RF – CAVITY BARRIERS AND FIRE STOPS FOR RAISED ACCESS FLOORS

Technical Data Sheet

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SIDERISE®

Acoustic, fire and thermal insulation specialists

Application

SIDERISE RF Systems prevent the spread of fire and smoke, 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 simple to install 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 fire resistance (EI 30). CB barriers are designed to suit individual floor void depths between 50mm and 600mm (see Table 1 for ratings by void size)

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

RF-FS barriers are designed to suit individual floor void depths between 50mm and 600mm. They have been designed as a one-piece system and afford easy cutting and installation. Additionally, due to a unique manufacturing process, the products also offer unique vertical compression to allow tightness of fit.

SIDERISE RF Systems have Certifire 3rd party approval (CF 5646) please refer to Table 1 for details.

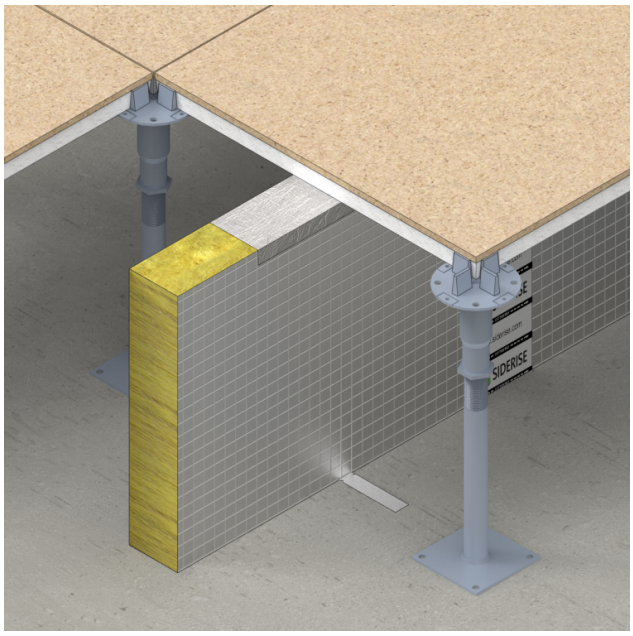
Product Description

SIDERISE RF cavity barrier and fire stop systems are classified A1 to EN 13501-1 and comprise a unique non-combustible stone wool lamella core, which is faced on two sides with an impervious aluminium foil, offering excellent resistance to the passage of smoke.

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 1 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

SIDERISE RF cavity barrier and fire stop systems have been successfully tested to the latest European standards - EN 1366-4 for up to 120 minutes fire resistance (integrity and insulation).

- Some options have additionally been 3rd party certified under Certifire CF 5646, please see Table 1 for details.
- In terms of 'Reaction to Fire', the products are classified 'A1' to EN 13501-1.

Table 1 : Resistance to Fire to EN 1366-4

Void Width	Product Ref.	Product	Compression	Bracket Requirement	Classification	3rd Party Certification
(mm)		Thickness	(minimum)	Range (mm)	(EN 13501-2)	(Product Ref)
50 to 200	RF-CB30	75mm	+10mm	2no. B195	EI 30	-
	RF-FS60	90mm	+5mm	No brackets	EI 60	Certifire CF 5646 (RF 60/60)
	RF-FS120	120mm	+10mm	2no. B195	EI 120	-
201 to 300	RF-CB30	75mm	+10mm	2 no. B195	EI 30	-
	RF-FS60	90mm			EI 60	-
	RF-FS120	120mm			EI 120	-
301 to 400	RF-CB30-X	90mm	+10mm	2 no. B355	EI 30	Certifire CF 5646 (RF 60/30)
	RF-FS60-X	120mm			EI 60	-
401 to 600	RF-FS60-X	120mm	+20mm	2 no. B355	EI 60	-

- Brackets must be installed at 600mm centres based on a 1200mm strip. This can be reduced pro rata for shorter lengths. Please note that 2 brackets are required for any length of barrier greater than 300mm. For lengths ≤300mm 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.

Cover Length
• Butt Joint (RF-CB-BJ and RF-FS-BJ) = 1200mm
• Rebate Joint (RF-CB-RJ and RF-FS-RJ) = 1175mm

Please advise joint style at time of ordering.

Acoustic Performance

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

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

Based on laboratory tests to determine airborne sound transmission in accordance with BS EN ISO 140-3 : 1995, BS 2750 : Part 3 : 1995 on a variety of SIDERISE RF systems the following Weighted Sound Reduction Index (Rw) values can be used: as shown in table 3 below. Sound Research Laboratories Limited test report no. : C/99/5L/7743/I refers.

Actual performance will be dependent on several factors including the design, choice of materials and degree of fit between components.

For raised access floor systems requiring higher 'cross-talk' values i.e. approx. 45+dB, the improvement in 'cross-talk' value may be limited by other factors, including flanking transmission, leakage through M&E systems etc.

However, for installations offering a reduced 'cross-talk' performance, such as installations with frequent service openings, larger improvements can be affected by the installation of the RF before reaching limiting values. In such instances, improvements up to 20dB may be possible.

Table 2 - Acoustic performance

	Weighted Sound Reduction Index	
Product Type	**Thickness (mm)**	**Rw (dB)**
RF-CB30	75	21
RF-CB30-X	90	23
RF-FS60	90	23
RF-FS60-X	120	25
RF-FS120	120	25

Thermal Performance

Thermal conductivity : λ_{10} = 0.038 W/m.K (tested foil to foil)

Technical Specification

SIDERISE RF Cavity Barrier and Fire Stop systems

Form supplied	Sheet BJ: 1200mm x 1200mm x thickness
	Sheet RJ: 1200mm x 1175mm x thickness
	Pre-cut strips: 1200mm x (cavity + compression) x thickness (See Table 1)
Colour	Silver
Finish	Bright aluminium foil
Density	Nominal 75Kg/m^3
Thermal conductivity	λ_{10} = 0.038 W/m.K (tested Foil to Foil)
Cavities	50mm to 600mm, for voids over 600mm please contact technical@siderise.com
Fire resistance	30 to 120 minutes EI to EN 13501-2
Reaction to fire	Class 'A1' to EN 13501-1

Environmental

SIDERISE RF Cavity barrier and Fire Stop systems for raised access floors are environmentally friendly.
- They contain no Volatile Organic Compounds (VOCs) and no very Volatile Organic Compounds (vVOCs).
- Zero Ozone Depleting Potential
- Zero Global Warming Potential
- Recyclable

Additional Information

The following information is available upon request or via download from the website:
- CF 5646 3rd Party Certification
- NBS Specification Clause
- Installation Instructions
- Safety Data Sheet

Technical Support

Technical Services Team: **technical@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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www.siderise.com

SIDERISE GROUP
Forge Industrial Estate,
Maesteg, UK, CF34 0AY
T: +44 (0)1656 730833
F: +44 (0)1656 812509
E: sales@siderise.com