

NSAI

Agrément

CERTIFICATE NO. 04/0210

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Solitex Fronta WA Breathable Wall Protection Membrane System de revetment Dachbelagsystem

NSAI Agrément (Irish Agrément Board) is designated by Government to carry out European Technical Assessments.

NSAI Agrément Certificates establish proof that the certified products are 'proper materials' suitable for their intended use under Irish site conditions, and in accordance with the **Building Regulations 1997 to 2014**.



PRODUCT DESCRIPTION:

This Certificate relates to the Solitex Fronta WA Breathable Wall Protection Membrane to be used on timber frame housing with masonry or close jointed facades. Solitex Fronta WA Breathable Wall Protection Membrane is manufactured from spun-bonded High Density polypropylene layer, a central TEEE monolithic film and an inner polypropylene layer and is not affected by water. This Certificate certifies compliance with the requirements of the Building Regulations 1997 to 2014.

USE:

The Solitex Fronta WA Breathable Wall Protection Membrane is suitable for timber frame constructions. The product is water resistant and is used to prevent water passing to the timber structure. It is water vapour permeable thus allowing the timber structure to breathe. Any vapour which enters the wall construction from

inside can pass into the wall cavity where it can be removed by air movement or condense and drain safely away. A vapour control layer must be utilised on the internal structure of the building.

MANUFACTURE AND MARKETING:

The product is manufactured by:

Moll bauökologische Produkte GmbH,
Rheintalstr. 35-43,
68723 Schwetzingen,
Germany.

The product is marketed by:

MacCann & Byrne Ltd.,
Importers & Distributors,
Athboy, Co. Meath.

Readers are advised to check that this Certificate has not been withdrawn or superseded by a later issue by contacting NSAI Agrément, NSAI, Santry, Dublin 9 or online at www.nσαι.ie

1.1 ASSESSMENT

In the opinion of the NSAI (National Standards Authority of Ireland) Agrément Board, Solitex Fronta WA Breathable Wall Protection Membrane if used in accordance with this Certificate can meet the requirements of the Building Regulations 1997 to 2014, as indicated in Section 1.2 of this Irish Agrément Certificate.

1.2 BUILDING REGULATIONS 1997 to 2014 REQUIREMENT:

Part D – Materials and Workmanship

D3 – Solitex Fronta WA Breathable Wall Protection Membrane, as certified in the Irish Agrément Certificate, is comprised of ‘proper materials’ fit for their intended use (see Part 4 of this Certificate).

D1 – Solitex Fronta WA Breathable Wall Protection Membrane, as certified in this Certificate, meets the requirements of the building regulations for workmanship.

Part A - Structure

A1 – Loading

Tests indicate that walls incorporating Solitex Fronta WA

Breathable Wall Protection Membrane meet the loading requirements set out in Section 3.2 of this Certificate.

Part B – Fire Safety

B2 – Internal Fire Spread (Linings)

Solitex Fronta WA Breathable Wall Protection Membrane installed in accordance with this Certificate may be used on the internal surfaces of buildings to meet this requirement.

B3 – Internal Fire Spread (Structure)

Solitex Fronta WA Breathable Wall Protection Membrane installed in accordance with this Certificate will not adversely affect the control of fire and smoke within concealed spaces in the structure or fabric of a properly designed building.

Part C – Site Preparation and Resistance to Moisture

C4 – Resistance to Weather and Ground Moisture

Solitex Fronta WA Breathable Wall Protection Membrane, when used in accordance with Part 3 of this Certificate, will meet this requirement.

2.1 PRODUCT DESCRIPTION

Solitex Fronta WA Breathable Wall Protection Membrane is manufactured from spun-bonded High Density polypropylene layer, a central TEEE monolithic film and an inner polypropylene layer. A product specification is shown in Table 1.

2.1.1 Ancillary Products

- Stainless Steel Staples or Nails
- Adhesive HDPE Tape
- TESCON VANA adhesive tape

2.2 MANUFACTURE

Solitex Fronta WA Breathable Wall Protection Membrane is manufactured by bonding together of two polypropylene spunbonded felts with a central layer of monolithic nonporous TEEE (thermoplastic ether ester elastomer) membrane through an extrusion-coating process.

