















# **Technical Description of Product**



PFC Corofil Cavity Fire Stop full fill cavity barrier is a stone wool product installed between the façade and the inner structure of a building to reinstate the fire resistance performance of the cavity.

PFC Corofil Cavity Fire Stop has been tested to EN1366-4 and EN1363-1 TR031 and will provide up to 120 minutes fire integrity and insulation performance.

PFC Corofil Cavity Fire Stop can be supplied in full slabs 1003mm x 605mm, or cut to size to suit the cavity width, and can be supplied as plain stone wool, foil encapsulated, or with an integral DPC.

## Intended Use

PFC Corofil Cavity Fire Stop has been designed and tested to be installed within building cavities between the façade and the inner structure. It can be installed against SFS with calcium silicate fibre cement or gypsum boards, and masonry substrates in both horizontal and vertical orientations. It has also been tested to be installed vertically against timber frame constructions with OSB and plywood sheathing boards.

PFC Corofil Cavity Fire Stop can be installed in masonry support systems\* in cavity widths up to 450mm. PFC Corofil Cavity Fire Stop is suitable for cavity widths up to 600mm. PFC Corofil Cavity Fire Stop can be installed in applications with or without an integral DPC.

PFC Corofil Cavity Fire Stop can be installed under a friction fit (please see tables from page 5 for compression required).

This data sheet shows the only applications the product has been tested in. Please ensure the product has been tested in and is suitable for your application (see PFC Corofil terms and conditions 9.4).

## **Key Points**

- Suitable for cavity widths up to 600mm (please see tables from page 5).
- Can be installed against SFS with calcium silicate fibre cement or gypsum boards.
- Can be installed against aerated concrete, concrete and masonry substrates.
- Can be installed in masonry support systems (please see substrates on page 4 for specification).
- Can be installed against timber frame with OSB and plywood sheathing boards.
- Provides up to 120 minutes fire resistance performance (please see tables from page 5).
- Can be installed with 0mm, 2mm or 5mm compression depending on application and fire resistance performance required.

 $<sup>^{\</sup>star}$  Please see substrates on page 4 for the masonry support system specification

### **Installation Instructions**



#### General

- Please refer to SDSCCFS for information on safe handling and disposal.
- Ensure surfaces are clean, dry and free from dirt, dust, mortar and other contaminants.
- Ensure the opening to be filled has been tested with and is suitable for the product being installed.
- Cut back any insulation fixed to the inner substrate prior to installation of the PFC Corofil Cavity Fire Stop.
- For applications where a compression fit is required, compress the PFC Corofil Cavity Fire Stop and push into the cavity.
- Any cutting of the PFC Corofil Cavity Fire Stop on site to suit tolerances, shall be done accurately and kept to a minimum. Ensure correct compression is maintained.
- When extending the length of the PFC Corofil Cavity Fire Stop, ensure the adjacent lengths have their joints tightly abutted together and are aligned flush with each other to give the appearance of a continuous strip with no gaps.
- Fill any gaps up to 5mm wide with PFC Corofil Acoustic Intumescent Sealant to a minimum depth of 10mm. Please note, gaps should not pass through the full depth of the barrier.
- Where brackets are required for installation, or for applications where a mechanical fix needs to be achieved, please follow the instructions below.
- For lightweight aggregate applications, fix PFC Corofil Multipurpose Brackets to the substrate using 1 no.
  non-combustible steel screw minimum 4mm Ø x 40mm long (supplied by others) and position the leg of the
  brackets to the midpoint of the PFC Corofil Cavity Fire Stop. The brackets should be fixed 250mm from each
  end of each individual section of barrier at maximum 500mm centres. For all other concrete or masonry
  applications, please speak with a fixings distributor to determine the correct fixing.
- For calcium silicate fibre cement board applications, fix PFC Corofil Multipurpose Brackets to the substrate
  using 1 no. 6mm Ø x 32mm coarse threaded steel screw suitable for the board (supplied by others) and
  position the leg of the brackets to the midpoint of the PFC Corofil Cavity Fire Stop. The brackets should be
  fixed 250mm from each end of each individual section of barrier at maximum 500mm centres.
- For gypsum board applications, fix PFC Corofil Multipurpose Brackets to the substrate using 1 no. interset bolt M5 x 37mm (supplied by others) and position the leg of the brackets to the midpoint of the PFC Corofil Cavity Fire Stop. The brackets should be fixed 250mm from each end of each individual section of barrier at maximum 500mm centres.
- For OSB and plywood board applications, fix PFC Corofil Multipurpose Brackets to the substrate using 1 no. steel screw 4mm Ø x 40mm long (supplied by others) and position the leg of the brackets to the midpoint of the PFC Corofil Cavity Fire Stop. The brackets should be fixed 250mm from each end of each individual section of barrier at maximum 500mm centres. A minimum 38mm thick timber stud must be in place directly behind the sheathing board following the line with the cavity barrier.
- When fixing the brackets to any other substrate, please contact a fixing supplier for advice on the correct fixings.
- Push the PFC Corofil Cavity Fire Stop onto the leg of the bracket so it is spiked into the centre along the length and compress into the cavity. There should be at least 25mm between the end of the bracket and the outer face of the barrier.
- When cutting lengths to fit at the end of a run, install one bracket centrally in lengths up to 300mm, for lengths 301mm to 1000mm 2 brackets should still be used distanced equally from each end.

