boundary by the documents supporting the national Building Regulations.

2.1.5 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.

2.1.6 Where the product forms the face of a cavity, the spacing of cavity barriers are restricted by the national Building Regulations.

### 3 Hygiene, health and the environment

Data were assessed for the following characteristics.

#### 3.1 Weathertightness

3.1.1 The results of a weathertightness test are given in Table 3.

Product assessed	Assessment method	Requirement	Result
DuPont AirGuard Reflective E	Watertightness to STN EN 1928 : 2001 at 2 kPa	No leakage	Pass

3.1.2 On the basis of data assessed, DuPont AirGuard Reflective E provides an effective control to the passage of liquid water and water vapour and will contribute to limiting the risk of interstitial condensation.

#### 3.2 Condensation

3.2.1 The results of a water vapour resistance test are given in Table 4.

Product assessed	Assessment method	Requirement	Result
DuPont AirGuard Reflective E	Water vapour diffusion - equivalent air layer thickness to STN EN 1931 : 2001	$\geq 40 \text{ m}^{(1)}$	Pass
	Airtightness to BS EN 12114 : 2000 at 50 Pa	No leakage	Pass

(1) Water vapour resistance may be taken as  $5 \times s_d$  value

3.2.2 A condensation risk analysis was carried out based on the result given in Table 3, and satisfactory conclusions were drawn.

3.2.3 The risk of condensation occurring will depend upon the properties and vapour resistance of other materials used in the construction, the internal and external conditions and the effectiveness of the product's installation.

3.2.4 Consideration must be given in the overall installation to minimising penetrations by services. Joints at ceilings/walls and wall/floor junctions must be sealed to offer significant resistance to water vapour transmission. Sealing must also be carried out in accordance with the Certificate holder's instructions.

3.2.5 Constructions must be in accordance with the nominal recommendations of BS 5250 : 2021 using a minimum air layer equivalent value ( $s_d$ ) of not less than 1500 m (equivalent to a water vapour resistance of  $7500 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$ ) for the product.

3.2.6 On the basis of data assessed, the product's joints have a satisfactory resistance to air movement.

#### 3.3 Resistance to mechanical damage

3.3.1 Results of resistance to mechanical damage tests are given in Table 5.

**Table 5 Resistance to mechanical damage**

Product assessed	Assessment method	Requirement	Result
DuPont AirGuard Reflective E	Nail tear to BS EN 12310-1 : 2000	≥ 35 N	
	Longitudinal direction		Pass
	Transverse direction		Pass
	Tensile strength to BS EN 12311-2 : 2000	Value achieved	
	Longitudinal direction		161 N·(50 mm) <sup>-1</sup>
	Transverse direction		131 N·(50 mm) <sup>-1</sup>
	Elongation to BS EN 12311-1 : 2000	Value achieved	
	Longitudinal direction		11%
	Transverse direction		15%

3.3.2 On the basis of data assessed, the product has adequate strength to resist the loads associated with installation on the wall or floor and service.

## 4 Safety and accessibility in use

Not applicable.

## 5 Protection against noise

Not applicable.

## 6 Energy economy and heat retention

Data were assessed for the following characteristics.

### 6.1 Thermal insulation

6.1.1 Results of emissivity tests are given in Table 6.

**Table 6 Emissivity tests**

Product assessed	Assessment method	Requirement	Result
DuPont AirGuard Reflective E	Emissivity to BS EN 15976 : 2011 Control	≤0.1	Pass

6.1.2 Calculations of thermal transmittance (U value) should be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2019, using an emissivity value of 0.05 for the foil surface of the product.

6.1.3 Where the product faces into an unventilated cavity, this corresponds to the cavity thermal resistance values given in Table 7.

