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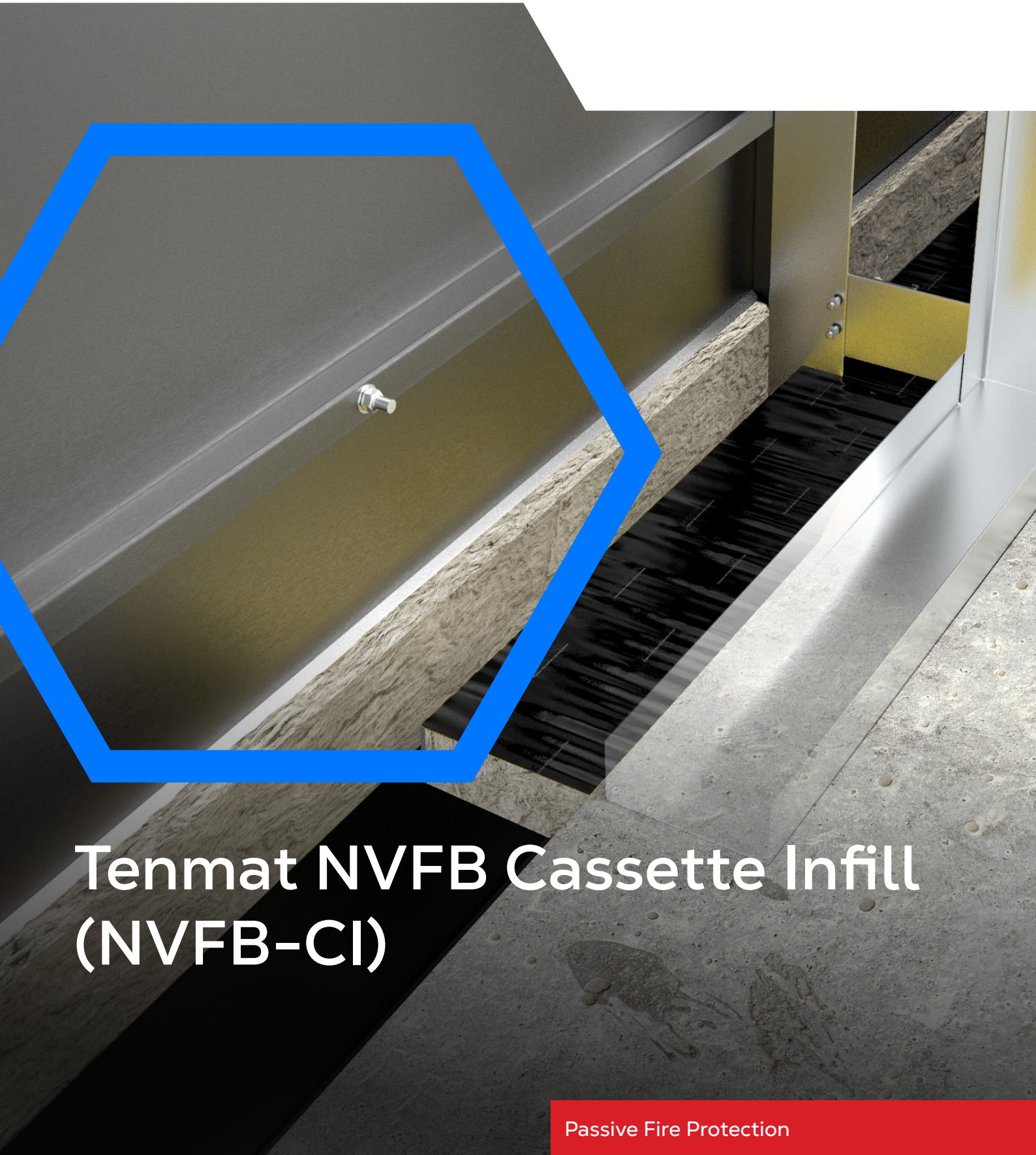

Tenmat NVFB Cassette Infill (NVFB-CI)

Passive Fire Protection

Product Description

Tenmat NVFB Cassette Infill (NVFB-CI) is a bespoke cut strip of high density, non-combustible stone wool with a thickness to suit the depth of the cassette panel.

