

# LINEAR & TRAPEZOIDAL FIRESTOP SYSTEM

Fire stopping solutions at compartment junctions





# LINEAR & TRAPEZOIDAL FIRESTOP SYSTEM

Linear and Trapezoidal Firestop systems have been developed to provide up to 4 hours fire stopping at the junctions of compartment walls and floors.

The systems have been tested in accordance with BS 476 part 20: 1987.







## Advantages

- Up to 4 hours fire resistance
- Suitable for walls ranging from 400kg/m<sup>3</sup>
- Manufactured for a wide range of profiles
- Easy installation

## Description

Linear and Trapezoidal Firestop products are made from dense, moisture resistant stone wool, allowing adequate compression yet retaining the necessary lateral stiffness for ease of installation.

The Linear and Trapezoidal Firestop System can be manufactured to suit a wide range of steel profile dimensions.

All Firestop products are supplied in standard lengths of 1m.

### Linear Firestop 2A

- Rectangular strips (installed under min. 5% compression)
- Thicknesses: 12.5, 20, 30, 40, 50, 60, 70, 80, 90, 100mm
- Widths: 100, 150, 200, 300, 400mm
- Fire resistance: Up to 4 hours

### Trapezoidal Firestop 2B

- Trapezoidal strips (tight fit required)

Available for all profiled decks. Deck profile to be named at time of order, e.g. Ribdeck 60, Alphalok etc.

### Dovetail Infill Firestop Strip

- Supplied as narrow rectangular strips for pinched installation into nominated dovetail shaped deck profiles; e.g. Holorib, Quicksan, Q51

## Applications

Linear and Trapezoidal Firestop Systems have been developed to provide up to 4 hours firestopping at the junctions of compartment walls and floors.

Solutions illustrated are for masonry walls with a density of at least 400 kg/m<sup>3</sup> and include both fire integrity and insulation criteria for concrete decks, composite decks and simple profiled sheeting.



Figure 1 – Linear Firestop 2A



Figure 2 – Linear Firestop 2A and 2B



Figure 3 – Linear Firestop 2A and Dovetail Infill Strip

## Performance

### Fire performance

All fire ratings apply to gaps over walls constructed of dense aggregate blocks, lightweight aggregate concrete, clay bricks or concrete blocks with a minimum density of 400Kg/m<sup>3</sup>

Fire resistance includes integrity and insulation criteria to BS 476: Part 20: 1987.

Min. wall thickness/ fire stop width	Fire resistance (integrity and insulation)
100mm	2 hours
150mm	3 hours
200mm	4 hours
Friction fitted	600 x 600mm

Note: Stated performance assumes fire resistance of supporting wall is no less than fire stop.

### Chemical

ROCKWOOL stone wool insulation has a basaltic composition in which the refractory oxide components have been enhanced for stability at high temperatures.

Stone wool is chemically inert. An aqueous extract of the wool is neutral (pH7) or slightly alkaline.

### Biological

Linear and Trapezoidal Firestop Systems are completely rot proof, do not offer sustenance to vermin and do not encourage the growth of fungi, moulds and bacteria.

### Compatibility

ROCKWOOL products are compatible with all normal building and constructional materials with which they are likely to come into contact.

### Durability

ROCKWOOL materials will perform effectively throughout the lifetime of the building with a minimum of maintenance (unless disturbed).

## Technical Information

### Standards and approvals

Linear and Trapezoidal Firestops have been tested to BS 476: Part 20: 1987 and can provide up to 4 hours fire protection.

Achieves Euroclass A1 in accordance with BS EN 13501-1.

Linear and Trapezoidal Firestops are third party approved with LPCB – certificate no. 022b.

This product has been authorised for use in LUL surface and sub-surface premises when installed in accordance with this datasheet. Please refer to the LUL Approved Product Register at [www.LU-apr.co.uk](http://www.LU-apr.co.uk) for specific details.

### Product information

Property	Description
Length	1000mm
Width	Up to 400mm
Thickness	12.5 – 100mm
Deck Profiles	Various
Density	110 Kg/m <sup>3</sup>
Fire Resistance	Up to 4 hours