**Table 7 Cavity thermal resistance values**

	Result
Walls – with a cavity > 20 mm thick	0.67 m <sup>2</sup> ·K·W <sup>-1</sup>
Floors – with a cavity > 25 mm thick	0.80 m <sup>2</sup> ·K·W <sup>-1</sup>

6.1.4 On the basis of data assessed, the product is satisfactory for use as a radiant barrier and is effective in reducing the thermal transmittance when the foil surface is facing towards the exterior of the building into an air space. Further information is given in BRE Report BR 262 : 2002.

6.1.5 When lapped, fixed and taped correctly, the product acts as an air barrier and can contribute to elements and junctions minimising heat loss by unplanned air infiltration and exfiltration. Guidance in this respect can be found in the documents supporting the national Building Regulations.

## 7 Sustainable use of natural resources

Not applicable.

## 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 7.

Product assessed	Assessment method	Requirement	Result
	Emissivity to BS EN 15976 : 2011 Heat aged at 70 °C for 90 days	≤0.1	Pass
	Heat aged at 45 °C for 90 days and 100% rh for 21 days	≤0.1	Pass
	Resistance to water penetration to STN EN 1928 : 2001 (method A) following heat ageing according to EN 13984 : 2013	No leakage	Pass
	Water vapour transmission properties to STN EN 1931: 2001 following heat ageing according to EN 13984 : 2013	≥ 40 m	Pass

### 8.3 Service life

Under normal service conditions, the product will have a life equivalent to the structure in which it is incorporated, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

## 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 assessed in this Certificate.

9.1.2 It is essential that proper care and attention is given to maintaining the product's integrity and continuity.

9.1.3 The product is effective in reducing the thermal transmittance (U value) of walls and floors in which it is installed. Further information is given in BRE Report BR 262 : 2002.

9.1.4 Suspended concrete and suspended timber ground floors incorporating the product must include suitable ventilation.

### 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 the Certificate holder's instructions and good building practice. A summary of instructions and guidance is provided in Annex A.



9.2.3 Where wood preservatives and damp-proofing treatments containing solvents have been applied, sufficient time must be allowed for solvents to disperse before the product is installed.

9.2.4 For timber-frame constructions, when used in walls, the product must be positioned on the warm side of the thermal insulation and held in place by staples at approximately 500 mm centres to the background structure. Joints between adjacent sheets of the material must be lapped 100 mm over a support and be sealed with a strip of either Tyvek Double-sided Tape (1310D) or Tyvek Metallised Tape (2060M).

9.2.5 At all penetrations and abutments, the product must be cut neatly to fit as closely as possible and the joint sealed with a strip of Tyvek Double-sided Tape (1310D) and Tyvek Metallised Tape (2060M). Penetrations must be kept to a minimum.

9.2.6 The product must be made vapour- and convection-tight at all window and door openings and at other detailing. The membrane must be sealed tight against the frame with Tyvek Butyl Tape (1311B) and compressed with a timber batten fixed over. All membrane laps and penetrations must be sealed with Tyvek Metallised Tape (2060M), Tyvek Acrylic Tape (2060B) or Tyvek Double-sided Tape (1310D).

9.2.7 Internal lining must be set on spacer battens, leaving a minimum gap of 25 mm behind the lining to accommodate wiring and other services and to reduce the need for penetrations of the vapour control layer/air barrier. When used without a void, the product does not contribute to the thermal value of the construction but continues to act as a vapour control layer/air barrier.

9.2.8 When used in floors, the product must be either installed above or beneath the floor boarding and beneath the internal floor finishes.

9.2.9 Joints between adjacent sheets of the material must be lapped 100 mm and be sealed with a strip of either Tyvek Butyl Tape (1311B) or Tyvek Metallised Tape (2060M).

9.2.10 When used in steel frame constructions, the product is fastened to the steelwork using an appropriate fixing system, such as a 25 mm steel framing screw with an EPDM rubber washer, in accordance with the Certificate holder's instructions. Fixing should be at maximum 500 mm centres.