2.2.1 Product Quality Control

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

- Dimensions

- Tensile strength
- Dimensional stability
- Melt flow index
- Impact test

The management systems of Non Woven Industries S.p.A. have been assessed and registered as meeting the requirements of ISO 9001.

2.3 DELIVERY, STORAGE AND MARKING

Rolls are supplied on pallets, wrapped in PE foil with product information label inside. Label gives manufacturer's name and product description, NSAI Agrément identification mark and Certificate number. Product should be stored on a clean level surface, above ground and away from water and contamination, under cover and away from direct sunlight.

2.4 INSTALLATION

2.4.1 General

Solitex Fronta WA Breathable Wall Protection Membrane must be installed in accordance with the manufacturer's instructions and the recommendations given in this Certificate.

Characteristic	Test Standard	Results		
		Solitex Fronta WA		Units
Thickness*	EN 1849-2:2001	0.45 ± 0.05		mm
Surface Weight*	EN 1849-2:2001	100 ± 5		g/m ²
Roll Width ^{1*}	EN 1848-2	1.5		m
Roll Length ^{2*}	EN 1848-2	50		m
Standard roll weight	BS 2782-6	8		kg
Fire Class*	EN 13501-1:2010	E		
S _d -value ^{4*}	EN ISO 12572:2001	0.05 ± 0.02		m
g-value* (Water vapour resistance)	EN ISO 12572:2001	0.25 ± 0.1		MNs/g
Diffusion Resistance (μ)	EN ISO 12572:2001	111		
		MD	CD	
Tensile strength* MD/CD ³	EN 12311-1:1999	210 ± 20	140 ± 20	N/50mm
Tensile strength* MD/CD ³ Aged [§]	EN 12311-1:1999	190 ± 20	120 ± 20	N/50mm
Elongation* MD/CD ³	EN 12311-1:1999	90 ± 10	90 ± 10	%
Elongation* MD/CD ³ Aged [§]	EN 12311-1:1999	70 ± 10	70 ± 10	%
Nail tear resistance* MD/CD	EN 12310-1:1999	110 ± 20	140 ± 20	N
Water resistance un-/aged* [§]	EN 1928:2001	Class W1/W1		
Water column	EN 20811:1993	10,000		mm
§) Artificial ageing by long term*	EN 1297:2004/ EN 1296:2001	passed		
Flexibility at low temperature*	EN 1109:1999	-40		°C

*Refer to Clause 3.4 of this certificate and I.S. EN 13859-2:2014
¹ dimensional tolerances +0.005m
² dimensional tolerances +0.5m
³ MD/CD – longitudinal direction/transverse direction
⁴ g-value = S_d-value divided by the vapour permeability of still air (0.2 gm/MNs)
[§] Artificial ageing by long term

Table 1: Product Specification

2.4.2 Installation Procedure

Membrane must be secured with austenitic stainless steel nails or staples at max 500 mm centres.

Upper layers should always overlap lower layers to facilitate the easier shedding of rain and water away from the sheathing material.

Horizontal joints should overlap by 100 mm minimum. Vertical joints should overlap by 150 mm minimum and be staggered or offset wherever possible (see Figure 1).

To enhance the wind tightness of the Solitex Fronta WA layer, ancillary single or double sided tapes are available to seal along the vertical and horizontal laps such as TESCON VANA single sided tape or duplex double sided adhesive tape.

Allow for sufficient overlap at the bottom of panels to ensure that the bottom timbers and sole plates are well covered. Solitex Fronta WA Breathable Wall Protection Membrane should extend at least 50 mm below the top of the rising wall (see Figure 2).

At window sills a DPC should be folded on site to provide protection for the bottom, back and ends of the sill. A layer of Solitex Fronta WA membrane should be folded over and inwards to cover all timber cavity barriers as shown in Figure 3.

When required both vertical and horizontal proprietary polythene sleeved cavity barriers should be fitted in front of the Solitex Fronta WA Membrane according to the manufacturer's instructions (see Figure 4).

