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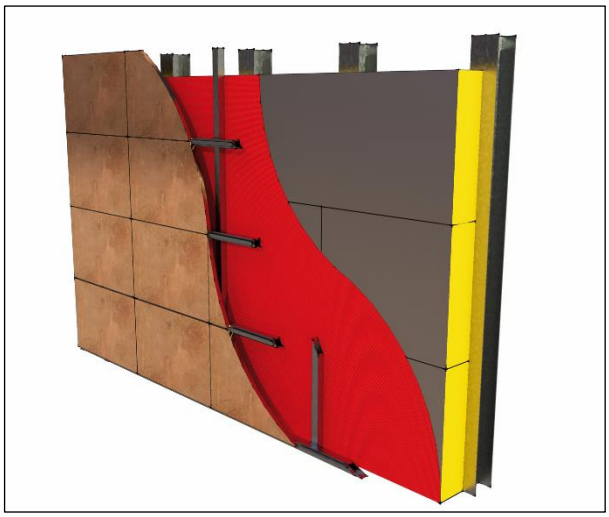
Agrément Certificate
15/5274
Product Sheet 2

WRAPTITE BREATHER MEMBRANE

FOR USE IN WALL AND FLOOR CONSTRUCTIONS

This Agrément Certificate Product Sheet(1) relates to Wraptite Breather Membrane, a self-adhesive, vapour permeable, airtight membrane consisting of a triple-layer polypropylene micro-porous film laminate, with a proprietary acrylic moisture vapour permeable adhesive and silicon-coated PET release liner, for use in walls with a cavity and a masonry outer leaf, weatherboarding, tile/slate cladding or closed rain-screen cladding systems and in modular floor cassette constructions.

(1) Hereinafter referred to as 'Certificate'.



CERTIFICATION INCLUDES:

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

KEY FACTORS ASSESSED

Weathertightness — the product will contribute to protecting a wall and floor against water penetration (see section 6).

Risk of condensation — the product has low water vapour transmission and can contribute to reducing the risk of interstital condensation (see section 7).

Strength — the product has adequate strength to resist damage during the construction of the wall/floor (see section 8).

Durability — the product will have a life equal to that of the bulding in which it is installed (see section 11).

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

On behalf of the British Board of Agrément

Date of Second issue: 23 April 2018

Originally certificated on 16 Noveber 2015

John Albon – Head of Approvals
Construction Products

Claire Curtis-Thomas
Chief Executive

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

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

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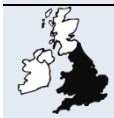
Regulations

In the opinion of the BBA, Wraptite Breather Membrane for use in wall and floor constructions, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The product will contribute to a wall/floor satisfying this Requirement. See section 6.1 of this Certificate.
Requirement:	**C2(c)**	**Resistance to moisture**
Comment:		The product will contribute to a wall/floor satisfying this Requirement. See section 7.1 of this Certificate.
Regulation:	**7**	**Materials and workmanship**
Comment:		The product is acceptable. See section 11 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Durability, workmanship and fitness of materials**
Comment:		The product can contribute to a construction satisfying this Regulation. See section 11 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	3.10	Precipitation
Comment:		The product will contribute to a wall/floor satisfying clauses 3.10.1(1)(2) and 3.10.5(1)(2) of this Standard. See section 6.1 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to limiting the risk of condensation with reference to clauses 3.15.1(1) and 3.15.4(1) of this Standard. See section 7.1 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		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(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The product is acceptable. See section 11 and the *Installation* part of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The product will contribute to a wall/floor satisfying this Regulation. See section 6.1 of this Certificate.

Regulation:	**29**	**Condensation**
Comment:		The product can enable a wall/floor to satisfy this Regulation. See section 7.1 of this Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: 1 *Description* of this Certificate.

Additional Information

NHBC Standards 2018

In the opinion of the BBA, Wraptite Breather Membrane for use in wall and floor constructions, 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* and 6.10 *Light steel framed walls and floors.*

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard EN 13859-2 : 2014. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

Wraptite Breather Membrane for use in wall and floor constructions is a self-adhesive vapour permeable membrane consisting of a triple-layer polypropylene micro-porous film laminate, with a proprietary acrylic moisture vapour permeable adhesive and silicon-coated PET release liner. The membrane has the following nominal characteristics:

Thickness (mm)	0.65
Mass per unit area* ($g \cdot m^{-2}$)	292
Roll length (m)	50
Roll width (m)	1.5
Roll weight (kg)	24
Equivalent air layer thickness S_d* (m)	0.039
Water vapour transmission($g \cdot m^2 \cdot 24hr$)	893
Resistance to penetration of air ($m^3 m^{-2} \cdot h^{-1} \cdot 50\ Pa^{-1}$)	0.01
Watertightness*	
unaged	Class W1
aged(1)	Class W1
Tensile strength* ($N \cdot 50\ mm^{-1}$)	
longitudinal	417
transverse	252
Nail tear* (N)	
longitudinal	412
transverse	286
Colour	
upper	red
lower	white.

(1) Aged in accordance with EN 13859-2: 2014, Annex C.

