

# NVFB-LGS Linear Gap Seals

Tenmat's NVFB-LGS Linear Gap Seals are stone wool strips designed to provide fire resistance to construction joints in fire rated walls and floors

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## Product Description

The Tenmat NVFB-LGS Linear Gap Seals are stone wool strips installed in rigid wall and rigid floor constructions to maintain the fire resistance of the fire separating element.

The NVFB-LGS are supplied pre-cut in 1 metre lengths to suit joint widths up to 200mm.

The product is designed to be installed under compression into the joint to provide an effective fire and smoke seal.

Tested details also include cable penetrations and installation under protected steel beams.

Tested to EN1366-4, the NVFB-LGS Linear Gap Seals will provide up to 240 minutes fire integrity and insulation performance.

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## Intended Use

The strips can be installed in vertical linear joints within the wall construction, or horizontally at the junction between the head of the wall and rigid floor as well as the junction at the head of the wall and a steel beam\*.

Tenmat NVFB-LGS Linear Gap Seals are also suitable for installations in horizontal linear joints in rigid floors.

Depending on application, the product can be installed as a single strip or a double strip system.

This data sheet shows the only applications the product has been tested in. Please ensure the product has been tested in and is suitable for your application.

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## Key Points

- EN13501-2 Classification Report
- Fire Tested to EN1366-4
- Provides up to EI240 minutes fire integrity and insulation performance
- Suitable for linear joints up to 200mm wide.
- Suitable for lateral movement joints up to 100mm with  $\leq 25$ mm extension in both rigid floors and rigid walls.
- Can be used in rigid floors, rigid walls, to the underside of a steel beam\* (protected with gypsum based beam encasement system).

\* Please see fire performance tables for exact configuration for the steel beam

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## Substrates

- Rigid walls: Minimum 100, 140 or 215mm thick (depending on application) and comprised of concrete, aerated concrete, blockwork or masonry, with a minimum density of 650kg/m<sup>3</sup>.
  - Rigid floors: Minimum 150mm thick and comprised of concrete, aerated concrete or masonry, with a minimum density of 650kg/m<sup>3</sup>.
  - Steel Beam: 254mm high x 102mm wide x 22kg/m I beam with 75 microns C400V3 primer, clad with a double layer of British Gypsum beam encasement system to three sides (top and both sides of beam).
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## Terminology

Fire resistance classes:

### **E = Integrity**

Integrity refers to the ability of a product to maintain its physical integrity and prevent the passage of flames and hot gases through to the non-fire side.

### **I = Insulation**

Insulation refers to the ability of a material to resist the transfer of heat from one side to another. Giving occupants and the fire service more time to evacuate and control the fire.

Performance Data

Rigid Walls

**Single Strip System**  
**Rigid Walls not including Head of Wall (HoW)**

Joint width (mm)	Orientation	Seal Depth (mm)	Compression Required (mm)	Minimal wall thickness (mm)	Fire resistance performance
10 - 200	Vertical	100	5	100	EI120
10 - 200 with integral DPC					
50 - 200 with sheathed electrical cables up to a maximum diameter of 21mm <sup>1</sup>	Horizontal	100	5	100	EI20 EI30

<sup>1</sup> Voids and interstices/gaps of cables to be sealed with PFC Corofil Acoustic Intumescent Sealant to a min. depth of 10mm

**Single Strip System**  
**Rigid Walls or Head of Wall (HoW) to Concrete Floor Soffit**

Joint width (mm)	Orientation	Seal Depth (mm)	Compression Required (mm)	Minimal wall thickness (mm)	Fire resistance performance
10 - 100	Horizontal	100	5	100	EI120
101 - 200					EI20 EI30

**Double Strip System**  
**Rigid Walls not including Head of Wall (HoW)**

Joint width (mm)	Orientation	Seal depth (mm)	Compression required (mm)	Minimum air gap between seals (mm)	Minimum wall thickness (mm)	Fire resistance performance
10 - 60	Vertical	2 x 30	5	40	100	EI120
10 - 100		2 x 50	5	40	140	

**Double Strip System**  
**Rigid Walls or Head of Wall (HoW) to Concrete Floor Soffit**

Joint width (mm)	Orientation	Seal depth (mm)	Compression required (mm)	Minimum air gap between seals (mm)	Minimum wall thickness (mm)	Fire resistance performance
10 - 60	Horizontal	2 x 30	5	40	100	EI20 EI90
10 - 60		2 x 50	5	40	140	EI240
61 - 100		2 x 50	5	40	140	E240 EI180
10 - 100		2 x 85	5	40	215	EI240

Note: The butt joints in adjacent lengths of NVFB-LGS should be offset by min. 150mm either side of the wall

**Single Strip System**

**Rigid Walls or Head of Wall (HoW) to concrete floor where lateral movement is required**

Joint size (mm)	Orientation	Seal Depth (mm)	Compression required after movement (mm)	Minimum wall thickness (mm)	Maximum Lateral Movement (mm)	Fire resistance performance
10 - 100	Horizontal	100	5	100	25	E1120
10 - 100	Vertical	100	5	100	25	E120 E145

