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NVFB-WB
Cavity Fire Barrier

Tenmat's NVFB-WB Cavity Fire Barriers are designed to reinstate fire resistance performance within cavities created behind external wall systems.

Passive Fire Protection - Cavity Barriers

Product Description

The NVFB-WB is a highly compressible, A1 Reaction to Fire Rated stone wool cavity barrier, tested to BS EN 1366-4 with specific fibre orientation that enables effective sealing of cavities even where an irregular outer surface is encountered such as behind lapped cladding.

In the event of a fire the NVFB-WB provides non-ventilated, full fill fire protection to restrict the spread of fire in external wall cavities.

Product Details

- "Full fill" / "closed state" cavity fire barrier
- BS EN 1366-4 3rd Party Fire Tested
- Fire Rated for up to 120 minutes integrity and insulation
- Highly compressible to suit irregular outer substrates
- Tested behind both lapped and flat external weatherboards
- Tested on Timber SIPS Panels
- Tested for masonry outers with DPC membrane
- Sizes available to suit cavity batten widths of 25, 38 and 50mm

Approved Applications - NVFB-WB

NVFB-WB "Non-Ventilated" Cavity Fire Barrier

Fire Test Performance to BS EN 1366-4

Inner Leaf Substrate Type (facing cavity) with Appropriate minutes Fire Rating	Outer leaf Substrate Type (facing cavity) With Appropriate Fire Resistance	Cavity Barrier Orientation	DPC tested	Batten/ Cavity Size (in mm)	Max. Cavity including lapped detail (in mm)	NVFB-WB Thickness (in mm)	NVFB-WB Width (in mm)	Product Fire Resistance Rating	
								Integrity (mins)	Insulation (mins)
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	25	33	40*	100	120	60
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	38	46	50*	100	120	60
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	50	58	60	100	120	60
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	25	33	50*	100	120	120
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	38	46	60*	100	120	120
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® Plank Weatherboards*** - Lap	Vertical	N/A	50	58	75	100	120	120
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® VL Plank	Vertical	N/A	25	25	40*	100	120	120
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® VL Plank	Vertical	N/A	38	38	50*	100	120	120
Aerated Concrete, Concrete, Blockwork & Masonry	Hardie® VL Plank	Vertical	N/A	50	50	60	100	120	120
Timber SIPS Panel	Aerated Concrete, Concrete, Blockwork & Masonry	Horizontal	Yes	50	50	60	100	120	120
Timber SIPS Panel	Aerated Concrete, Concrete, Blockwork & Masonry	Vertical	Yes	50	50	60	100	120	60
Timber SIPS Panel	Knauf Windliner A2 Gypsum Sheathing / Render board	Vertical	N/A	50	50	60	100	120	60
Timber SIPS Panel Party Wall Detail	Aerated Concrete, Concrete, Blockwork & Masonry	Vertical	Yes	50	50	60	250	120	120
Timber SIPS Panel Party Wall Detail - Sealing Panel Gap	Aerated Concrete. Concrete, Blockwork & Masonry	Vertical	Yes	50	N/A	60	100	120	120

The fire rating required on Timber Frame projects would typically be expected to be 30 minutes only. The fire ratings and information provided in this document and supporting fire test evidence is not intended to be a complete specification for the proposed cavity barrier and it is the responsibility of others (the Principal Designer) to ensure that the product/assembly is suitable for the intended purpose.

Fire Test Evidence:
Fire Test Report WF 534907B
Fire Test Report WF 538815B

* NVFB-WB thickness approved based on the direct field of application rules in BS EN 1366-4 which covers smaller joint widths from that tested provided the degree of compression (%) exerted on the seal is equal to or greater that that used in the test.

SIP Panel details:
SIPCo Ltd Structurally Insulated Panels (SIP), total thickness 145mm, consisting of Softwood Timber Framework 120x45mm, Polyurethane (PU) Foam infill, OSB 12.5mm thick facings (both sides), Protect TF200 (combustible) Breather Membrane 0.3mm thick on cavity side only

Damp Proof Course tested was a combustible Low Density Polyethylene (LDPE)

Note: Aerated Concrete, Concrete, Blockwork and Masonry of density 670 kg/m3 or greater are approved.

Technical Information - NVFB-WB

Property	NVFB-WB
Colour	Buff/Beige
Finish	Plain Fibre
Cuttability	Can be cut to length
Reaction to Fire	A1
Working Life	60 years (see below)
Long term storage conditions	Dry, ambient
Transportation Storage Temp	-20°C to +70°C
Durability	The fire performance of mineral wool does not deteriorate with time. The Euroclass classification of the product is related to the organic content, which cannot increase with time.