### Installation Instructions



### **Masonry Support System**

- Mark where the masonry support brackets meet the PFC Corofil Cavity Fire Stop and cut a notch into the CCFS.
- Compress the PFC Corofil Cavity Fire Stop and push into the cavity.

### **Substrates**

- Rigid walls: Minimum 100mm thick and comprise of concrete, aerated concrete or masonry, with a minimum density of 650kg/m³.
- Rigid Floors: Minimum 150mm thick and comprise of concrete, aerated concrete or masonry, with a minimum density of 650kg/m³.

#### SFS Systems:

- 1. 135mm overall thickness comprising, 90mm Metsec C stud, clad internally with  $2 \times 15$ mm Knauf Fire Panel, clad externally with  $1 \times 12$ mm RCM Y-Wall panel and 75mm Rockwool Duo slab.
- 2. 125mm overall thickness comprising, 90mm and 94mm Metsec steel profiles and 100mm Rockwool insulation, clad internally with 1 x 12.5mm plasterboard, clad externally with 1 x 12.5mm Siniat Weather Defence board.
- 3. 125mm overall thickness comprising, 92mm and 94mm steel profiles and 100mm Rainscreen Duoslab insulation, clad internally with  $1 \times 12.5$ mm Knauf Windliner board, clad externally with  $1 \times 12.5$ mm Gyproc WallBoard.
- 4. 125mm overall thickness comprising, 92mm and 94mm steel profiles and 100mm Flexi Slab insulation, clad internally with  $1 \times 12.5$ mm Glasroc X board, clad externally with  $1 \times 12.5$ mm Gyproc WallBoard with Obex Cortex Class A2 breather membrane.
- 5. 127.5mm overall thickness comprising, 100mm x 35mm Caledan steel profiles and 100mm Rockwool steel frame slab insulation, clad internally with 1 x 15mm British Gypsum Gyproc wallboard, clad externally with 1 x 12.5mm British Gypsum Glasroc X gypsum based sheathing board. Cavity insulation was Rockwool Duoslab, DPC to face of CCFS was Visqueen Polythene Damp proof course, 1mm thick x 150mm wide.

### Masonry Support Sytems:

- 1. Ancon MDC/P Masonry Support System to suit cavity widths up to 450mm.
- 2. Wincro WSC Masonry Support System to suit cavity widths up to 300mm.

### **Timber Frame:**

Comprising OSB or Plywood sheathing boards (minimum 9mm thick) with a minimum 38mm thick timber stud placed directly behind the sheathing board in line with the cavity barrier.

