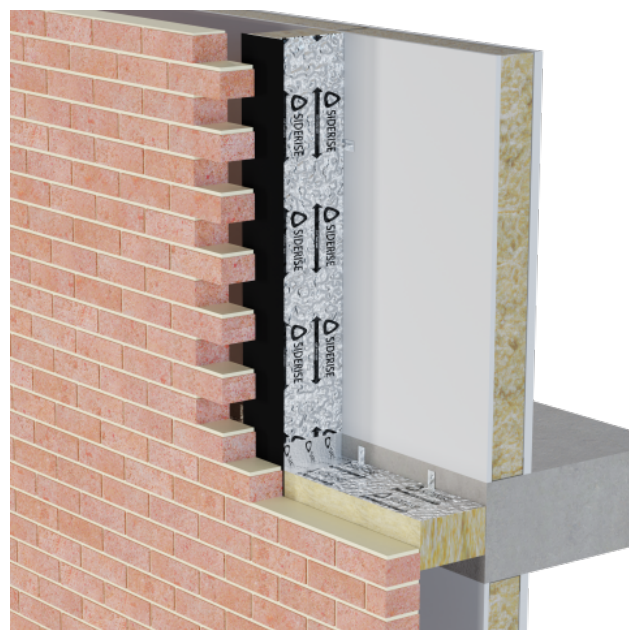


Siderise EW Closed State Cavity Barrier and Firestop

Cavity barriers and firestops to protect compartment lines and around openings in masonry walls



Application

Siderise EW Systems have been developed to provide a tested method of sealing external wall cavities for fire and smoke in external masonry constructions.

The EW product range is for use as a Cavity Barrier or Firestop in accordance with the guidance supporting the national Building Regulations.

Friction fit is available (see tables 2 & 3 for applicable voids) to support installation with 'green' brickwork, which brings considerable advantages to the construction timeline.

Please note that some void ranges are only available with a compression fit and may be unsuitable for green brickwork. Care should be taken when installing under compression to ensure mortar has cured adequately to prevent deformation of the masonry outer leaf.

In addition to providing an effective seal against the passage of smoke and fire, the products are also acoustically absorptive.

These products represent an ideal combination of fully qualified performance and practical installation.

3rd party product approval is provided by IFC Certification (IFCC 1830).

Product Description

Siderise EW Systems comprise of a low resin content stone wool insulation core which is pre-compressed internally to form a resilient strip. The material is faced on two sides with reinforced aluminium foil which is an effective smoke barrier. 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 & 3 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 to accommodate site tolerance (where the void may vary significantly).
- Appropriate brackets must be ordered separately.

Siderise EW should be installed in accordance with PD6697:2019 - 'Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2'.

- **Horizontal** - EW must be installed with a suitable cavity tray immediately above.
- **Vertical** - EW must be installed with a DPC extending a minimum of 25mm into the cavity on either side. DPC to be sourced separately. If requested by Building Control / Warranty provider the DPC can be optionally secured with Siderise RFT 120/45 foil tape.

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 EN 13501-1.

Siderise EW Systems are classified as A1 to EN 13501-1:2018. This is detailed further in Third-party certification with Intertek. Please see Table 1 for further information.

Table 1: Reaction to Fire Performance

Properties	Value
Classification	A1 to EN 13501-1
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 EW is manufactured and so covers a wider range than the thicknesses used for EW resistance to fire testing shown in table 2 and 3.*

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 EN 13501-2.

Siderise EW Systems have been tested in accordance with EN1366-4:2006 + A1:2010 and EN 1366-4: 2021(Only applies to EW-FS60 horizontal voids 51-250mm, EW-FS60 vertical voids 251-450mm and EW-FS120 horizontal voids with MSA – 250mm).

Siderise EW Systems maintained integrity (E) and insulation (I) requirements as detailed in Tables 2-3.

3rd party product approval is provided by [IFC Certification \(IFCC 1830\)](#).

