Siderise RF Cavity Barrier and Firestop for Raised Access Floors

Compartmentation solutions for preventing fire spread under raised access floors

Application

Siderise RF Cavity Barrier & Firestop Systems prevent the spread of fire and reduce sound transmission by sealing the voids between raised access floors and floor slabs.

The range includes options to either subdivide large uninterrupted cavities (Cavity Barriers) or to provide continuity of fire resistance when aligned underneath partitions (Fire Stops). Across the range, these systems have been tested for fire performance, acoustic performance, and for use as a plenum liner.

Siderise RF-CB Cavity Barrier systems are used to subdivide uninterrupted voids in accordance with Building Regulations and offer 30 minutes of fire resistance. Please see Table 2 for ratings by void size.

Siderise RF-FS Firestop systems maintain continuity of fire resistance for installations aligned with fire-rated partitions hence maintaining compartmentation. The 'FS' systems offer 60 to 120 minutes of fire resistance.

RF-FS barriers are designed to suit individual floor void depths. They are a one-piece system that affords easy cutting and installation. Additionally, due to a unique manufacturing process, the products offer unique vertical compression to allow tightness of fit.

Siderise RF Cavity Barrier & Firestop Systems have been tested in general accordance with EN1366-4: 2006 + A1:2010. Please refer to Table 2 for details.

Product Description

Siderise RF Cavity Barrier and Firestop Systems are classified A1 to EN 13501-1:2018 and comprise a unique non-combustible stone wool lamella core with vertically oriented fibres laterally compressed and held in place by aluminium foil facings on two sides.

Siderise RF is available in the following forms:

Pre-cut Strips

· Pre-cut products are available in 1mm increments of width to suit the cavity size. Please see Table 2 regarding 'fit type'.
· Supplied with appropriate brackets as part of a system.

Sheets

· Standard sheet size is 1200 x 1200mm and may be of benefit when the actual void size is not known or where it varies significantly.
· Appropriate brackets must be ordered separately.

Fire Performance

In terms of 'Reaction to Fire', the products are classified 'A1' to EN 13501-1:2018. See Table 1.

Table 1 : Reaction to Fire Performance

Properties	Value
Classification	A1 to BS EN 13501-1: 2018
Certificate No.	WHI20-32944302 (US) WHI-09/02-22-000001-03 (UK)
Thickness Range	50-175mm*
Substrates	Mechanically fixed to gypsum or any other A1 or A2-s1, d0 substrate
Joints	With or without joints

Siderise RF cavity barrier and fire stop systems have been successfully tested to EN 1366-4:2006 + A1:2010 for up to 120 minutes fire resistance (integrity and insulation). See Table 2.

Table 2 : Resistance to Fire to EN 1366-4:2006 + A1:2010

Product Ref	Void Width (mm)	Thickness (mm)	Compression (min.)	Integrity (Mins)	Insulation (mins)	Product Length (mm)	Bracket Requirement
RF-CB30	50 - 200	75	+10mm	60	30	1200	2no.B195 600mm centres
RF-FS60	50 - 200	90	+5mm	60	60	1200	No brackets**
RF-FS120	50 - 200	120	+10mm	120	120	1200	2no.B195 600mm centres
RF-CB30	201 - 300	75	+10mm	60	30	1200	2no.B195 600mm centres
RF-FS60	201 - 300	90	+10mm	90	60	1200	2no.B195 600mm centres
RF-FS120	201 - 300	120	+10mm	120	120	1200	2no.B195 600mm centres
RF-CB30-X	301 - 400	90	+10mm	60	30	1200	2no.B355 600mm centres
RF-FS60-X	301 - 400	120	+20mm	60	60	1200	2no.B355 600mm centres
RF-FS60-X	401 - 600	120	+20mm	60	60	1200	2no.B355 600mm centres
RF-FS60-X	601 - 1000	120	+40mm	60	60	1200	4no. B355(300mm centres)

NOTE - To facilitate the required compression, raised access floor panels will require mechanical fixing to the floor pedestals. This is to ensure that the panels are correctly seated onto the pedestals whilst providing the required compression to the RF.