All timber stud positions must be marked to facilitate fixing of masonry wall ties.

Should any damage occur through mishap or vandalism, these areas should be repaired or replaced before the final outer cladding is applied, ensuring that the laps are maintained and that the upper sheet laps over the lower.

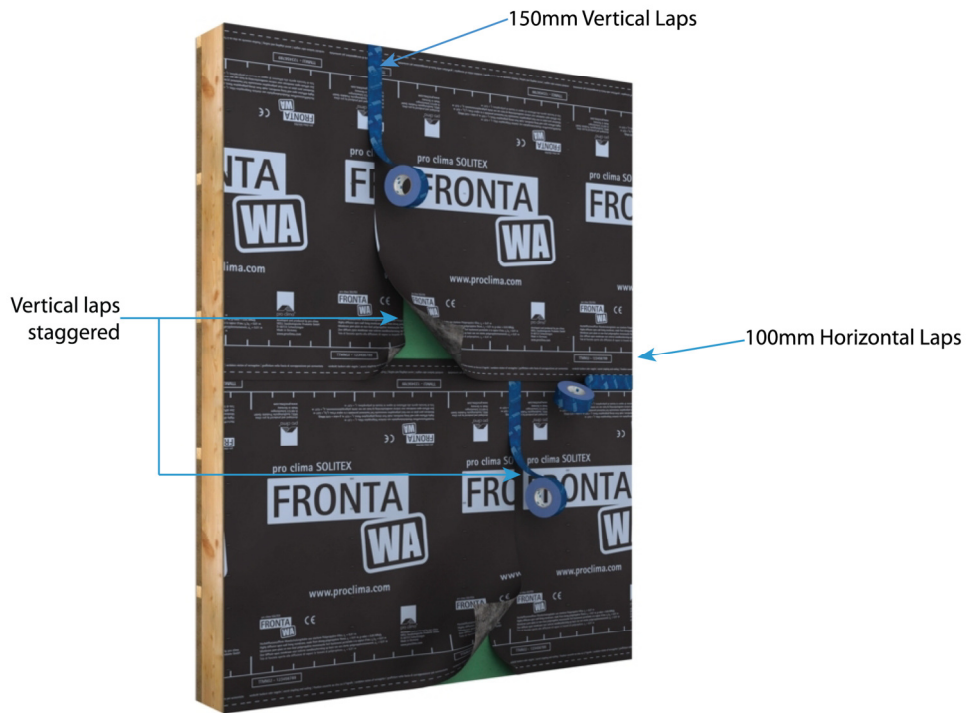


Figure 1: Horizontal and Vertical Joints



Figure 2: Foundation Level

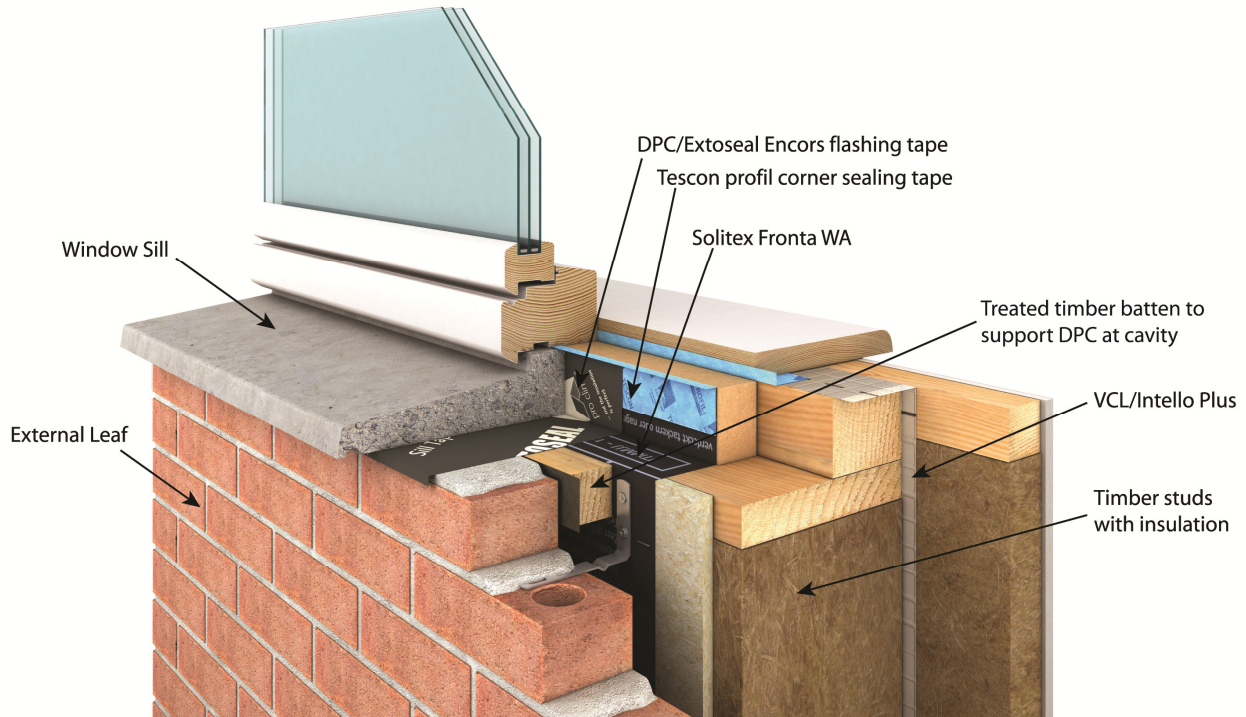


Figure 3: At Window Sills

3.1 GENERAL

Solitex Fronta WA Breathable Wall Protection Membrane is suitable for timber frame constructions.

3.2 STRENGTH

Solitex Fronta WA Breathable Wall Protection Membrane will resist the loads associated with the installation of the material on to a timber frame stud wall.

Suitable timber frame constructions are defined as those designed and built in accordance with the relevant parts of I.S. EN 1995-1-2:2004/A2:2014 *Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings*.

The membrane may be damaged by high winds, careless handling or by vandalism and should not be left uncovered for longer than is absolutely necessary. Any damaged areas should be repaired or replaced before the final outer cladding is applied.

The membrane should be protected against long term exposure to UV light. The manufacturer recommends a maximum exposure time of 3 months.

3.3 WEATHERTIGHTNESS

Tests confirm that Solitex Fronta WA Breathable Wall Protection Membrane 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 wall constructed to I.S. EN 1995-1-2:2004/A2:2014 *timber* and BS 8000-6:2013 *Workmanship on building sites – Code of practice for slating and tiling of roofs and walls*.