Tenmat NVFB Cassette Infill (NVFB-CI) is fixed to the inner face of the cassette panel to provide a flat surface facing into the cavity and allows the intumescent open state cavity barrier to maintain a continuous gap and closed state cavity barriers to seal off against the back of the panel without the need to notch around the panel joints.

Tenmat NVFB Cassette Infill (NVFB-CI) is tested horizontally to the principles of EN1363-1 and ASFP Technical Guidance Document 19 (TGD19) and vertically generally in accordance with BS EN 1366-4.

Intended Use

Tenmat NVFB Cassette Infill (NVFB-CI) is designed for use with the Tenmat VFB 120/120 Ventilated Fire Barrier (Open State Cavity Barrier comprising of FF102 4mm thick intumescent strip with stonewool backing) and Tenmat NVFB Non-Ventilated Fire Barriers. The NVFB-CI should fill out the depth of the cassette panel, allowing the cavity barriers to form an effective seal to the back of the cassette panel without the need for notching around the panel joints.

Key Points

- CCPI Verified
- Tested horizontally to the general principles of EN1363-1 and following ASFP Technical Guidance Document 19 (TGD19)
- Tested vertically generally in accordance with BS EN 1366-4
- Suitable for cavity widths between 80mm and 400mm

Specification

Product Dimensions	Bespoke cut width x depth to suit panel x 1000mm long

CCPI ASSESSED PRODUCT INFORMATION 002300002/1227 Cavity Barriers

NBS

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Performance Data

Fire Resistance Performance of Tenmat NVFB Cassette Infill (NVFB-CI) installed within Aluminium Cassette Panels

Tested horizontally to the general principles of EN1363-1 and ASFP TGD19 and vertically to EN1366-4

Cassette Panel Ref.	Cassette Panel Thickness (mm)	Cassette Panel Internal Depth (mm) [6]	Cassette Infill Ref.	Cassette Infill Thickness x Width (mm)	Tested Cavity Barrier Ref.	Overall Cavity Width (mm)	Cavity Insulation	Orientation	Air Gap [1]	Fire Resistance	
										Integrity (mins)	Insulation (mins)
Solid Aluminium Cassette Panel [2]	2.3	31	NVFB-CI	35 x 150 [4]	VFB 120/120	90	None	Horizontal	25	90	30
Solid Aluminium Cassette Panel [2]	2.3	31	NVFB-CI	35 x 150 [4]	VFB 120/120	91-300	Stone-wool	Horizontal	25	45	30
Solid Aluminium Cassette Panel [3]	3.0	37	NVFB-CI	40 x 150 [5]	VFB 120/120	80	Stone-wool	Horizontal	25	120	60
Solid Aluminium Cassette Panel [3]	3.0	37	NVFB-CI	40 x 150 [5]	VFB 120/120	81-400	Stone-wool	Horizontal	25	90	30
Solid Aluminium Cassette Panel [3]	3.0	37	NVFB-CI	40 x 250 [5]	NVFB	10-400	Stone-wool	Vertical	N/A	120	15

[1] Maximum air gap permissible between front face of open state cavity barrier and rear face of the NVFB Cassette Infill (NVFB-CI).

[2] Test build up - SFS 132.5mm overall thickness comprising, 100mm x 70mm Metsec Steel Stud (without insulation infill), clad internally with 2 x 12.5mm Knauf Fire Panel Gypsum board, clad externally with 1 x 12.5mm Knauf Windliner RTF Class A2 gypsum based sheathing board, cavity insulation on 300mm cavity only was Rockwool DuoSlab Rainscreen Insulation, 50mm thick, 58kg/m3 (measured), outer substrate was JWD Architectural Aluminium Cassette Panel 2.3mm thick and 31mm deep. Report 503148R.