### Handling/Storage

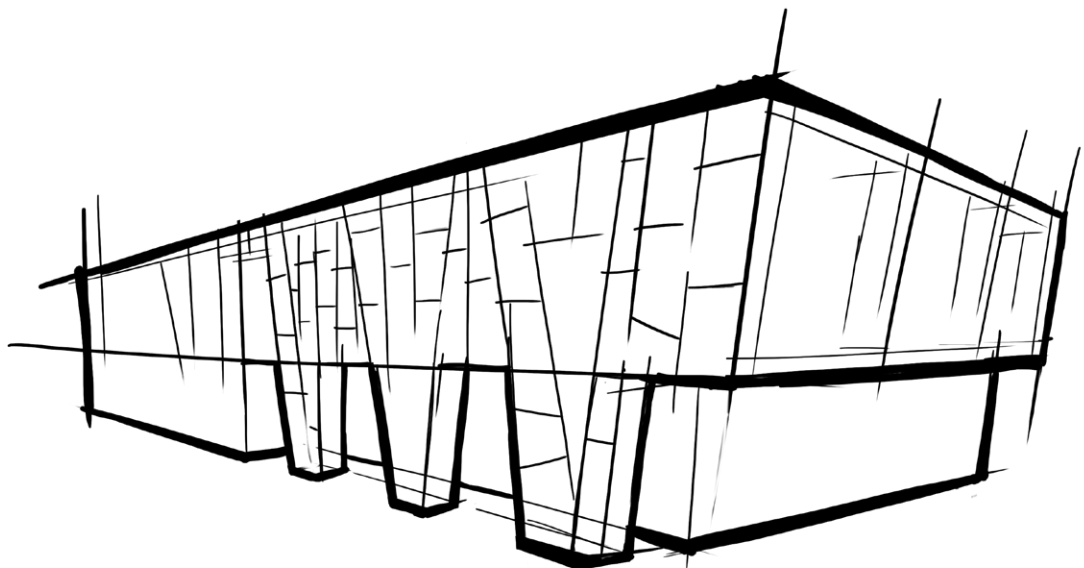
Linear and Trapezoidal Firestop materials are light and easy to handle and should be cut using a sharp bladed knife. Store in dry conditions.

### Maintenance

Once installed, Linear and Trapezoidal Firestop materials will need no maintenance unless disturbed.

### Other information

For areas such as clean rooms, Firestop systems are available totally enclosed in shrink wrap.



## Installation

The following installation requirements must be met in order to reliably achieve the stated fire resistances.

- Linear Firestop 2A must be fitted as rectangular pieces, tightly butt jointed and compressed by at least 5% in thickness.
- Up to 3 layers may be used. Single layer firestopping will always be preferred, with multi-layer methods limited to those occasions where building tolerances demand practicality. All layers should be installed simultaneously. The height of void should not exceed the width of the Firestop.
- Gaps associated with perimeter floor slab/wall fire stopping should be achieved using ROCKWOOL SP Firestop Systems.