** Whilst RF-FS60 has been tested in general accordance with EN 1366-4:2006 + A1:2010 in void widths 50-200mm without mechanical fixings and brackets, we note that some supervising authorities may require a form of mechanical fixing. We recommend engaging with the project supervising authorities prior to installation to ensure all their requirements are met.

- Brackets must be installed at 600mm centres based on a 1200mm strip, except for between 601-1000mm voids which should be installed at 300mm centres. This can be reduced pro rata for shorter lengths. Please note that a minimum of 2 brackets are required for any length of barrier greater than 250mm. For lengths ≤250mm a single bracket must be utilised.
- All brackets to be suitably fixed to substrate with non-combustible fixings
- All brackets to penetrate product at mid-thickness.
- All brackets to penetrate to a depth of 75% of gap width. For RF-FS60-X used in voids of 601-1000mm, brackets should penetrate 355mm.
- Please refer to the installation instructions for further details.

Joint Type

- Butt Joint (RF-CB-BJ and RF-FS-BJ) available as standard.

Acoustic Performance

The installation of Siderise RF cavity barrier and fire stop systems can enhance the 'room-to-room' sound reduction of raised access floors which form a continuous common void under adjacent areas. This can result in improved speech privacy and greater control of disturbance from intrusive noise.

The acoustic performance of the RF material is due to the unique internal construction of the stone wool lamella core. The product's foil facings and the additional sealing of the vertical joints with foil tape all serve to provide improved air tightness.

The product's standalone acoustic performance is tested in accordance with BS EN ISO 10140-2:2021. Weighted sound reduction index (dB Rw) values for various grades of the product are given below in Table 3.

The acoustic flanking performance of a raised access floor (given as a dB Dn,f,w value) will be affected by both the floor tiles themselves and any cavity barriers which may be installed in the void. The below values represent the performance of Siderise RF barriers only.

Table 3 - Acoustic Performance (Weighted Sound Reduction Index)

Product Ref.	Thickness (mm)	Product Surface Weight (kg/m^2)	Rw (dB)	C:Ctr
RF-CB30	75	6	21	(-1;-2)
RF-CB30-X	90	7.1	21	(-1;-2)
RF-FS60	90	7.1	21	(-1;-2)
RF-FS60-X	120	9.4	23	(-1;-3)
RF-FS120	120	9.4	23	(-1;-3)

Thermal Performance

Thermal conductivity : λ = 0.038 W/m.K (tested foil to foil)

Technical Specification

Siderise RF Cavity Barrier and Fire Stop systems

Table 4 : Product Properties

Properties	Value
Form supplied	Sheet BJ: 1200mm x 1200mm x thickness, Pre-cut strips: 1200mm x (cavity + compression) x thickness (See Table 2)
Colour	Silver
Finish	Bright aluminium foil
Density	Nominal 75kg/m^3
Thermal conductivity	λ= 0.038 W/m.K (tested Foil to Foil)
Cavities	50mm to 1000mm
Fire resistance	60-120 mins (Integrity) & 30-120 mins (Insulation)- see Table 2
Reaction to fire	Class 'A1' to EN 13501-1:2018 - see Table 1

Environmental

The stone wool core is recyclable.

Additional Information Available

The following information is available upon request or via download from the website:

- Environmental Product Declaration
- Installation Instructions
- Material Data Sheet
- NBS Specification Clause

Technical Support

For technical advice, support, or classification reports - please contact: **technical.services@siderise.com**

For Installation Training or Site Inspections please contact: **site.services@siderise.com**

Context

The information in this datasheet is believed to be accurate at the date of publication. Siderise has a policy of continuous product improvement and reserves the right to alter or amend the specifications of products without prior notice. Siderise does not accept responsibility for the consequences of using the products described outside of the recommendations within this datasheet. Expert advice should be sought where there is any doubt about the correct specification or installation of Siderise products.

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