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**Agrément  
Certificate  
No 01/3806**  
Second issue\*

Designated by Government  
to issue  
European Technical  
Approvals

## PROTECT TF200 BREATHER MEMBRANE

Membrane perméable à la vapeur d'eau  
Entlüftermembrane

## Product



- THIS CERTIFICATE RELATES TO PROTECT TF200 BREATHER MEMBRANE, A SPUNBONDED POLYPROPYLENE FABRIC FOR USE IN WALLS OF TIMBER FRAME BUILDINGS.

- The product is for use as a factory- or site-applied breather membrane in suitably designed timber frame constructions.

## Regulations

### 1 The Building Regulations 2000 (as amended) (England and Wales)



The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of breather membranes for timber frame construction with the Building Regulations. In the opinion of the BBA, Protect TF200 Breather Membrane, if used in accordance with the provisions of this Certificate, will contribute to meeting the relevant requirements.

Requirement: C4

Resistance to weather and ground moisture

Comment:

Tests for water resistance indicate that the product can contribute to meeting the requirement for walls provided the wall complies with the conditions set out in section 7.2 of this Certificate. See section 10.3 of this Certificate.

Requirement: Regulation 7

Materials and workmanship

Comment:

The product is an acceptable material. See section 13 of this Certificate.

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## 2 The Building Standards (Scotland) Regulations 1990 (as amended)



In the opinion of the BBA, Protect TF200 Breather Membrane, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation:	10	Fitness of materials and workmanship
Standards:	B2.1 and B2.2	Selection and use of materials, fittings, and components, and workmanship
Comment:		The product complies with these Standards. See section 13 of this Certificate.
Regulation:	17	Resistance to moisture
Regulation:	18	Resistance to condensation
Standard:	G3.1	Resistance to precipitation
Comment:		The use of the product can contribute to enabling a wall to satisfy the requirements of this Standard. See section 10.3 of this Certificate.
Standard:	G4.1	Interstitial condensation
Comment:		The use of this product can contribute to enabling a wall to satisfy the requirements of this Standard. See section 11.1 of this Certificate.

## 3 The Building Regulations (Northern Ireland) 2000 (as amended)



In the opinion of the BBA, Protect TF200 Breather Membrane, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is an acceptable material. See section 13 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		The use of the product can contribute towards enabling a wall to satisfy the requirements of this Regulation. See section 10.3 of this Certificate.
Regulation:	C5	Condensation
Comment:		The use of the product can contribute to enabling a wall to satisfy the requirements of this Regulation. See section 11.1 of this Certificate.

## 4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: *5 Description (5.2).*

## Technical Specification

### 5 Description

5.1 Protect TF200 Breather Membrane is manufactured by extruding polypropylene to produce fibres. These fibres are then spun and bonded together using a combination of heat and pressure in a continuous process.

5.2 The product has the nominal characteristics of:

thickness (mm)	0.45
weight (kgm <sup>-2</sup> )	0.10
roll widths (m)	1.3, 2.6, 2.7, 3.0
standard roll length (m)	100
standard roll weight (kg)	13.0, 26.0, 27.0, 30.0
pigment <sup>(1)</sup>	grey, green, blue, red, yellow

(1) Bespoke printing is available.

5.3 Quality control checks are carried out on the incoming raw materials, during production and on the final product. Quality control checks on the final product include:

weight  
tear  
tensile strength/elongation.

### 6 Delivery to site and storage

6.1 Rolls are delivered to site in polythene wrappers bearing the manufacturer's name, product name, product grade and the BBA identification mark bearing the number of this Certificate.

6.2 Rolls should be stored flat or on end on a clean, level surface and kept under cover.

## Design Data

### 7 General

7.1 Protect TF200 Breather Membrane is satisfactory for use as a factory- or site-applied breather membrane in walls of timber frame constructions.



7.2 In the absence of other guidance, suitable timber frame constructions are defined as those designed and built in accordance with NHBC Standards, Section 6.2 and the Zurich Building Guarantees Technical Standards, Section 6, clause 6.8 *External timber frame walls*.