Figure 4 – Profiled metal deck over blockwork wall

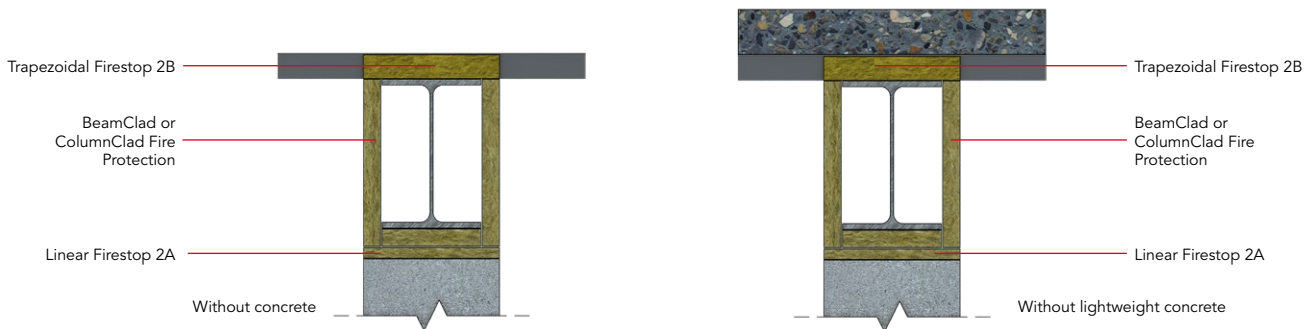


Figure 5 – Profiled metal deck with/without concrete over a universal beam

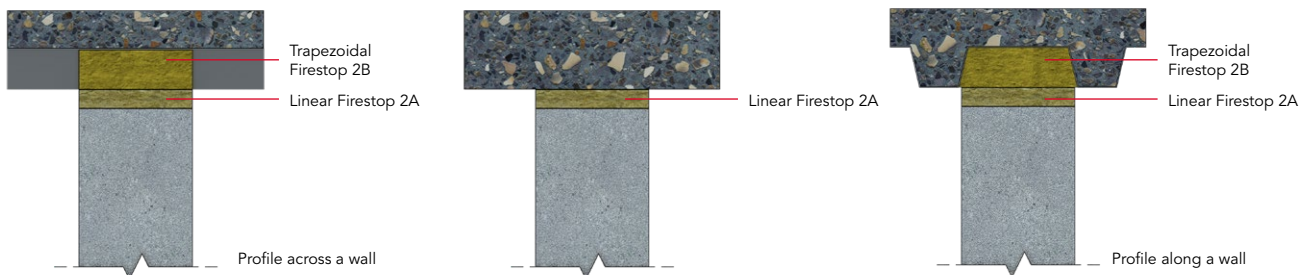
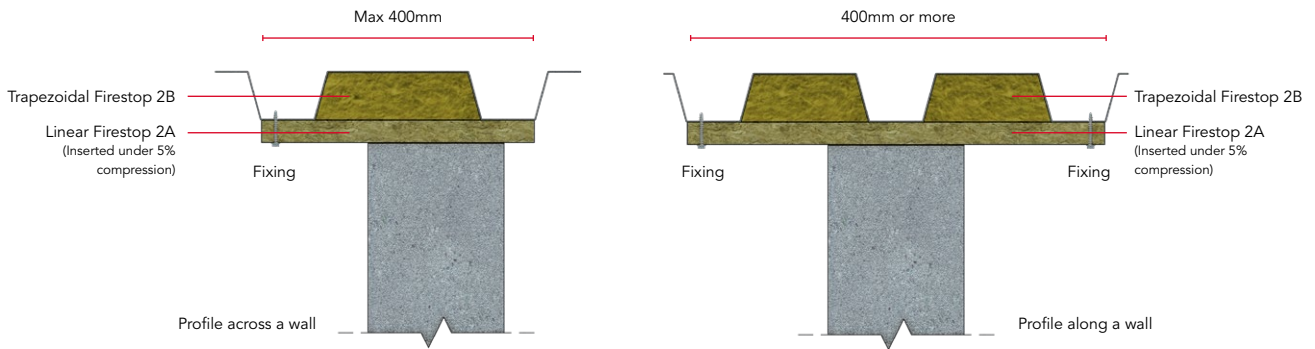


Figure 6 – With/without profiled metal deck under a lightweight concrete slab

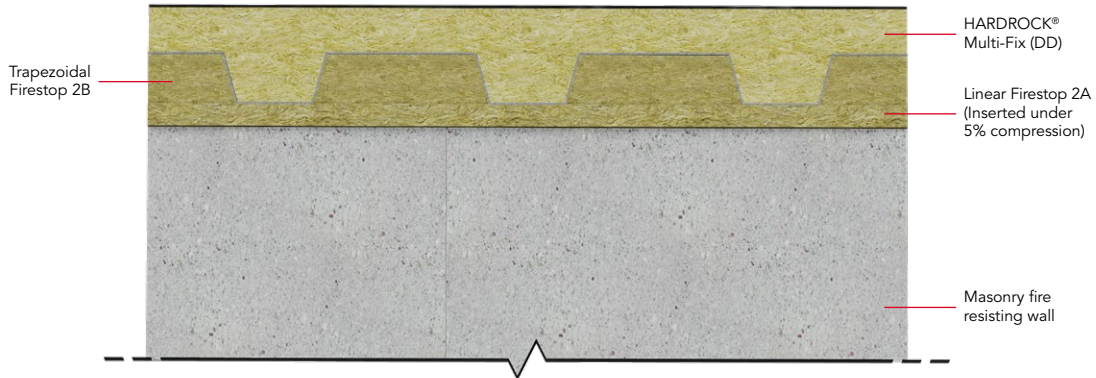
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**Figure 7a & 7b** – Metal profiles parallel but offset from the wall line

Fig 7a: The 'overhang' of the Linear Firestop 2A should be supported with steel self-tapping screws or 'hammer fix' anchors into deck / concrete soffit at 350mm maximum centres (minimum of 3 fixings per 1m length of fire stop).

Fig 7b: Where the Linear Firestop 2A is required to be fixed to the deck at distances in excess of 400mm, turn the 1m length of fire stop 90° and cut to required size to suit profile spacing. In such cases, secure each length of fire stop to the soffit using at least 2 fixings at both ends.



**Figure 8** – ROCKWOOL Insulated flat roof deck with profiles perpendicular to the wall line

When fire stopping between the head of a fire resistant wall and the underside of a perforated roof deck insulated with ROCKWOOL HARDROCK® Multi-Fix [DD] flat roof insulation, it should be considered best practice to fill both the upper and lower deck profiles with Trapezoidal Firestop 2B products. In such cases, when placing an order it should be noted that the sizes of the two profiles may differ.