9.2.11 When used in masonry constructions, the product is fastened to the masonry using an appropriate anchor fixing system or a masonry nail/screw and an EPDM rubber washer. Fixing must be at maximum 500 mm centres. Tyvek Double-sided Tape (1310D) can be used to fix the membrane, in addition to the mechanical method. For airtightness, Tyvek Butyl Tape (1311B) can be used at fixing points where a compressible washer is not employed. A primer can be applied to chalky or porous masonry to seal the surface and improve adhesion before applying adhesive tape.

### 9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, the product must be installed by a competent general builder, or a contractor, experienced with this type of product.

### 9.4 Maintenance and repair

9.4.1 As the product is confined within a wall or floor structure and has suitable durability, maintenance is not required. Any damaged areas must be repaired or replaced before completion.

9.4.2 Damage to the product can be repaired with Tyvek Metallised Tape (2060M).

9.4.3 Extensively damaged areas must be made good by overlaying a new sheet sealed in place with Tyvek Metallised Tape (2060M).

## 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 products are delivered to site in packages bearing the marketing company's name, the grade identification and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handling 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 a smooth, clean, dry surface, under cover and protected from sunlight.

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.

### CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard EN 13984 : 2013.

### Additional information on installation

#### Condensation

A.1 The risk of condensation occurring will depend upon the properties and vapour resistance of other materials used in the construction, the internal and external conditions and the effectiveness of the product's installation.

A.2 Consideration must be given in the overall installation to minimising penetrations by services. Joints at ceilings/walls and wall/floor junctions must be sealed to offer significant resistance to water vapour transmission. Sealing must also be carried out in accordance with the Certificate holder's instructions.

A.3 Constructions must be in accordance with the nominal recommendations of BS 5250 : 2021 using a minimum air layer equivalent value (sd) of not less than 1500 m (equivalent to a water vapour resistance of 7500 MN·s·g<sup>-1</sup>) for the product.

#### Surface condensation

A.4 In England and Wales, walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 0.7 W·m<sup>-2</sup>·K<sup>-1</sup> at any point, and the junctions and openings are designed in accordance with the relevant requirements of limiting thermal bridging and air leakage.

A.5 For buildings in Scotland, wall constructions will be acceptable when the thermal transmittance (U value) does not exceed 1.2 W·m<sup>-2</sup>·K<sup>-1</sup> at any point, and the junctions with other elements are designed in accordance with the guidance referred to in BS 5250 : 2021. Further guidance may be obtained from BRE Report BR 262 : 2002.

## Bibliography

BRE Report BR 262 : 2002 *Thermal insulation : avoiding risk*

BRE Report BR 443 : 2019 *Conventions for U-value calculations*

BS 5250 : 2021 *Code of practice for control of condensation in buildings*

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

BS EN 12311-1 : 2000 *Flexible sheets for waterproofing – Determination of tensile properties – Bitumen sheets for roof waterproofing*

BS EN 12311-2 : 2000 *Flexible Sheets for Waterproofing – Determination of tensile properties Part 2: plastic and rubber sheets for roof waterproofing*

BS EN 12114 : 2000 *Thermal performance of buildings – Air permeability of building components and building elements – Laboratory test methods*

BS EN 13859-2 : 2014 *Flexible sheets for waterproofing – Definitions and characteristics of underlays – Underlays for walls*

BS EN 15976 : 2011 *Flexible sheets for waterproofing – Determination of emissivity*

BS EN ISO 6946 : 2017 *Building components and building elements – Thermal resistance and thermal transmittance – Calculation methods*

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

EN 13984 : 2013 *Flexible sheets for waterproofing – Plastic and rubber vapour control layers – Definitions and characteristics*

EN ISO 11925-2 : 2020 *Reaction to fire tests – Ignitability of products subjected to direct impingement of flame - Part 2: single-flame source test*

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

STN EN 1931 : 2001 *Flexible sheets for waterproofing – Bitumen, plastic and rubber sheets for roof waterproofing – Determination of water vapour transmission properties*

### 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 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.