



Fire Barrier

DATASHEET



Introduction

Rockwool Fire Barrier has been developed to inhibit the spread of smoke and flames through concealed spaces in buildings, particularly above ceilings.

Rockwool Fire Barrier is ideally suited for use in new works and refurbishment projects alike.

The flexibility of Fire Barrier simplifies its installation in cavities where a rigid product would prove difficult, such as in trapezoidal roof decks and for penetrations by structural members and services.

Applications And Design

Rockwool Fire Barrier is generally applied as a hanging curtain, continuously supported and secured at the head or soffit. At the base, although it can sometimes be allowed to drape freely, it is preferable (e.g. on a suspended ceiling) to wire the barrier tightly to the grid. In situations where Fire Barrier continues a fire resisting partition upwards into a ceiling void it is essential to fix the Barrier to the partition head or compartment wall.

Standards And Regulations

Non-Combustibility

Fire Barrier is non-combustible to BS 476: Part 4: 1970 (1984).

Rockwool Half-Hour Cavity Barrier

Satisfies the requirements of the Building Regulations 1991 (1992 edition) Approved Document B and Appendix A, Table A1, for 30 minutes integrity and 15 minutes insulation.

Rockwool 1 Hour, 1 Hour And 2 Hour Fire Barriers

Can be used where fire resistant partitions need to be continued above a ceiling into the roof void, and conform with the Building Regulations Approved Document B and fulfil all normal fire insulation requirements for divisions of space.

Description

Composition And Manufacture

Rockwool is manufactured from a melt of volcanic rock and limestone. The molten rock is spun into wool, treated with a small quantity of resin and cured to form a mat. 25mm galvanised wire mesh is stitched with wire to one face to produce a very flexible Fire Barrier. The product is also available with aluminium foil finish to one or both sides.

Weight

The nominal weight of Rockwool Fire Barrier is 5.25kg/m² at 50mm thickness and 6.3kg/m² at 60mm thickness.

Dimensions

Standard width 1 metre.

Thickness (mm)	Length (m)
50	4
60	3.5



Fire Barrier

DATASHEET



Fire Performance And Specification

Product	Fire Performance			Specification
	Integrity (Mins)	Insulation (Mins)	WARRES Report No.	
Hour Cavity Barrier*	32	23	51811	1 layer 50mm Fire Barrier
1 Hour Fire Barrier*	100	100	51812	2 layers 50mm Fire Barrier with staggered vertical joints
1 Hours Fire Barrier	100	100	51812	2 layers 50mm Fire Barrier with staggered vertical joints
2 Hours Fire Barrier	150	134	44509	2 layers 60mm Fire Barrier separated by 40mm air space

* Fire Barrier can also be used for fire stopping the cavities of timber frame separating walls and floors (see also Data Sheet 090).

Acoustic Performance

The correct use of Fire Barrier within structural cavities and voids will reduce the level of transmitted sound.

Room To Room Attenuation	Rx dB
Typical lay-in grid system	30
As above, with 50mm Rockwool Fire Barrier	42
Applied as 2, but Rockwool Fire Barrier foil faced on one side	44
Applied as 2, but two thicknesses of 50mm Rockwool Fire Barrier both foil faced	50

Wire Stitching Of Butt Joints In All Rockwool Fire Barriers

Adjacent barriers must be closely butt jointed, or overlapped, and through stitched with 0.9mm galvanised annealed wire. It is essential that the barrier provides a good seal at its head, perimeter and at all joints.

Where the barrier abuts a profile such as a trapezoidal deck the material must be cut to suit and secured to fire stop the gap.

General Design Considerations

A cavity fire barrier must be designed to restrict the passage of both hot smoke and flame for the minimum specified period as required by the Building Regulations. In addition it must be fixed in such a way that: (a) it will remain effective in the event of structural movement; (b) there are no gaps where it abuts other elements of construction, and (c) complies with the requirements of Approved Document B of the Building Regulations.

Access Through Fire Barrier

When regular access is required through a fire barrier it must be provided by a fire tested door and frame assembly rated to provide the appropriate fire resistance. The Fire Barrier must be fixed securely to the frame of the door with FBS strap and appropriate screws.

Fire Barrier And Dampers

Where Rockwool Fire Barrier is installed in conjunction with fire dampers, the dampers must be supported independently of the fire barrier. HVCA or ASFP publications may be helpful.



Fire Barrier

DATASHEET



Fixing And Clamping

Reference is made in the drawings to maximum centres for fixings, generally 750mm for expanding bolts and 300mm for set screws and nuts.

However, it is essential that the free overhang at the end of the FBA angle should not exceed 300mm, and similarly the free overhang of the FBS strap should not exceed 150mm.

Structural Stability

It is essential that the Fire Barrier is secured to a structural member that will survive a fire for the period of time required of the Fire Barrier. Suitable fire protection of the structural member may be required.

Air Plenums

Rockwool Fire Barrier product can safely be used in return air plenum installations. A copy of the report of a fibre monitoring survey conducted by the Institute of Occupational Medicine, ref OH/1294, is available from Rockwool SP&A Department on request.

Penetrations Of Fire Barrier

Where supported non-combustible pipes penetrate 50mm Fire Barrier, a 50mm thick x 300mm long collar fitted to one side of the Barrier will provide an effective fire stop to the passage of flames or hot gasses for 30 minutes (WARRES C82845) and for fire attack on either side in accordance with BS 476: Part 20: 1987, Heating conditions.

Where Fire Barrier is penetrated by services pipework, beams or trusses, etc, the barrier is first cut locally to accommodate the service and then re-stitched as neatly as possible. The pipe, service or structural member is then sleeved each side of the barrier to a minimum length of 300mm, using the same barrier material. The sleeve should be wired to the main barrier to prevent it becoming detached from the barrier.

Reference should also be made to the requirements of Section 10 to Approved Document B of the Building Regulations.

Rockwool Fixings

Angle and strap are specially manufactured from mild steel with pre-punched holes and slots for easy assembly on site. They are painted red for identification and corrosion protection. They are also suitable for the support framework of barriers exceeding 3.5 metres in height.

Dimensions (Approx.)

FBA 62 x 41mm angle x 3050mm long

FBS 38mm wide strap x 1830mm long

Nuts and bolts are available in packs of:

- a) 50 no. M6 x 80mm bolts and 100 no. nuts
- b) 50 no. M8 x 16mm bolts and 50 no nuts

Work On Site

Handling And Storage

Rockwool Fire Barrier is easy to handle. It is easy to cut to any shape.

The product should be stored indoors or under a weatherproof covering.

Maintenance

Once installed Rockwool Fire Barrier should need no maintenance.



Fire Barrier

DATASHEET



Health And Safety

All Rockwool products are subject to a Maximum Exposure Limit as follows:

5mg/m³total dust 8 hour (Time Weighted Average).

A Material Safety Data Sheet is available from the Rockwool Sales Promotion and Advertising Department.

CDM Construction (Design and Management) Regulations, in so far as they involve Rockwool products, are fully discussed in Rockwool Data Sheet 002.

The fibres from which Rockwool products are made are not classified for carcinogenicity under the European Community Directive 97/69/EC. The fibres are classified as irritant, and products are labelled accordingly, in line with the requirements of the UK Health and Safety Executive.

The forgoing information is believed to be accurate at the time of preparation of this document, and is provided in good faith. However, no warranty or representation with respect to such information is intended of given.
