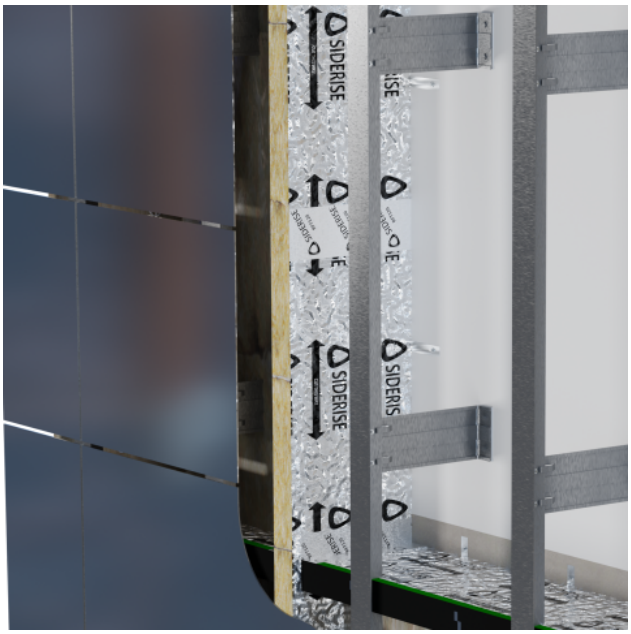
Siderise RV Vertical Cavity Barrier

Full fill cavity fire barrier for horizontal compartmentation in all types of rainscreen façades



Application

Siderise RV vertical cavity barriers for rainscreen cladding are used to full fill the void between the external envelope and internal substrate.

The construction of RV vertical cavity barriers offers resistance to the passage of fire. Additionally, by fully sealing the void, they assist ventilated façades to function by maintaining air-pressurisation compartmentation.

Significantly, their unique stone wool lamella core construction enables the vertical barriers to accommodate the serviceability movement normally associated with rainscreen façades.

Intersections between horizontal and vertical cavity barriers are simply abutted, with RFT 120/45 foil tape applied as detailed in the RV Installation Instructions. The leading edge compresses directly against the external envelope. No intumescent strip is required.

CCPI assessed status

Siderise RV vertical cavity barrier products have been assessed under the CCPI scheme.

Assessment Number: 000800106/1126

CCPI
ASSESSED PRODUCT INFORMATION
000800106/1126
RV Cavity Barriers for Cladding Rainscreen - Vertical

Product Description

Siderise RV vertical cavity barriers for rainscreen cladding applications consist of a non-combustible stone wool lamella core, with reinforced aluminium foil faces.

Siderise RV vertical cavity barriers are installed within the cavity, formed between the rainscreen facade and the inner structural wall, using the appropriate Siderise support brackets. Brackets are available in either galvanised mild steel (G) or stainless steel (S).

The standard product length is 1200mm.

Fire Performance

Reaction to fire

This is the response of a material in contributing by its own decomposition to a fire to which it is exposed under specified conditions. Results are classified to BS EN 13501-1:2018 “Fire classification of construction products and building elements”.

Siderise RV vertical cavity barriers have reaction to fire Third-party certification with Intertek and are classified as A1 to BS EN 13501-1:2018. Please see Table 1 for further information.

Table 1 : Reaction to Fire Performance

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

**Please note that the thickness declared here refers to reaction to fire testing (supported by certificates - WHI-09/02-22-000001-03 (UK) & WHI20-32944302 (US)) carried out on the base material from which RV is manufactured and so covers a wider range than the thicknesses used for RV resistance to fire testing shown in Table 2.*

Resistance to Fire

This is the ability of an element of structure or product to maintain its stability for a specific period as determined by the loadbearing capacity(for structural elements only), integrity and / or insulation against heat transfer specified in the fire resistance test. Results are given in accordance with BS EN 13501-2.

Siderise RV vertical cavity barriers have been tested for resistance to fire in accordance with BS EN 1366-4: 2006+A1: 2010. The cavity barriers maintained integrity (E) and insulation (I) requirements as detailed in Table 2

The tests have been undertaken to assess the ability of the vertical cavity barrier products to reinstate the fire resistance of a lightweight aerated concrete supporting construction. This is the standard assembly for testing such cavity barrier products as it allows the performance of the individual barrier to be classified.

Third-party Certification

For full details of Siderise RV certified products, including the testing and scope of our Third-party certification, please refer to IFC Certification IFCC 1712. Please see Table 2 for more information.

The Certificates are available for download from our online Technical Resources or by contacting our Technical Support department: technical.services@siderise.com

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

Product Ref	Void Width (mm)	Thickness (mm)	Compression (min.)	Integrity (Mins)	Insulation (mins)	Product Length (mm)	Bracket Requirement	Third-party Certification
RV-90/30	20 - 50	75	+10%	90	30	1200	None.	IFCC 1712
	51 - 150	75	+10mm	90	30	1200	2no.B65/110 600mm centres	IFCC 1712
	151 - 250	75	+10mm	90	30	1200	2no.B195 600mm centres	IFCC 1712
RV-90/30X	251 - 400	90	+10mm	90	30	1200	2no.B355 600mm centres	IFCC 1712
RV-90/60	20 - 50	100	+10%	90	60	1200	None.	IFCC 1712
	51 - 150	100	+10mm	90	60	1200	2no.B65/110 600mm centres	IFCC 1712
	151 - 250	100	+10mm	90	60	1200	2no.B195 600mm centres	IFCC 1712
RV-90/60X	251 - 400	120	+10mm	90	60	1200	2no.B355 600mm centres	IFCC 1712
RV-120/120	20 - 50	120	+10%	120	120	1200	None.	IFCC 1712
	51 - 150	120	+10mm	120	120	1200	2no.B65/110 600mm centres	IFCC 1712
	151 - 250	120	+10mm	120	120	1200	2no.B195 600mm centres	IFCC 1712
RV-120/120X	251 - 400	150	+10mm	120	120	1200	2no.B355 600mm centres	IFCC 1712

Please note: -

Integrity and Insulation ratings in the above tables refer to performance in product fire tests to BS EN1366-4:2006+A1: 2010.