7.3 The membrane may be damaged by high winds, careless handling or by vandalism and

### 8 Strength

8.1 The membrane will resist the loads associated with construction of, and installation into, timber frame dwellings.

8.2 The membrane is not adversely affected by water and will retain its properties when wet.

### 9 Properties in relation to fire

9.1 The product has similar properties in relation to fire to those of a polypropylene sheet. It will melt and shrink away from a heat source and will burn in the presence of an ignition source. Therefore, the products are unclassifiable in terms of the Building Regulations. This should be considered when assessing the overall fire risk.

9.2 To meet the requirements for the provision of cavity barriers in the national Building Regulations, cavity barriers should be provided as described in:

#### *England and Wales*

Approved Document B, Requirement B3, Section 9, Clauses 9.2 to 9.5

#### *Scotland*

Standard D4.1

#### *Northern Ireland*

Technical Booklet E, Section 3, Clauses 3.27 to 3.28.

### 10 Weathertightness

10.1 Tests indicate that the product can resist the penetration of liquid water to a head of 330 mm.

10.2 Tests indicate that the product will resist the passage of water and wind-blown dust and snow.



10.3 The membrane can contribute towards a wall conforming to those constructions as described in the national Building Regulations:

#### *England and Wales*

Approved Document C, Requirement C4, Section 6.2

#### *Scotland*

Regulation 17, Standard G3.1

#### *Northern Ireland*

Regulation C4.

10.4 The membrane meets the requirements for a high-performance breather membrane in accordance with TRADA Information Sheet 35, and protects a structure against rainwater penetration during construction prior to the installation of the brickwork. The period prior to the installation of the brickwork should be kept to a minimum.

## 11 Risk of condensation



11.1 The risk of condensation occurring within the wall of the timber frame 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.

11.2 The membrane has a water vapour resistance of  $0.106 \text{ MNsg}^{-1}$ .

## 12 Maintenance and repair

Any damaged areas should be repaired or replaced before overcladding prevents access.

## 13 Durability



The membrane will be unaffected by the normal conditions found in the space between the cladding and the timber frame structures and will have a life comparable with other elements of construction (such as vapour control layers).

## Installation

### 14 General

Protect TF200 Breather Membrane must be installed in accordance with the Certificate holder's instructions and the recommendations given in NHBC Standards, Section 6.2, and the Zurich Building Guarantees Technical Standards, Section 6 where appropriate.

### 15 Procedure

15.1 The membrane must be secured at regular intervals not exceeding 500 mm with austenitic stainless steel staples or nails to prevent damage by wind.

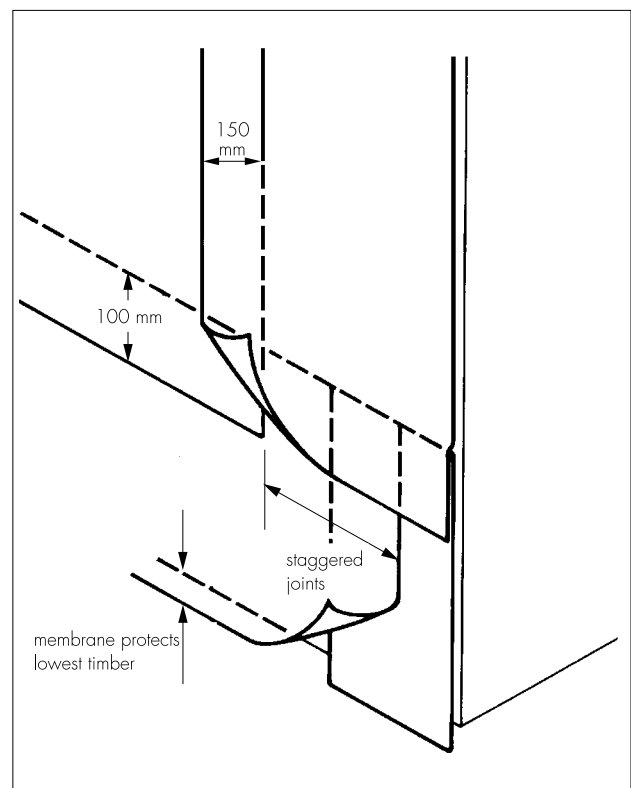
15.2 Upper layers should overlap lower layers to shed water away from the sheathing. Vertical laps should be staggered wherever possible (see Figure 1).