# **Terminology**

#### Fire resistance classes:

- E = Integrity. The length of time it takes for the fire to pass to the non-fire side.
- I = Insulation. The length of time it takes for the heat of the fire to pass to the non-fire side.



# Rigid Floors minimum thickness 150mm

PFC Corofil Cavity Fire Stop installed against Rigid Floors minimum 150mm thick									
	Minimum thickness of Cavity Fire Stop (mm)		Compression required		Fire resistance performance				
Overall Cavity width (mm)		Orientation		Brackets required	Integrity (minutes)	Insulation (minutes)			
10 – 100	100			No	E 120	EI 120			
101 - 200	100		5mm -	No	E 120	El 90			
201 - 450	92	Horizontal		Yes	E 120	El 30			
451 - 595	82			Yes	E 60	El 30			

# Rigid Walls minimum thickness 100mm

PFC Corofil Cavity Fire Stop installed against Rigid walls minimum 100mm thick.										
Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)		Compression required		Fire resistance performance					
		Orientation		Brackets required	Integrity (minutes)	Insulation (minutes)				
10 - 200	100	Vertical	5mm	No	E 120	EI 120				
201 - 600	82	vertical	5mm -	Yes	E 120	El 30				



### Corofil CCFS, Tested to EN1366-4

Rigid walls minimum thickness 100mm Rigid floors minimum thickness 150mm Fire resistance performance Overall Cavity Minimum thickness of Compression Brackets Orientation width (mm) Cavity Fire Stop (mm) required required Integrity Insulation (minutes) (minutes) Horizontal 201 - 300 100 5mm Yes 120 120

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 510661/R

Vertical

Rigid walls minimum thickness 100mm Fire resistance performance **Overall Cavity** Minimum thickness of Compression Brackets Orientation width (mm) Cavity Fire Stop (mm) required required Integrity Insulation (minutes) (minutes) Horizontal 10 - 300 100 2mm Yes E 120 EI 30 Vertical

PFC Corofil Cavity Fire Stop installed against masonry substrate Rigid walls minimum thickness 100mm									
Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)		Compression required	Brackets required	Fire resistance performance				
		Orientation			Integrity (minutes)	Insulation (minutes)			
10 - 300	100	Vertical	Omm	Yes	E 120	EI 20			



# Rigid Floors minimum thickness 150mm with masonry support system

	PFC Corofil Cavity Fire Stop installed horizontally against Ancon MDC Masonry Support System fixed to a rigid floor slab minimum 150mm thick									
	Overall Cavity width (mm)	Minimum thickness of	Minimum gap from top of	Compression	Brackets	Fire resistance performance				
		Cavity Fire Stop (mm)	masonry support bracket to top of floor slab (mm)	required	required	Integrity (minutes)	Insulation (minutes)			
	10 - 200				No	E 120	EI 120			
	201 - 450	82	28	5mm	Yes	E 120	EI 30			

PFC Corofil Cavity Fire Stop installed horizontally against Ancon MDC Masonry Support System fixed to a rigid floor slab minimum 150mm thick									
Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Penetration of masonry	Orientation of MSA	Compression required	Brackets required	Fire resistance performance			
		support bracket				Integrity (minutes)	Insulation (minutes)		
10 - 200	100	Flush with top of barrier	Standard			100	60		
		20mm below top face of barrier	Standard	3mm	No	120			

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 545808A

PFC Corofil Cavity Fire Stop installed horizontally against Wincro WSC Masonry Support System fixed to a rigid floor slab

Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Penetration of masonry	Orientation of	Compression	Brackets	Fire resistance performance	
		support bracket	MSA	required	required	Integrity (minutes)	Insulation (minutes)
10 - 300		Flush with top of barrier	Standard				
	100	40mm above top face of barrier	Inverted	3mm	No	120	30

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 545808B



# SFS system with calcium silicate cement fibre board

PFC Corofil Cavity Fire Stop installed against SFS system (see 'SFS Systems' substrate 1 on page 4 for full specification) to masonry outer substrate									
Overall Cavity width (mm)	Minimum thickness of	Oriontation	Compression	Brackets	Fire resistance performance				
	Cavity Fire Stop (mm)	Orientation	required	required	Integrity (minutes)	Insulation (minutes)			
10 - 595	82	Horizontal	5mm	Yes	E 120	EI 60			
10 - 600	82	Vertical	əinm	Yes	E 120	El 30			