Care must be taken to ensure that all timber in the cavity is covered by the membrane including the base timbers.

Particular attention should be given to ensure that adequate ventilation is provided and drainage to wall cavities must be catered for in accordance with the Building Regulations 1997 to 2014.

3.4 CE marking

The manufacturer has taken the responsibility of CE marking the products in accordance with harmonised standard I.S. EN 13859-2:2014. An asterisk (*) appearing in this Certificate indicates that data shown is given in the manufacturer's Declaration of Performance (DoP). Designers should refer to the latest version of the manufacturer's DoP for all essential characteristics.

4.1 BEHAVIOUR IN FIRE

Solitex Fronta WA Breathable Wall Protection Membrane is self-extinguishing after exposure to naked flame, and has a fire class of E when classified in accordance with I.S. EN 13501-1:2002.

Cavity barriers must be provided as indicated in Part 3.3 of TGD to Part B of the Building Regulations 1997 to 2014.

Toxicity – Negligible when used in a wall construction situation.

4.2 WATER PENETRATION

Solitex Fronta WA Breathable Wall Protection Membrane, when used in accordance with this Certificate, presents no significant risk of water penetration.

4.3 WATER VAPOUR PENETRATION AND CONDENSATION RISK

The risk of condensation occurring within the wall of a 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 barrier.

Solitex Fronta WA Membrane has a mean water vapour resistance (g-value) 0.25 MNs/g (see table 1).

The general design guides contained in BS 5250:2016 *Codes of practice for control of condensation in buildings* must be met when installing this product.

