

firewise

supplies Ltd

Technical Data Firewise FR Fire Collars



Related Firewise Products



Technical Data

Firewise FR Fire Collars

Product Description

Firewise FR Collars provide a robust, versatile and economic fire seal to provide fire resistance in compartment walls (including gypsum stud walls) and floors where openings in these construction elements are formed to accommodate plastic service pipes. In a fire attack situation, the intumescent lining within the collar expands to form a robust char barrier which prevents the passage of flames and hot gases through voids created by the melting plastic pipe and in addition restricts temperature rise on the non-fire side of the wall or floor.

Firewise FR Collars are made from corrosion resistant powder coated steel or stainless steel and lined with a water resistant polymer based intumescent material. Firewise FR Collars are supplied in 8 standard sizes, but have been tested 'oversize' on smaller diameter plastic pipes thereby reducing the need to use more costly non-standard sizes. Firewise FR Collars are particularly suitable when pipes are fitted in tight corners (see installation instructions). Firewise FR Collars are also suitable for use when plastic pipes are installed through mineral wool penetration systems, without the need for any additional mechanical fixings (up to 110mm Ø). The full scope of use is dependent on certification - please refer to Fire Performance.



Physical Properties

Composition:	Powder coated steel or stainless steel shell with intumescent liner
Intumescent activation temperature:	Approximately 180° C
Intumescent expansion pressure:	193.5 kPa mean peak pressure for 1.82mm thick material in a 8.27mm gap
Intumescent expansion volume ratio:	11.45 mean ratio at 2.84 kPa
Service temperature:	-15°C - +75°C

Firewise FR Collars contain no hazardous materials and are asbestos free. This data sheet should be read in conjunction with the MSDS for this product.

Fire Performance

Scope of use of collars tested in accordance with EN1363-1:1999 & EN1366-3:2004, BS476-Part 20:1987 and Assessed to BS 476-20.

For use with PVC, uPVC, cPVC, PP, PE and ABS pipes.

Construction	Integrity	Insulation
Timber/Steel Stud Drywalls	120 mins	120 mins
Concrete/Blockwalls	240 mins	240 mins
Concrete Floors - fully cast-in (up to 110mm Ø)	240 mins 180 mins	240 mins 180 mins
Mineral Wool Boards - up to 110mm Ø	90 mins	90 mins

Scope of use of CE marked collars in accordance with ETAG 026-2.

Refer to ETA 14/0241 for further details – available from Firewise.

Construction	Collar Size	Pipe Wall Thk	Pipe Material	Integrity & Insulation			
Steel/Timber Stud Drywalls - min. 100 mm thick - both faces min. 2N° 12.5 mm boards - refer to Fig A	55mm	2.0-3.7mm	uPVC	120 mins			
	82mm	3.0-3.5mm					
	110mm	2.2-8.1mm					
	125mm	3.7-9.2mm					
	160mm	3.2-11.8mm					
Concrete/Masonry Walls - min. 100 mm thick - min. density 650 kg/m³ - refer to Fig C	55mm	2.0-3.7mm	uPVC	120 mins			
	82mm	3.0-3.5mm					
	110mm	2.2-8.1mm					
	125mm	3.7-9.2mm					
	160mm	3.2-11.8mm					
	Concrete Floors - min. 150 mm thick - min. density 650 kg/m³ - surface mounted - refer to Fig B	55mm			2.5-3.7mm	uPVC	240 mins
					82mm		3.0-3.5mm
		110mm			3.8mm	PP	240 mins
					2.2-8.1mm 5.3mm		uPVC Composite
		125mm			3.7-9.2mm	uPVC	120 mins
160mm		10mm	PE	60 mins			
		3.2-11.8mm	uPVC	180 mins			

Dimensional Data

Size	To Suit Pipe OD	Height	Shell O/D*
55mm	32-55mm	50mm	72mm
82mm	56-82mm	50mm	103mm
110mm	83-110mm	50mm	135mm
125mm	111-125mm	60mm	160mm
160mm	126-160mm	60mm	203mm
200mm	200mm	78mm	269mm
250mm	250mm	78mm	328mm
315mm	315mm	78mm	390mm

* approx. dimension



Installation Instructions



The fixing diagrams below are intended as simple representations of tested and certified methods of installation. Whilst practical site conditions have been considered, any alternative method of fixing may invalidate the test certification and advice should be sought from the manufacturer.