Table 2: Resistance to Fire to EN1366-4 (Horizontal)

Product Ref	Void Width (mm)	Thickness (mm)	Compression (min.)	Integrity (Mins)	Insulation (mins)	Product Length (mm)	Bracket Requirement	Third-party Certification
EW-CB30	20 - 50	75	Gap Width + 10%	120	30	1200	None.	IFCC 1830
EW-CB30	51 - 150	75	Friction	90	30	1200	2no.B65/110 600mm centres	IFCC 1830
EW-CB30	151 - 250	75	Friction	90	30	1200	2no.B195 600mm centres	IFCC 1830
EW-CB30	251 - 350	75	Friction	90	30	1200	2no.B355 600mm centres	IFCC 1830
EW-FS60	20 - 50	90	Gap Width + 10%	90	60	1200	None.	IFCC 1830
EW-FS60	51 - 150	90	Friction	90	60	1200	2no.B65/110 600mm centres	IFCC 1830
EW-FS60	151 - 250	90	Friction	90	60	1200	2no.B195 600mm centres	IFCC 1830
EW-FS60	251 - 300	90	Gap Width +10mm	90	60	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120	20 - 50	120	Friction	120	120	1200	None.	IFCC 1830
EW-FS120	51 - 150	120	Friction	120	120	1200	2no.B65/110 600mm centres	IFCC 1830
EW-FS120	151 - 250	120	Friction	120	120	1200	2no.B195 600mm centres	IFCC 1830
EW-FS120	251 - 350	120	Friction	120	120	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120 with MSA*(1)	250 (Tested)	120	Friction	120	120	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120 with MSA*(2)	250 (Tested)	120	Friction	120	120	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120 with MSA*(3)	250 (Tested)	120	Friction	120	120	1200	2no.B355 600mm centres	IFCC 1830

*Siderise has undertaken additional testing with EW-FS120 which includes masonry support angles (MSA) penetrating the system. For more information on these tests please refer to IFCC 1830 or contact technical.services@siderise.com

(1) In this test specimen the MSA penetrates the product and protrudes from the unexposed face by 18mm

(2) In this test specimen the MSA penetrates the product and is finished flush with the unexposed face and protrudes the exposed face by 15mm

(3) In this test specimen the MSA penetrates the product by 50% and protrudes the exposed face by 75mm

Table 3: Resistance to Fire to EN1366-4 (Vertical)

Product Ref	Void Width (mm)	Thickness (mm)	Compression (min.)	Integrity (Mins)	Insulation (mins)	Product Length (mm)	Bracket Requirement	Third-party Certification
EW-CB30	20 - 50	75	Gap Width + 10%	120	30	1200	None.	IFCC 1830
EW-CB30	51 - 150	75	Friction	120	30	1200	2no.B65/110 600mm centres	IFCC 1830
EW-CB30	151 - 250	75	Friction	120	30	1200	2no.B195 600mm centres	IFCC 1830
EW-CB30	251 - 350	75	Friction	120	30	1200	2no.B355 600mm centres	IFCC 1830
EW-CB30	351 - 450	75	Gap Width +10mm	120	30	1200	2no.B355 600mm centres	IFCC 1830
EW-FS60	20 - 50	90	Gap Width + 10%	90	60	1200	None.	IFCC 1830
EW-FS60	51 - 150	90	Friction	90	60	1200	2no.B65/110 600mm centres	IFCC 1830
EW-FS60	151 - 250	90	Friction	90	60	1200	2no.B195 600mm centres	IFCC 1830
EW-FS60	251 - 450	90	Gap Width +10mm	90	60	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120	20 - 50	120	Friction	120	120	1200	None.	IFCC 1830
EW-FS120	51 - 150	120	Friction	120	120	1200	2no.B65/110 600mm centres	IFCC 1830
EW-FS120	151 - 250	120	Friction	120	120	1200	2no.B195 600mm centres	IFCC 1830
EW-FS120	251 - 350	120	Friction	120	120	1200	2no.B355 600mm centres	IFCC 1830
EW-FS120	351 - 450	120	Gap Width +10mm	120	120	1200	2no.B355 600mm centres	IFCC 1830

- All brackets are to be suitably fixed to the substrate with non-combustible fixings, or mortared into masonry coursing.
- All brackets to penetrate product at mid-thickness.
- All brackets to penetrate to a depth of 75% of gap width.

- Brackets are available in two forms: (G) denotes galvanised steel brackets and (S) denotes stainless steel brackets.
- 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 250mm. For lengths ≤ 250 mm a single bracket can be utilised.
- Whilst the EW range has been tested in general accordance with EN 1366-4 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.

Friction Fit - product should be sized equal to the void width and installed with no gaps.

Please note product supplied in strip form will have a -0mm/+4mm tolerance.

Compression Fit - the product should be sized to the void width plus a minimum of +10mm or 10% compression (Please see Tables 2 & 3). Care should be taken when installing under compression to ensure mortar has cured adequately to prevent deformation of the masonry outer leaf.

Please see separate installation instructions (available for download from our website) for more information.