# SFS system with gypsum board, Tested to EN1366-4

PFC Corofil Cavity Fire Stop installed against SFS system (see 'SFS Systems' substrate 2 on page 4 for full specification) to masonry outer substrate									
	Minimum thickness of Cavity Fire Stop (mm)		Compression required		Fire resistance	Fire resistance performance			
Overall Cavity width (mm)		Orientation		Brackets required	Integrity (minutes)	Insulation (minutes)			
10 - 450	100	Horizontal		.,	E 120	El 30			
		Vertical	2mm	Yes	E 120	El 30			

PFC Corofil Cavity Fire Stop installed against SFS system (see 'SFS Systems' substrate 4 on page 4 for full specification) to masonry outer substrate									
			Compression required		Fire resistance performance				
Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Orientation		Brackets required	Integrity (minutes)	Insulation (minutes)			
10000		Horizontal	_		100	100			
10 - 200	100	Vertical	5mm	No	120	120			

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 545809A



PFC Corofil Cavity Fire Stop installed against SFS system (see 'SFS Systems' substrate 3 on page 4 for full specification) to masonry outer substrate

'								
Overall Cavity	Minimum thickness of Cavity Fire Stop (mm)	Orientation	Compression required		Fire resistance performance			
Overall Cavity width (mm)				Brackets required	Integrity (minutes)	Insulation (minutes)		
10 - 300	100	Vertical	5mm	V	120	90		
301 - 450	100			Yes	120	60		

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 545809B

PFC Corofil Cavity Fire Stop installed against SFS system (see 'SFS Systems' substrate 3 on page 4 for full specification) with horizontal C-channels\* to masonry outer substrate

Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Orientation	Compression required	Brackets required	Fire resistance performance		
					Integrity (minutes)	Insulation (minutes)	
10 - 300 100		Vertical	2mm	Yes	120	60	

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 545809B

PFC Corofil Cavity Fire Stop (CCFS) installed against SFS system (see SFS systems substrate 5 on page 4 for full specification)

Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	l ()rientation l		Brackets required	Outer substrate	Fire resistance performance	
			Compression required			Integrity (minutes)	Insulation (minutes)
10 - 300	100	Vertical	Omm	Yes	Masonry/ concrete	120	30
		Horizontal				120	120
10 - 320		Vertical			Rockpanel rainscreen 9mm thick	120	90

<sup>\* 3</sup>mm thick aluminium and 1.9mm thick galvanised steel C-channels penetrated the Corofil CCFS



# Timber frame systems, Tested to EN1366-4

PFC Corofil Cavity Fire Stop installed against timber framework with plywood sheathing (see substrates on page 4 for full specification) to masonry outer substrate

Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Orientation	Compression required	Brackets required	Fire resistance performance	
					Integrity (minutes)	Insulation (minutes)
10 - 297	100	Vertical	2mm	Yes	60	30

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 510756/R

PFC Corofil Cavity Fire Stop installed against timber framework with OSB sheathing (see substrates on page 4 for full specification) to masonry outer substrate

Overall Cavity width (mm)	Minimum thickness of Cavity Fire Stop (mm)	Orientation	Compression required	Brackets required	Fire resistance performance	
					Integrity (minutes)	Insulation (minutes)
10 - 123	100	Vertical	2mm	Yes	60	60

Please note: The products and fire resistance performances listed in this table are not included in the Classification Report.

Please contact PFC Corofil Technical for the relevant fire test report - Ref: WF 510756/R





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King Georges Trading Estate | Davis Road | Chessington | KT9 1TT T. +44 (0) 208 391 0533

 ${\sf E. sales@pfc\text{-}corofil.com\ |\ tech@pfc\text{-}corofil.com\ |\ W.\ pfc\text{-}corofil.com}}$ 



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