In all cases, we recommend that the specifier and user review the specific project configuration regarding available large-scale system test data and in light of the latest National Building Regulations, local Building Code, and/or government advice. For voids greater than the product parameters, please contact technical.services@siderise.com for assistance.

Whilst the RV range has been tested in general accordance with BS EN 1366-4:2006+A1:2010 “Fire resistance tests for service installations - Linear joint seals.” in narrow void widths 20-50mm 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.

Support Brackets

Support brackets should be installed at 600mm fixing centres (300mm from each end).

The brackets are supplied as standard in 1mm galvanised mild steel (G) or stainless steel (S), in a flat form for site folding.

Lengths of the barrier are secured with these dedicated brackets, which impale the product at mid thickness to a depth of 75% of void.

The brackets are secured to the inner structural wall using non-combustible steel anchors or screws. These fixings are not supplied by Siderise.

Please see separate installation instructions and installation video available on our website.

Please note:

For voids up to 50mm: (measured cavity) +10% compression is required.

For voids greater than 50mm: (measured cavity) + 10mm compression is required.

Siderise RH horizontal cavity barriers are installed so that they terminate each side of the Siderise RV vertical cavity barriers.

System Fire Performance

Siderise cavity barrier products have been used in a number of large-scale system tests such as BS 8414(1&2) and NFPA 285. These may be used to evaluate the performance of the Siderise cavity barriers within a complete cladding system. The rules for extended application of results from BS 8414 tests are subsequently defined in BS 9414.

For information regarding performance and assembly details in system tests please contact our technical services team.

Acoustic Performance

Additionally, the RV range of barriers are acoustically absorptive.

Furthermore, the foil facings and the additional sealing of joints with Siderise foil tape all serve to provide improved airtightness.

Table 3 confirms the laboratory tested values for Weighted Sound Reduction Index (dB Rw) in accordance BS EN ISO 10140-2:2021; Acoustics-Laboratory measurement of sound insulation of building elements, Part 2: Measurement of airborne sound insulation.

Table 3: RV Acoustic Performance - Weighted Sound Reduction Index

Product Type	Thickness (mm)	Rw (dB)	C:Ctr
RV-90/30	75	21	(-1;-2)
RV-90/30X	90	21	(-1;-2)
RV-90/60	100	21	(-1;-2)
RV-90/60X	120	23	(-1;-3)
RV-120/120	120	23	(-1;-3)
RV-120/120X	150	23	(-1;-3)

Rw is the weighted sound reduction index. It is a laboratory measured value to identify the airborne sound insulation performance of a building element. It is used for internal or external walls, ceilings/floors, windows, doors, or any separating element. The higher the Rw value, the better that element performs in reducing sound transmission.

Please note that the values presented in the above table refer to the standalone performance of the Siderise products only.

Thermal Performance

Thermal conductivity: λ = 0.038 W/m.K +/-5% (tested foil to foil) to BS EN 12667: 2001

Technical Specification

Table 4: Product Properties

Properties	Value
Form Supplied	Sheets: 1200mm x 1200mm (UK and EU); 1200mm x 1150mm (RoW) Pre-cut strips: 1200mm long and supplied in width to suit advised void size.
Product Finish	Aluminium foil to surfaces exposed to cavity
Product Colour	Solid, green-brown exposed edges with silver aluminium top and bottom facings
Density	Nominal 75 kg/m^3
Thermal Conductivity	λ = 0.038 W/m.K ±5% (tested foil to foil) to BS EN 12667: 2001
Void Sizes	RV-90/30 permissible for voids 20-250mm RV-90/30X permissible for voids 251- 400mm RV-90/60 permissible for voids up to 20-250mm RV-90/60X permissible for voids up to 251-400mm RV-120/120 permissible for voids 20-250mm RV-120/120X permissible for voids 251-400mm
Reaction to Fire	Class 'A1' to BS EN 13501-1:2018 (see Table 1)
Resistance to Fire	30 to 120 minutes (see Table 2)

Environmental

Recyclability

The stone wool core is recyclable.

Third-party verified EPD

Siderise RV Vertical Cavity Barrier have an Environmental Product Declaration (HUB-1302) in accordance with BS EN 15804+A2 & ISO 14025 / ISO 21930. Please see EPD in Product Resources or EPD Hub for further information.

60 Year Design Life

To confirm long-term durability, RV Cavity Barriers have been put through EOTA TR 024 'Type X' accelerated age testing. This is the harshest category which replicates exposure to rain, UV, high temperatures, and frost and thaw cycles.

When correctly installed in recommended applications, RV Cavity Barriers have an expected service lifespan of 60 years.

Additional Information Available

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

- Third-party Certification
- Environmental Product Declaration
- Material Data Sheet
- Installation Instructions
- Installation Video
- Standard Details
- NBS Specification Clauses

Technical Support

Technical Services Team: technical.services@siderise.com

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

For technical advice or support in the Middle East, India or Asia Pacific contact: smetech@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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