When considering Steel Frame Systems (SFS) the supporting substrate should be capable of providing support to the barrier for the required period of fire resistance. For other void sizes or additional advice, please contact Technical Support.

Acoustic Performance

Due to the way cavity masonry façades typically interface with floor slabs it is not usual to rely on elements within the cavity to control flanking noise transfer between floors.

Flanking performance for masonry façades is typically controlled by internal finishes such as high mass plasterboard linings. Siderise EW is not designed with acoustic applications in mind, however as a stonewool product it naturally has some sound absorbing properties.

Please contact our technical department for project specific guidance relating to acoustic performance in masonry applications.

Thermal Performance

Thermal conductivity : $\lambda = 0.038 \text{ W/m.K} \pm 5\%$ (tested foil to foil) to EN 12667: 2001

Damp Proofing

Siderise EW must be damp-proofed in accordance with PD6697:2019 - 'Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2'.

Technical Specification

Siderise EW - Cavity Barriers and Fire Stops

Table 4: Product Properties

Properties	Value
Form Supplied	Sheets: Standard sheet size is 1200 x 1200mm (UK), 1200mm x 1150mm (RoW): Thickness is denoted by the rating. Pre-cut strips: 1200mm length, width available in 1mm increments to suit the cavity size. Pre-cut strips are sized to allow for application of the relevant compression requirement (where applicable). Please see Tables 2 & 3 regarding 'fit type'. Supplied with appropriate brackets as part of a system.
Reaction to Fire	Classification to EN 13501-1 : 'A1' Please see Table 1
Resistance to Fire	30 to 120 minutes, please see Table 2 & 3
Thermal Conductivity	$\lambda = 0.038 \text{ W/m.K} \pm 5\%$ (tested foil to foil) to EN 12667: 2001
Chemical	The base stone wool is chemically inert. An aqueous extract of the rock wool is neutral (pH7) or slightly alkaline. Resistant to most acids and weak alkaline solutions.
Biological	Vermin and rot proof and does not encourage the growth of fungi, moulds or bacteria.
Effect of water	Non-hygroscopic. Unaffected by humid atmosphere. Must be suitably damp proofed in accordance with codes of practice for masonry constructions
Compatibility	Compatible with all normal building materials.
Maintenance	No maintenance required unless disturbed.
Handling	See Material Data Sheet section 7.

Siderise offers a range of ancillary products to complement the EW range these include:

Fixing Brackets must be used in the installation of the product.

Brackets come in two forms: 'G' - Galvanised Steel Brackets and 'S' - Stainless Steel Brackets.

Brackets are supplied with all EW in strip form, but must be ordered separately for all EW in sheet form.

Aluminium Jointing Tape must be used at all joints and intersections:

- RFT120/45 (120mm wide x 45m rolls)
- Adhesive backed
- Supplied in boxes of 8

Table 5: Physical Characteristics

Properties	Value
Manufacturer and Product Name	Siderise EW
Product Type	Cavity Barriers and Fire Stops for Masonry External Walls
Code/Model/Reference/SKU	EW
Description	See 'Product Description' section
Application/Use	See 'Application' section
Material	See Material Data Sheet section 3.1
Weight	Individual Precut strips 0.23kg to 5.49kg (75mm thick;20mm width to 120mm thick;450mm width, respectively). Full individual sheets from 8.3 +/- 0.1 kg to approx 13.7+/- 0.4 kg (75mm to 120mm thick respectively). Based on Precut strips and Full sheets at 1200mm lengths.
Finish /Colour	Solid, green-brown exposed edges with silver aluminium top and bottom facings.
Packaging	Pre-cut strips packaged in cardboard cartons size; Full sheets packaged on pallets.
Pack Size	Pre-cut strips packaged in cardboard cartons size up to 1230mm x 610mm ; Max 8 cartons per pallet. Full sheets packaged on pallets 1210mm x 1210mm Packaged pallet max height approx. 2100mm.
Unit of measure	millimetre (mm)
Chemical properties/Safety data sheets	See Material Data Sheet section 3.1
Size/dimensions (product & installation spatial requirement)	See Table 4 'Form Supplied'
Shelf life	n/a; Store in dry conditions and protect from mechanical damage.

Environmental

The stone wool core is recyclable.

Additional Information Available

The following information is available for download via the website:

- Third-party Certification - IFCC 1830
- Standard Details
- NBS Specification Clauses
- Installation Instructions
- Material Data Sheet

Technical Support

For technical advice or support 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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