Standard Sizes

40mm x 100mm x 1200mm
50mm x 100mm x 1200mm
60mm x 100mm x 1200mm

Non Standard Sizes

75mm x 100mm x 1200mm
Alternative widths are readily available
For alternative thickness options, please contact TENMAT

Note: ROCKWOOL stone wool is durable by nature. Sample testing from existing buildings shows that the stone wool retains its performance for at least 65 years* without being affected by compression or temperature or humidity changes. (* FIW, Durability Project Mineral Wool 2016)

This performance is dependent upon correct and appropriate usage as stated in any installation instructions and manufacturer guidance, appropriate attachment and protection of the product, high standard of workmanship during the installation and the product not being disturbed or damaged after installation.

Pre Installation

The principal designer must approve the use of any cavity barrier, in conjunction with the products fire test reports, taking full account of the whole construction of the external wall systems and components, including any requirements of Building Regulations and or NHBC Standards.

Before the Tenmat NVFB-WB is recommended by Tenmat, the following information is required to ensure that the suggested product is considered suitable for the intended application, by Tenmat, within the construction as indicated by the client.

- Project name, location and postcode.
- Building height and use (as per ADB V1/2 2020).
- Fire resistance period/rating required. Integrity and Insulation.
- Composition and construction of external walls, both inner and outer substrates.
- Total external wall cavity size. (Maximum distance from outer face of inner substrate to inner face of inner substrate including tolerances/profiles).
- Type and thickness of cavity insulation if present.
- Quantity required to complete project?
- When will materials be required?
- Name and role of person completing form.

When the above information is obtained then this can be cross referenced with the full range of Tenmat cavity barriers to ensure that the product recommended, by Tenmat, is considered suitable for consideration by the principal designer.

General considerations for the principal designer

The installation of the NVFB-WB vertically must take priority and be installed first with any horizontal cavity barriers fitted either side of the vertical cavity barrier.

The principal designer must sanction any interruptions, which may include items such as brackets, rails or battens, that may affect the continuous line of the cavity barrier. The principal designer must consider the combustibility, melting points and the shape of any interruptions, that are likely to prevent the cavity barrier performing as tested or as expected in the projects design.

If there are interruptions/obstructions that prevent the cavity barrier being fitted in a continuous line, and with sanction from the principal designer, the product may be cut with a sharp knife and tightly butted up against any obstructions and then restarted on the opposite side of the obstruction. The obstruction must not create a void which the cavity barrier can not fully fill.

The cavity barrier should not be penetrated by anything other than the mechanical fixings which are used to fix the cavity barrier to the building.

The cavity barrier should be installed onto a flat surface, with no gaps behind the cavity barrier, the maximum tested cavity should not should not exceed the tested details in the fire test evidence table.

The Tenmat technical team should be consulted in any instance where the principal designer is uncertain as to any issues which may impede the ability of the cavity barrier to perform as expected.

Ensure the installation area is free from dust, oil and any corrosive material.

Check the mounting substrate is solid and free from cracks and degradation before beginning.

Installation Instructions

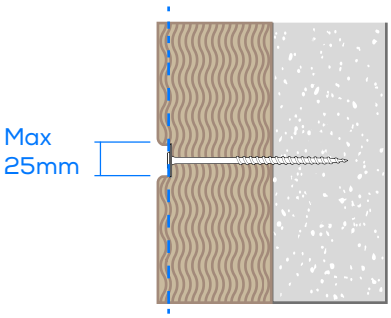
Position the first screw fixing through the centre line of the face of the cavity barrier at a maximum 150mm from one end, continue to face fix through at maximum 450mm centres (3 screws per 1.2 metre length), ensuring that the final fixing is a maximum 150mm from the end of the cavity barrier.

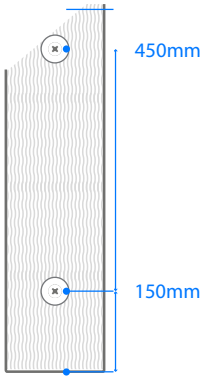
Fix using max. 25mm diameter stainless steel penny washers or stainless steel screws sufficient to hold in place prior to installation of outer substrate.

Ensure the fixings are recessed into the NVFB-WB so as to allow the required compression behind the outer substrate. The NVFB-WB should not be overly compressed at the fixing point by more than 5mm more than the compression level.

For Timber/SIPS Panel installations, it must be ensured that a minimum 45mm thick timber stud is positioned behind the NVFB-WB.

