
CERTIFICATE OF APPROVAL

No CF 514

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

FSI LIMITED

Westminster Industrial Estate, Tamworth Road,
Measham DE12 7DS

Tel: 01530 515130 Fax: 01530 273564

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT

Stopseal Fire Pillows
& S-Line Fire Pillows

TECHNICAL SCHEDULE

TS03 Penetration Sealing
Systems

Signed and sealed for and on behalf of Exova (UK) Limited trading as
Warrington Certification



Paul Duggan
Certification Manager



Issued:
Reissued:
Valid to:

20th November 2006
8th May 2018
7th May 2023

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FSI LIMITED

Stopseal Fire Pillows & S-Line Fire Pillows

1. This approval relates to the use of Stopseal Fire Pillows & S-Line Fire Pillows for the fire protection where services are penetrating walls and floors. The detailed scope is given in the Approval Matrix included in this Certificate. This shows the thickness and acceptable services for Stopseal Fire Pillows required to provide fire resistance periods in accordance with BS 476: Part 20: 1987 and for S-Line Fire Pillows required to provide fire resistance periods in accordance with EN 1366-3: 2009 (as indicated in the Matrix of Approval) of up to 120 minutes for differing services and wall/floor constructions. The scope of certification complies with the guidelines stated in the ASFP Red Book: 3rd Edition for 3rd party certification schemes.
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
3. The product is approved on the basis of:
 - i) Initial type testing
 - ii) Audit testing at the frequency specified in TS03
 - iii) A design appraisal against TS03
 - iv) Inspection and surveillance of factory production control
4. The concrete floors and/or masonry or concrete walls shall be at least as thick as the sealing system as shown in the Approval matrix and have at least the same fire rating as that required for the penetration seal.
5. The services which may be fitted through the seals are cables ladders of various sizes and communication cables.
6. The approval relates to ongoing production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

Further Information

Further information regarding the details contained in this data sheet may be obtained from FSi Limited. (Tel: 01530 515130).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel:01925 646777).

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Stopseal Fire Pillows - BS 476: Part 20: 1987 Approval Matrix

Product Name:		Stopseal Fire Pillows				
Coating / WFT:		Not applicable				
Density:		Not applicable				
Orientation	Services	Integrity/ Insulation	Required Pillow Thickness For Fire Resistance Period (minimum)			
			30 mins	60 mins	90 mins	120 mins
Floor	No	Int. & Ins.	150 mm	150 mm	200 mm	200 mm
	Yes	Int. & Ins.	150 mm	200 mm	250 mm	300 mm
	Yes	Int. only	150 mm	150 mm	200 mm	200 mm
Wall	No	Int. & Ins.	150 mm	180 mm	250 mm	300 mm
	Yes	Int. & Ins.	150 mm	200 mm	250 mm	300 mm
	Yes	Int. only	180 mm	180 mm	250 mm	300 mm
Penetrating Services:		Cable ladders and communication cables				
Maximum aperture:		1000 mm by 1000 mm				
Wall/floor thickness:		The floors and walls shall be a minimum of 100mm thick for periods of up to 60 minutes fire resistance and 150 mm (floor) and 200 mm (wall) thick for periods of 90 minutes and 120 minutes fire resistance. The minimum density for the concrete of the floor or wall is 780kg/m ³ and for walls made of concrete blocks is 600kg/m ³ .				
Application Technique:		Floors: Steel mesh (50 mm square with 5 mm wire) is mechanically fixed either to the soffit of the floor or within the reveal of the aperture via vertical returns at the edges of the mesh. The fire pillows are tightly packed into the opening and around the services. Walls: The fire pillows are tightly packed into the opening and around the services (no mesh is required).				
Service Coat-Back :		Not required			U Value:	Not known
Service Support Requirements:		Services should be rigidly supported via steel angles, hangars or channels, not further than 500 mm from the surface of the sealing system on both faces.				
Air Permeability: EN1026		Pressure (Pa)	Positive pressure (m ³ /h/m ²)	Negative pressure (m ³ /h/m ²)	Weather Capability:	Not evaluated by this approval
		50	13.9	17.2		
		100	22.8	31.1		
Acoustic Rating: BS EN ISO 10140-2:2010		R_w(C;C_{tr}) : 33(0;2) dB D_{new}(C;C_{tr}): 38(-2;-7)dB			Movement Capability:	Not evaluated by this approval

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S-Line Fire Pillows - BS EN 1366-3: 2009 Approval Matrix

Product Name:		S-Line Fire Pillows		
Element of construction	Services	Additional requirements	Integrity	Insulation
Masonry/ concrete wall min 150 mm thick	Telecom cables up to 21mm Ø (single or bundles up 100 mm Ø)	None	120 minutes	120 minutes
	Electrical cables up to 21 mm Ø	None	120 minutes	120 minutes
	Electrical cables up to 50 mm Ø	Cables lagged*	120 minutes	90 minutes
	Electrical cables up to 80 mm Ø	Cables lagged*	120 minutes	90 minutes
	Unsheathed wires up to 24 mm Ø	Cables lagged*	120 minutes	120 minutes
	Steel or Copper conduits and tubes up to 16 mm Ø	None	120 minutes	120 minutes
	Plastic (any) conduits and tubes up to 16 mm Ø	None	120 minutes	120 minutes
	Cable tray/ladder up to 300mm wide	None	120 minutes	60 minutes
	Cable tray up to 500 mm wide	None	120 minutes	90 minutes
	54mmØ x 1.0 mm thick copper pipe with 15 mm Armaflex insulation	Pipe lagged***	120 minutes	120 minutes
	108mmØ x 1.5 mm thick copper pipe	Pipe lagged*	120 minutes	90 minutes
	48mmØ x 3.5mm thick mild steel pipe	Pipe lagged**	120 minutes	120 minutes
	113mmØ x 4.5 mm thick copper pipe	Pipe lagged***	120 minutes	120 minutes
	165mmØx5.6mm thick mild steel pipe	None	120 minutes	-
* Lagging:		To be formed from 2 or more pillows stitched together around the service to a minimum length of 300 mm on both sides of the wall/main seal.		
** Lagging:		To be formed from Thermal Defence Wrap 1 to a minimum length of 300 mm on both sides of the wall/main seal.		
*** Lagging:		To be formed from Thermal Defence Wrap 2 to a minimum length of 300 mm on both sides of the wall/main seal.		
Maximum aperture:		1100 mm by 1100 mm		
Walls:		The walls shall be a minimum of 150mm thick and have a minimum density of 760kg/m ³ . The wall shall be classified to EN 13501-2 for at least the required performance period.		
Application Technique:		The fire pillows inserted lengthways to achieve a 300 mm deep seal and tightly packed into the opening and around the services. Smaller pillows are used as appropriate to fill smaller gaps.		
Service Coat-Back :		Not required	U Value:	Not known
Service Support Requirements:		Services should be rigidly supported via steel angles/hangars/channels, not further than 250 mm from the surface of the sealing system, on both faces.		