[3] Test build up - Horizontal Cavities 80mm and 400mm to back of the rails, Vertical Cavity 400mm to back of rail, SFS 121.5mm overall thickness comprising, 94mm x 40mm Speedline Steel Stud, 92mm x 32/34mm Speedline Stud, Rockwool RWA45 stud infill, clad internally with 1 x 15mm British Gypsum Gpyroc Wallboard, clad externally with 1 x 12.5mm Klasse G-board, RTF Class A1 gypsum based sheathing board, cavity insulation Rockwool DuoSlab Rainscreen Insulation, 25mm (80mm cavity) & 150mm (400mm cavities) thick, 60kg/m3, outer substrate was Genius Facades "Prime" Aluminium Cassette Panel 3mm thick and 37mm internal depth. Report 553880A.

[4] NVFB-CI was fixed to the panel with PFC Corofil Fire Rated Silicone Sealant.

[5] NVFB-CI was mechanically fixed in place on the horizontal specimen using integral fire barrier tabs ("F/B Tabs") formed in the panel returns, the vertical specimen was mechanically held by sitting in the panel return at base of panel, then held under compression by the vertical NVFB, no sealant was used.

[6] For NVFB-CI Cassette Infills for deeper cassettes please contact TENMAT for further technical support.

Technical Information

Material	Stonewool
Finish	Plain
Storage	Dry, ambient (see Safety Data Sheet)
Weight	Bespoke sizes ranging from 0.15kg to 3kg dependent on size to suit cassette panel
Thermal Conductivity - EN 13162	λ_D = 0.035 W/mK
Reaction to Fire	Classified 'A1' to EN13501-1
Resistance to Fire	See Fire Test Evidence table
Durability of reaction to fire and thermal conductivity to EN 13162 (stone wool element)	Reaction to fire and thermal conductivity does not change with time against heat, weathering, ageing/degradation.

The product is not subject to any warning or ban under Section 26 of the NZ Building Act 2004.

Fire test evidence, safety data sheets and previous versions of product information are all available upon request by contacting Tenmat, please click here

Installation Instructions

NVFB-CI – Sealant Fix

1. Install Cavity Barrier

- Install the **Tenmat Open State Cavity Barrier** in accordance with the manufacturer's **Technical Data Sheet**.

2. Prepare NVFB-CI

- Cut a **1 m length of Tenmat NVFB Cassette Infill (NVFB-CI)** to suit the cassette panel width.
- If the panel is wider than 1 m, use additional lengths with **tight butt joints and no gaps**.
- The overall insert length should be sized to ensure a tight compression fit within the panel.

3. Set Out and Align

- Mark the cassette panel to show where the cavity barrier lines up.
- Install the NVFB-CI ensuring the **Tenmat Open State Cavity Barrier can fully expand against its face.**
- The **bottom edge of the NVFB-CI must extend at least 5 mm below** the bottom of the cavity barrier (as tested detail).

4. Apply Sealant to NVFB-CI

- Apply **PFC Corofil Fire Resistant Silicone Sealant** to one face of the NVFB-CI:
  - ◊ **Min. of two continuous 6 mm beads**
  - ◊ Positioned approximately **25 mm in from each long edge**
  - ◊ Applied along the **full length** of the insert

5. Install NVFB-CI into Cassette

- Fit the NVFB-CI into the cassette with the **sealant facing the panel.**
- Apply **firm pressure along the full length** to ensure full adhesion to the cassette panel.

6. Edge Sealing and Panel Installation

- Apply PFC Corofil Fire Resistant Silicone Sealant, min. 6mm beads, **around all edges** of the NVFB-CI to seal to the cassette panel.
- Install the cassette panel.

7. Final Check

- Confirm the **Tenmat Open State Cavity Barrier and NVFB CI are correctly aligned.**
- Ensure the **NVFB-CI extends at least 5 mm below** the cavity barrier bottom edge.
- Ensure max. remaining air gap between the open state cavity barrier and the NVFB-CI is 25mm.