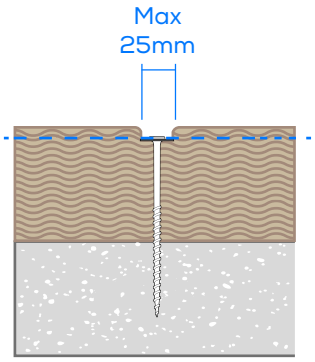
Vertical Install

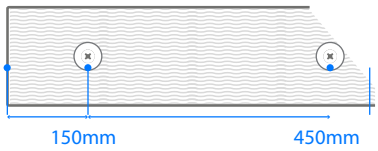




Dotted Line = Compression Zone

Horizontal Install



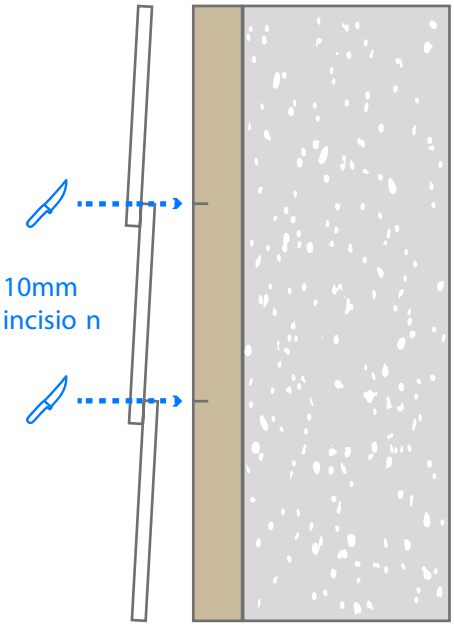


Dotted Line = Compression Zone

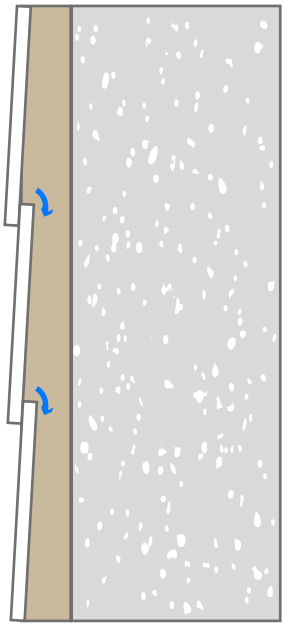
Fixing Detail for Shorter Lengths

Where sections of cavity barrier are less than 1.2 metres in length, ensure that face fixings are positioned at a maximum 150mm from each end. For cut sections of cavity barrier less than or equal to 300mm in length only one fixing is required. For cut sections 301 to 500mm then 2 fixings should be used distanced equally from each end.

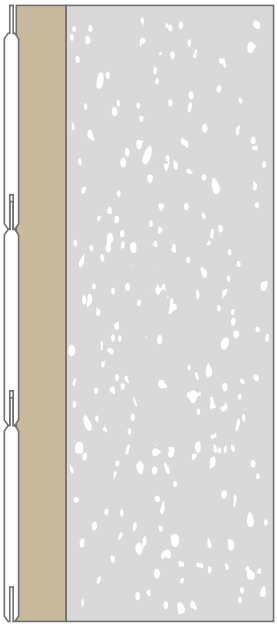
For installation behind lapped weather boards, the NVFB-WB should be slit horizontally to a depth of approx. 10mm in line with the top of each plank to allow the cavity barrier to fit into lapped cladding profile



Ensure all gaps behind the lapped planks are fully sealed by the NVFB-WB



For installation behind Concrete, Masonry, Blockwork, Sheathing / Render Boards or Hardie VL Plank / flat weather boards (not lapped), no slitting of NVFB-WB required



Intended Use

As a cavity barrier, within external wall cavities requiring permanent non-ventilated performance (NVFB-WB vertically and horizontally), to reinstate fire resistance performance of uninsulated cavities of up to 50mm in fire conditions.

For cavities greater than 50mm or that fall outside the fire test evidence scope, please contact TENMAT for alternative product solutions.

Maintenance

No active maintenance required, where alterations are made around the product it should be checked visually to ensure that the product is still installed as per the approved original design and fitting instructions at the time of original installation.

Storage

- Take care not to exceed safe working loads and heights for storage shelves and racks

Tools Required

- Sharp Knife
- Measuring Tape
- Max. 25mm penny washer and screw fixing (both stainless steel)
- Appropriate drill for fixing type

PPE Required

- Hand protection
- Eye protection

NVFB-WB

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Tenmat warrants the materials it produces will conform to Tenmat specifications and approved drawings where applicable. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application, carrying out testing where required. For construction projects, all products which the customer is intending to use on a particular project must be approved in writing by the customer's building designer, system designer or design control professional, to ensure compliance with the latest regulations.

The information contained in Tenmat data sheets is presented in good faith. Tenmat Limited makes passive fire protection product suggestions based solely upon and limited to the information made available to Tenmat. Tenmat possesses knowledge of fire test data and offers manufacturers installation advice. Within reason, Tenmat is skilled at offering opinion concerning the installations in question, and can comment on interfaces with other construction materials, but this is not a recommendation or decision. Decisions on overall building fire strategy are not made by Tenmat. Tenmat products have been tested for a wide range of construction types, and they must be only used in accordance with Tenmat test evidence. Each specific Tenmat product must be installed into a construction that matches the corresponding test report. Tenmat product performance requires safe and proper handling and correct installation.

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