Note: When specifying NVFB-LGS that requires movement, the product width must take into account joint size, lateral movement required (max. 25mm) and 5mm compression. E.g. 100mm joint requiring 25mm movement = 100+25+5=130mm wide product

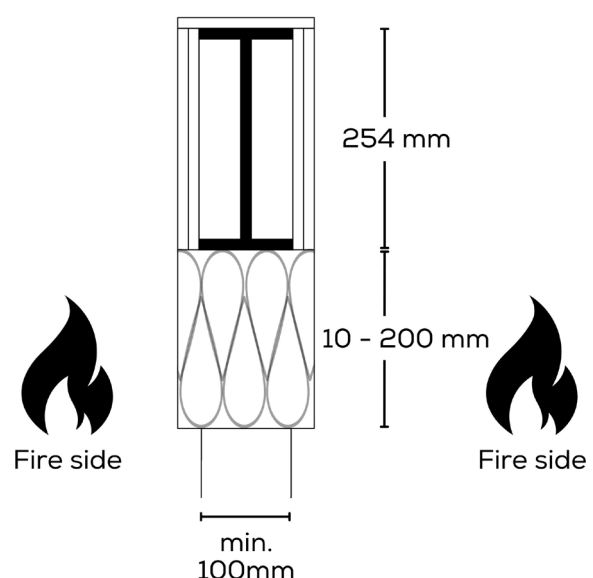
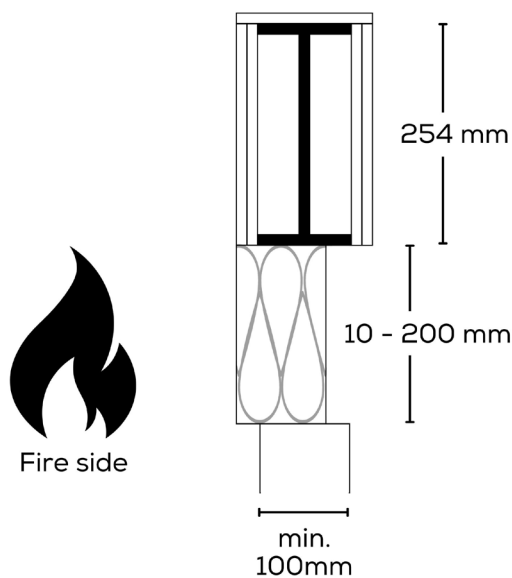
**Single Strip System**

**Rigid wall to the underside of a steel beam**

Steel beam description	Orientation	Joint size	Fire resistance performance
254mm high x 102mm wide x 22kg/m x 5m long I beam with 75 microns C400V3 primer protected by British Gypsum Beam Encasement System with 2 layers of Fireline board 15mm thick on 3 sides.	Horizontal	10-200	E120 E145

Installation of 100mm wide NVFB-LGS when fire risk side is known

Installation of NVFB-LGS to full width of steel beam encasement when fire risk is from both sides



## Rigid Floors

**Single Strip System**  
**Rigid Floors minimum 150mm thick**

Joint size (mm)	Orientation	Seal Depth (mm)	Compression required (mm)	Minimum floor thickness (mm)	Fire resistance performance
10 - 100	Horizontal	100	5	150	EI120
101 - 200		100	5	150	E120 EI90

**Double Strip System**  
**Rigid Floors minimum 150mm thick**

Joint width (mm)	Orientation	Seal depth (mm)	Compression required (mm)	Minimum air gap (mm)	Minimum floor thickness (mm)	Fire resistance performance
10 - 60	Horizontal	2 x 30	5	90	150	E120 EI60
10 - 100		2 x 50	5	50	150	E120 EI60

## Installation Instructions

- Ensure surfaces are clean, dry and free from dirt, dust, mortar and other contaminants.
- Ensure the opening to be filled has been tested with and is suitable for the product being installed.
- The NVFB-LGS should be installed with a minimum 5mm compression (compression will be greater where extended movement is required, see performance tables).
- For the single strip system, compress the NVFB-LGS and push into the linear gap.
- For wall applications, if the wall thickness is greater than 100mm the strip should be installed centrally within the wall joint.
- For floor applications, the NVFB-LGS can sit flush with the underside face of the floor or can be recessed to any depth within the floor.
- When installing adjacent lengths of NVFB-LGS, the meeting ends must be tightly abutted and aligned flush with each other to ensure a continuous strip with no gaps.
- For the double strip system the rigid wall should be of sufficient thickness to accommodate the width of the two NVFB-LGS and a minimum air gap (as stated in the performance tables). The strips should be installed flush with the outer face of the wall on both sides.
- For the double strip system, butt joints in adjacent lengths of NVFB-LGS should be offset by min. 150mm either side of the wall
- When the double strip system is used in rigid floors, the floors should be of sufficient thickness to accommodate the width of the two NVFB-LGS and a minimum air gap (as stated in the performance tables). The strips should be installed flush with the top and bottom face of the floor.
- Fill any minor irregularities up to 5mm with PFC Corofil Acoustic Intumescent Sealant to a minimum depth of 10mm.

# NVFB-LGS

## Linear Gap Seals

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