Installation Instructions

Mechanical Fix – Genius Facades Prime Panels

NVFB-CI – Horizontal Orientation

1. Install Cavity Barrier

- Install the **Tenmat Open State Cavity Barrier** in accordance with the manufacturer's **Technical Data Sheet**.

2. Prepare NVFB-CI

- Cut a **1 m length of Tenmat NVFB Cassette Infill (NVFB-CI)** to suit the cassette panel width.
- The overall insert length should be sized to ensure a tight compression fit within the panel

3. Align

- Genius panels have **pre cut fire barrier tabs ("F/B Tabs")** on the rear return aligned with the intended horizontal cavity barrier position.
- Align the NVFB-CI with:
  - ◊ The **"F/B Tabs" positions**, and
  - ◊ The **intended cavity barrier location**.
- Install the NVFB-CI so the **Open State Cavity Barrier can fully expand against its face**, and as a minimum the **circular head of the "F/B Tabs" fully engages** with the NVFB-CI.
- The **bottom edge of the NVFB-CI must extend at least 25 mm below** the bottom of the cavity barrier (as tested detail).

4. Mechanical Fixing

- The **left and right "F/B Tabs"** on the rear of the panel must be **pushed/compressed by hand into the NVFB-CI** to achieve a secure mechanical hold.

5. Final Check

- Confirm the **Open State Cavity Barrier and NVFB-CI are correctly aligned**.
- Ensure the **NVFB-CI extends at least 25 mm below** the cavity barrier bottom edge.
- Ensure the maximum remaining air gap between the open state cavity barriers and the NVFB-CI is 25mm.

Installation Instructions

Mechanical Fix – Genius Facades Prime Panels

NVFB-CI – Vertical Orientation

1. Install Cavity Barrier

- Install the **Tenmat Open State Cavity Barrier** in accordance with the manufacturer's **Technical Data Sheet**.

2. Prepare NVFB-CI

- Cut a **1 m length of Tenmat NVFB Cassette Infill (NVFB-CI)** to suit the cassette panel height.
- The overall insert length should be sized to ensure a tight compression fit within the panel.

3. Align

- Genius panels have a **base return** that allows the NVFB-CI to be **slotted in and mechanically retained**.
- Align the NVFB-CI with the **intended cavity barrier position**.
- Ensure the NVFB-CI **extends equally past the cavity barrier on both sides**
  (e.g. a 250 mm NVFB-CI extending 75 mm either side of a 100 mm cavity barrier).
- Install the NVFB-CI ensuring the **closed state cavity barrier fully seals against its face with no gaps**.
- The **bottom edge** of the NVFB-CI must **sit fully into the base of the panel return** to provide a mechanical fix.
- The **top edge** of the NVFB-CI must be **tightly compressed into the top of the panel with no gaps.**

4. Final Check

- Confirm the **Closed State Cavity Barrier and NVFB-CI are correctly aligned**.
- Ensure the **NVFB-CI fully fills the panel from top to bottom with no gaps**.
- Ensure the NVFB vertical cavity barrier and NVFB-CI are tightly abutted with no gaps once the panel is installed.

Limitations

To ensure compliance to the relevant test evidence detailed within this Data Sheet, the product must be installed as per the fitting instructions by competent installers. The product must only be used in vertical or horizontal orientations.

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.
- Where product(s) is damaged or tampered, new product should be installed in line with installation guidance.

Storage Conditions

- See Safety Data Sheet

Tools Required

- Sharp Knife
- Measuring Tape

PPE Required

- Hand protection
- Eye protection
- Follow project site requirements

Disposal

- Stone wool insulation is non hazardous waste and is categorised as “waste accepted at landfill for nonhazardous waste” and local regulations should be followed.

Please see Safety Data Sheet for more information.

Tenmat NVFB Cassette Infill (NVFB-CI)

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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.

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