In cases where combustible thermal insulation passes over the head of a fire resisting wall, guidance on maintaining fire compartmentation is provided in Approved Document B (Volume 2, Section B3) of The England and Wales Building Regulations 2000 (2006 edition). To reduce the risk of fire spreading to an adjacent compartment in such cases, it may be necessary to extend the wall through the roof line or introduce a 'protected zone' 1500mm either side of the fire resisting wall.

## Specification clauses

Linear and Trapezoidal Firestops are associated with the following NBS clauses:

F30 Accessories/sundry items for brick/block/stone walling

- 670 Tops of non-loadbearing walls

G30 Metal profiled sheet decking

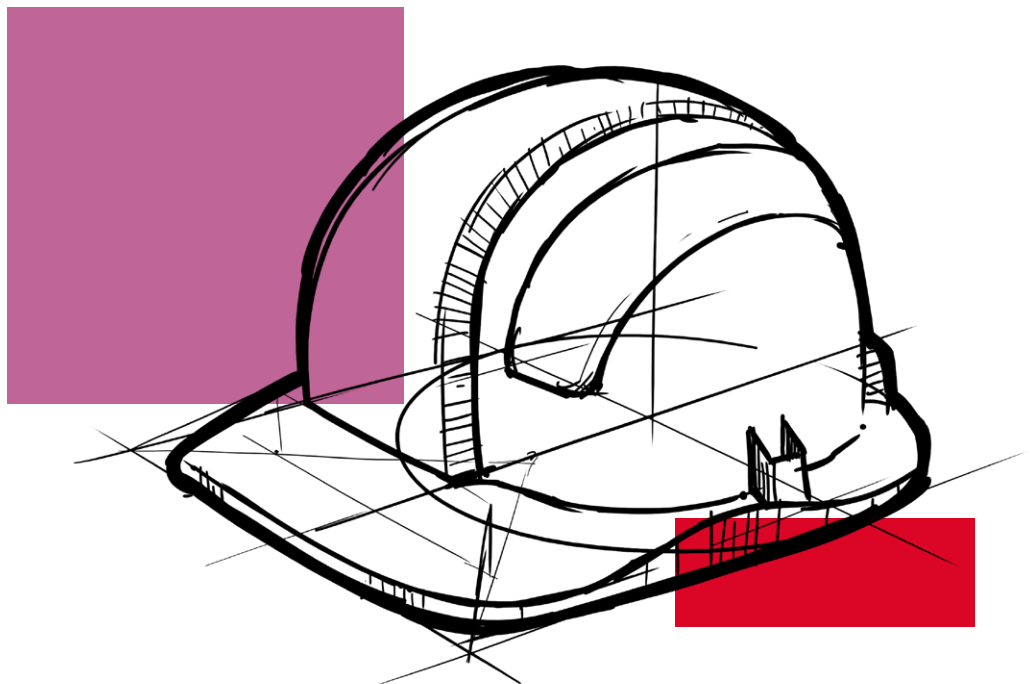
- 240 Fire resisting profile fillers

## Disclaimers

This product should only be utilised for applications as outlined in the relevant ROCKWOOL product datasheet and in accordance with the relevant ROCKWOOL Fire Resistance Testing. Additionally, the product must be installed in accordance with the current ROCKWOOL guidelines. For further information please visit [www.rockwool.co.uk](http://www.rockwool.co.uk) or contact our Technical Solutions Team on 01656 868490.

## Supporting Information

For further information relating to any aspect of the FirePro range, please refer to the applicable ROCKWOOL standard details at [www.rockwool.co.uk](http://www.rockwool.co.uk) or contact the ROCKWOOL technical solution team on 01656 868490 or [technical.solutions@rockwool.co.uk](mailto:technical.solutions@rockwool.co.uk).





## Sustainability

As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:



**Fire resistance**



**Acoustic comfort**



**Sustainable materials**



**Durability**

## Health & Safety

The safety of ROCKWOOL stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC: ROCKWOOL fibres are not classified as a possible human carcinogen.

A Material Safety Data Sheet is available and can be downloaded from [www.rockwool.co.uk](http://www.rockwool.co.uk) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

## Environment

Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL is approximately 97% recyclable. For waste ROCKWOOL material that may be generated during installation or at end of life, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.



## Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email [technical.solutions@rockwool.co.uk](mailto:technical.solutions@rockwool.co.uk)

Visit [www.rockwool.co.uk](http://www.rockwool.co.uk) to view our complete range of products and services.

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### The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the largest assets in the ROCKWOOL Group, and thus well protected and defended by us throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion. You must apply for a Trade Mark Usage Agreement. To apply, write to:  
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HARDROCK®

ROCKFLOOR®

FLEXI®

BEAMCLAD®

FIREPRO®

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**Notes**



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