2 Manufacture

2.1 The membrane is manufactured by a lamination process, in which a polypropylene non-woven membrane with a breathable film is laminated onto an acrylic moisture vapour permeable adhesive and silicon-coated PET release liner. The product is then cut to the required lengths and packed ready for despatch.

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

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

3 Delivery and site handling

3.1 The product is delivered to site in rolls individually wrapped in polythene with a label bearing the BBA logo incorporating the number of this Certificate.

3.2 The rolls should be stored flat or on end, on a smooth, clean, dry surface, under cover and protected from sunlight.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Wraptite Breather Membrane for use in wall and floor constructions.

Design Considerations

4 Use

4.1 Wraptite Breather Membrane for use in wall and floor constructions is satisfactory for use as on-site or factory-applied breather membrane in timber-, steel- and concrete-frame walls with a cavity and a masonry outer leaf, weatherboarding, tile/slate cladding or behind closed rain-screen cladding applications. It is also suitable for use in modular floor cassette constructions.

4.2 In the absence of other guidance, suitable timber-, steel- and concrete-frame walls are defined as those designed and built in accordance with *NHBC Standards* 2018, Chapters 6.2, 6.9 and 6.10.

4.3 The product satisfies the requirements for a Class W1* material in accordance with BS EN 13859-2 : 2014, and meets the NHBC requirement given in *NHBC Standards* 2018, Chapter 6.2, Clauses 6.2.13, 6.9.9 and 6.10.14 as a high-performance breather membrane for use in very severe exposure conditions(1).

(1) Very severe conditions are defined in *NHBC Standards* 2018, Figure 1, Exposure zones map showing categories of exposure to wind-driven rain.

5 Practicability of installation

The product is designed to be installed by competent general builders or contractors experienced with this type of product.

6 Weathertightness

6.1 The product is Class W1* in accordance with BS EN 13859-2 : 2014 and will resist the passage of liquid water penetration and wind-blown snow, and will protect the sheathing and frame from external moisture.

6.2 The product can be used as temporary weather protection during construction and prior to the completion of external brickwork or claddings. The period of such use should, however, be kept to a minimum.

7 Risk of condensation

7.1 For design purposes, the product's water vapour resistance may be taken as less than or equal to 0.60 MN·s·g^{-1}, and it is classified as a breather membrane in accordance with BS 5250 : 2011. Walls incorporating the product will, therefore, adequately limit the risk of interstitial condensation when designed and constructed in accordance with BS 5250 : 2011, Annex G.

7.2 The risk of condensation occurring within the wall of a building 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 internal vapour control layer.

8 Strength

The product will resist the normal loads associated with its installation.

9 Properties in relation to fire

9.1 The product is classified as Class B s1 d0* in accordance with BS EN 13501-1 : 2007.

9.2 Cavity barriers should be used to satisfy the requirements of the national Building Regulations.

10 Maintenance

As the product is confined within the wall space and has suitable durability (see section 11), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 14).

11 Durability

The product will be virtually unaffected by the normal conditions found in walls and will have a life comparable with that of the building in which it is installed.

Installation

12 General

12.1 The product must be installed and fixed in accordance with the Certificate holder's instructions and the recommendations given in *NHBC Standards* 2018, Chapters 6.2, 6.9 and 6.10, where appropriate.

12.2 Installation can be carried out under all conditions normal to construction works. The minimum air and surface temperature at which installation can take place is –6°C.

12.3 The product is installed with the red face uppermost, and lapped to shed water out and down the slope.

13 Procedure

Walls

13.1 The product may be used over sarking boards of softwood, Class A1/A2 sheathing boards, C4 grade chipboard or water-resistant grade OSB.

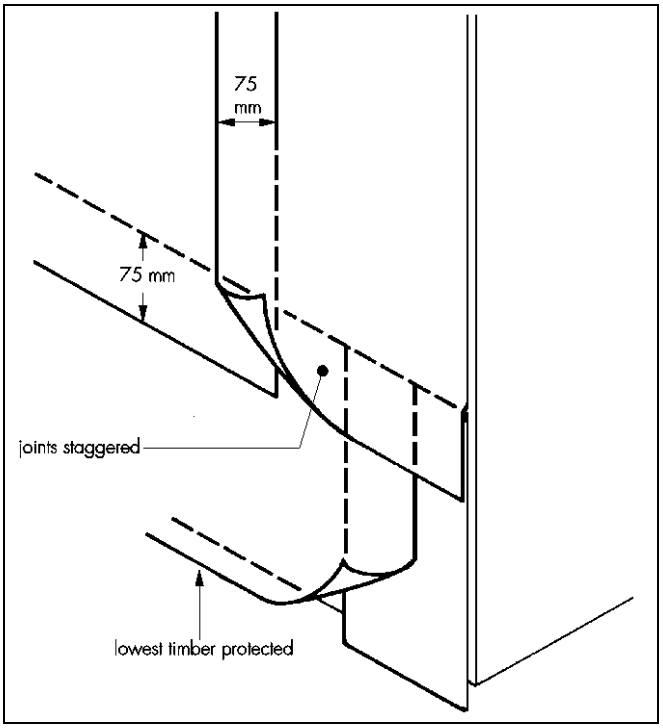
13.2 The substrate must be clean, dry and free from contaminants, sharp protrusions, or other matter that may hinder the adhesion of the membrane installation. Any loose dust or dirt must be removed by wiping with a dry cloth or by brushing.