15.3 Laps should not be less than:

horizontal	100 mm
vertical	150 mm.

15.4 In accordance with NHBC Standards, Section 6.2, it is essential that the lowest timbers are protected from moisture and that the positions of the studs are marked to facilitate wall tie fixings.

Figure 1 Membrane installation



## Technical Investigations

The following is a summary of the technical investigations carried out on Protect TF200 Breather Membrane.

### 16 Tests

A sample of the membrane was obtained from the Certificate holder for testing. The results of the tests carried out by, or on behalf of, the BBA, show typical results for the material and are summarised in Tables 1 and 2.

### 17 Other investigations

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

17.2 An assessment was made of the product's properties in relation to fire.

Table 1 Physical properties — directional

Test (units)	Method <sup>(1)</sup>	Mean results	
		Long	Trans
Tensile strength (Nmm <sup>-2</sup> ) unaged 200 light hours UV aged <sup>(2)</sup> 500 light hours UV aged <sup>(2)</sup> 56 days heat aged at 70°C 24 hours water soak at 20°C 56 days water soak at 20°C	BS EN ISO 527-3 speed 100 mm (min) <sup>-1</sup>	7.5	5.1
		5.5	4.3
		4.6	3.5
		6.5	5.0
		7.6	6.0
		7.8	6.2
Elongation at break (%) unaged 200 light hours UV aged <sup>(2)</sup> 500 light hours UV aged <sup>(2)</sup> 56 days heat aged at 70°C 24 hours water soak at 20°C 56 days water soak at 20°C	BS EN ISO 527-3 speed 100 mm (min) <sup>-1</sup>	44	50
		30	37
		28	28
		29	38
		42	55
		47	60
		Tear resistance (N) (nail tear)	MOAT 27 : 5.4.1 speed 100 mm (min) <sup>-1</sup>

(1) The test documents are listed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

(2) UVB 313 lamps cycling 4 hours UV at 50°C and 4 hours condensation at 50°C.

Table 2 Service performance

Test (units)	Method <sup>(1)</sup>	Mean result
Mullen burst strength (kNm <sup>-2</sup> )	BS 3137	469
Hydrostatic head (mm)	BS EN 20811	330
Dimensional stability	MOAT 27 : 5.6.1.1	no measurable movement
Water vapour permeability (gm <sup>-2</sup> day <sup>-1</sup> )	BS 3177 (25°C/75% RH)	1932
Water vapour resistance (MNsg <sup>-1</sup> )	BS 3177 (25°C/75% RH)	0.106
Spray test	T1/15 <sup>(2)</sup>	slight dampness

(1) The test documents are listed in the *Bibliography*. Numbers in the tables refer to the sections/parts of the various documents.

(2) BBA test method.

## Bibliography

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

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

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

BS EN ISO 527-3 : 1996 *Plastics — Determination of tensile properties — Test conditions for films and sheets*

MOAT No 27 : 1983 *General Directive for the Assessment of Roof Waterproofing Systems*

### 18 Conditions

18.1 This Certificate:

- (a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (d) is copyright of the BBA.

18.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

18.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked by the BBA or its agents; and

(c) are reviewed by the BBA as and when it considers appropriate.

18.4 In granting this Certificate, the BBA makes no representation as to:

- (a) the presence or absence of any patent or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the nature of individual installations of the product, including methods and workmanship.

18.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.



In the opinion of the British Board of Agrément, Protect TF200 Breather Membrane is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 01/3806 is accordingly awarded to Glidevale Ltd.

On behalf of the British Board of Agrément

Date of Second issue: 23rd May 2002

Chief Executive

*\*Original Certificate issued 19th March 2001. This version includes change of Certificate holder, product name and update of references to Regulations.*



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