4.4 DURABILITY

Solitex Fronta WA Breathable Wall Protection Membrane will be unaffected by the normal conditions found in a timber frame wall and will have a life comparable with other elements of construction. However, the membrane like most similar materials must be protected from sunlight, flame and solvents.

4.5 TESTS AND ASSESSMENTS WERE CARRIED OUT TO DETERMINE THE FOLLOWING:

- Water penetration resistance
- Water vapour resistance
- Tensile strength
- Elongation at break
- Nail tear resistance
- Dimensional accuracy
- Density



Figure 4: At Cavity Barriers

4.6 OTHER INVESTIGATIONS

- (i) Existing data on product properties in relation to fire, toxicity, environmental impact and the effect on mechanical strength/stability and durability were assessed.
- (ii) 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.
- (iii) Site visits were conducted to assess the practicability of installation and the history of performance in use of the product.
- (iv) Driving rain resistance was assessed.
- (v) A condensation risk analysis was performed.

5.1 National Standards Authority of Ireland ("NSAI") following consultation with NSAI Agrément has assessed the performance and method of installation of the product/process and the quality of the materials used in its manufacture and certifies the product/process to be fit for the use for which it is certified provided that it is manufactured, installed, used and maintained in accordance with the descriptions and specifications set out in this Certificate and in accordance with the manufacturer's instructions and usual trade practice. This Certificate shall remain valid for five years from date of issue or revision date so long as:

- (a) the specification of the product is unchanged.
- (b) the Building Regulations 1997 to 2014 and any other regulation or standard applicable to the product/process, its use or installation remains unchanged.
- (c) the product continues to be assessed for the quality of its manufacture and marking by NSAI.
- (d) no new information becomes available which in the opinion of the NSAI, would preclude the granting of the Certificate.
- (e) the product or process continues to be manufactured, installed, used and maintained in accordance with the description, specifications and safety recommendations set out in this certificate.
- (f) the registration and/or surveillance fees due to NSAI Agrément are paid.

5.2 The NSAI Agrément mark and certification number may only be used on or in relation to product/processes in respect of which a valid Certificate exists. If the Certificate becomes invalid the Certificate holder must not use the NSAI Agrément mark and certification number and must remove them from the products already marked.

5.3 In granting Certification, the NSAI makes no representation as to;

- (a) the absence or presence of patent rights subsisting in the product/process; or
- (b) the legal right of the Certificate holder to market, install or maintain the product/process; or
- (c) whether individual products have been manufactured or installed by the Certificate holder in accordance with the descriptions and specifications set out in this Certificate.

5.4 This Certificate does not comprise installation instructions and does not replace the manufacturer's

directions or any professional or trade advice relating to use and installation which may be appropriate.

5.5 Any recommendations contained in this Certificate relating to the safe use of the certified product/process are preconditions to the validity of the Certificate. However, the NSAI does not certify that the manufacture or installation of the certified product or process in accordance with the descriptions and specifications set out in this Certificate will satisfy the requirements of the Safety, Health and Welfare at Work Act 2005, or of any other current or future common law duty of care owed by the manufacturer or by the Certificate holder.

5.6 The NSAI is not responsible to any person or body for loss or damage including personal injury arising as a direct or indirect result of the use of this product or process.

5.7 Where reference is made in this Certificate to any Act of the Oireachtas, Regulation made thereunder, Statutory Instrument, Code of Practice, National Standards, manufacturer's instructions, or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certification.

NSAI Agrément

This Certificate No. **04/0210** is accordingly granted by the NSAI to **Moll bauökologische Produkte GmbH** on behalf of The Irish Agrément Board.

Date of Issue: **December 2004**

Signed



Seán Balf
Director of NSAI Agrément

Readers may check that the status of this Certificate has not changed by contacting NSAI Agrément, NSAI, 1 Swift Square, Northwood Business Park, Santry, Dublin 9, Ireland.
Telephone: (01) 807 3800. Fax: (01) 807 3842. www.nσαι.ie

Revisions: April 2017

Product specification updated to reflect manufactures Declaration of Performance.