13.3 The product is installed from the original packaging which functions as a dispenser. The membrane is applied by peeling back the release paper by approximately 150 mm. The release paper is folded back and, using a hand roller or a stiff brush, the glue surface is lightly applied to the prepared substrate.

13.4 The hand roller or stiff brush is used to smooth out any air bubbles, releasing any trapped air. Curing time is approximately six hours. Time for full adhesion may vary depending on local conditions.

13.5 Upper layers should overlap layers to shed water away from the sheathing. Vertical laps should be staggered wherever possible (see Figure 1).

Figure 1 Membrane installation



13.6 Vertical and horizontal laps should not be less than 75 mm.

13.7 It is essential that the positions of the studs are marked on the face of the membrane, usually by tape, to enable fixing of wall ties and battens.

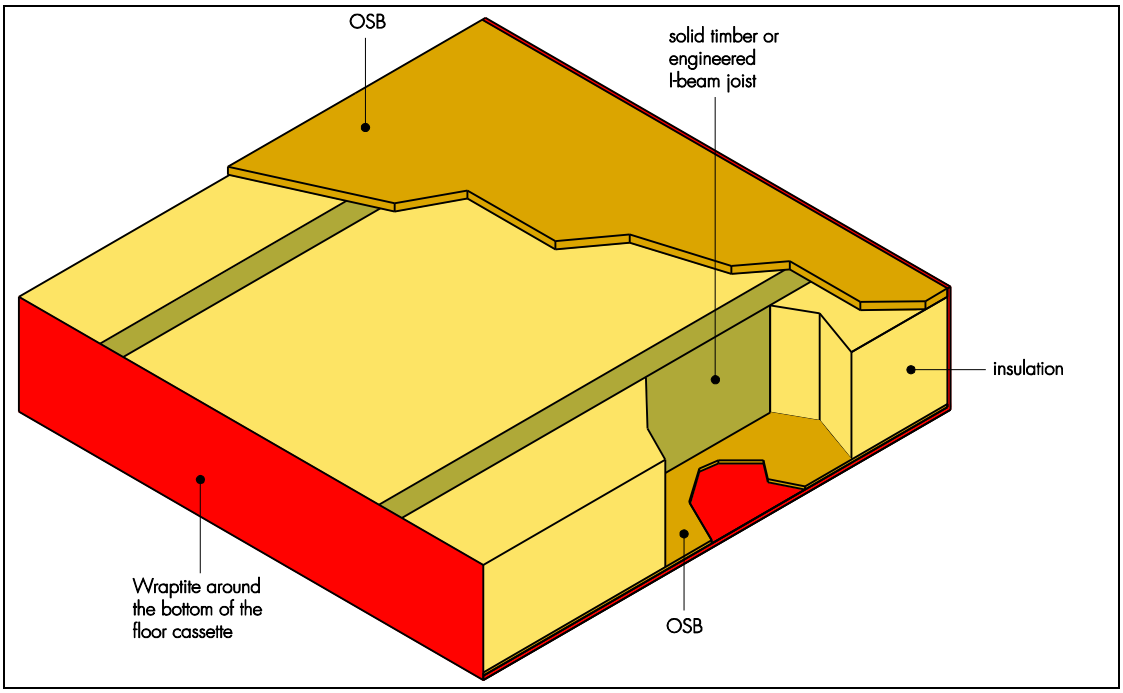
13.8 It is essential that the lowest timbers in the wall are protected by the membrane.

Floors

13.9 The product is installed continuously to the underside of the floor cassette and brought up the edges with minimum 75 mm overlaps.

13.10 Wraptite Tape is then used to seal any junctions between the wall/floor (see Figure 2).

Figure 2 Membrane installation on floors



14 Repair

The product can be damaged by careless handling, high winds or vandalism. Damage to the membrane must be repaired prior to the installation of external walls/floors or cladding, by laying another sheet over the damaged area and by patching and sealing correctly, ensuring that water is shed away from the sheathing.

Technical Investigations

15 Tests

15.1 Tests were carried out on the product and the results assessed to determine:

- thickness and mass
- width and straightness
- hydrostatic head
- Mullen burst strength.

15.2 An assessment was made of data to BS EN 13859-2 : 2014 in relation to:

- tensile strength and elongation*
- resistance to tear*
- dimensional stability
- resistance to penetration of air
- resistance to water penetration*
- resistance to artificial ageing*
- water vapour transmission*
- reaction to fire*.

16 Investigations

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

Bibliography

BS 5250 : 2011 + A1 : 2016 *Code of practice for control of condensation in buildings*

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

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

BS EN 13859-2 : 2014 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Underlays for discontinuous roofing*

17 Conditions

17.1 This Certificate:

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

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

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

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

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

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

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

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

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