Fig A. Surface Mounting to Timber or Steel Stud Drywall

1. A collar is required on both sides of the wall
2. Attach the collar around the pipe and slide firmly up against the plasterboard wall
3. Mark location of fixings and securely fasten collar to both sides of the wall using suitable non combustible drywall anchors
4. Min. separation between the pipe and any timber stud to be 100mm and filled with insulation class A1 or A2 to EN13501-1. Cavity between the pipe and timber stud to be closed with suitable non combustible material.

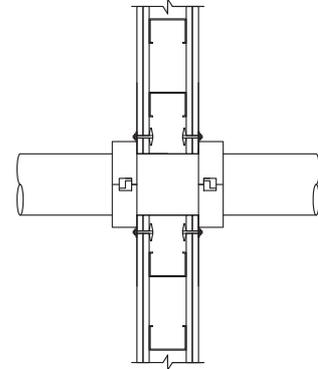


Fig B. Surface Mounting to Concrete Slab

1. A collar is required on the underside of the slab only
2. Attach the collar around the pipe and slide firmly up against the underside of the slab
3. Mark location of fixings and securely fasten collar to slab using suitable non combustible anchors or bolts (recommended 50mm minimum length)
4. If the pipe is tightly fitted into a corner, separate the 2 halves and fit one half of the collar behind the pipe. Once this is securely fastened to the slab, the other half can be attached using the slidelocks and then fixed onto the slab
5. If the surface of the slab is irregular, apply a bead of intumescent mastic around the circumference of the collar before mechanical attachment

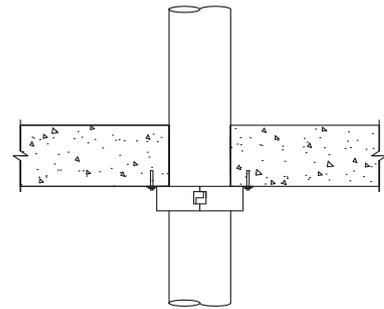


Fig C. Surface Mounting to Concrete/Blockwalls

1. A collar is required on both sides of the wall unless the fire risk is limited to 1 side only
2. Attach the collar around the pipe and slide firmly up against the wall
3. Mark location of fixings and securely fasten collar to both sides of the wall using suitable non combustible anchors or bolts (recommended 50mm minimum length)
4. If the surface of the wall is irregular, apply a bead of intumescent mastic around the circumference of the collar before mechanical attachment

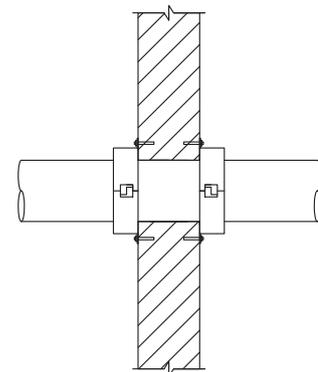


Fig D. Cast-into Mineral Wool Boards

1. The collar should be fitted through the full thickness of the mineral wool board
2. Mark the circumference of the collar shell on the board and cut out the mineral wool around the pipe to accommodate the collar
3. Fasten the collar around the pipe and push tightly into the annular space between the pipe and the board
4. Seal any gaps between the external shell and board with an intumescent sealant

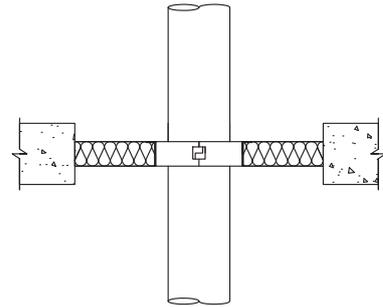
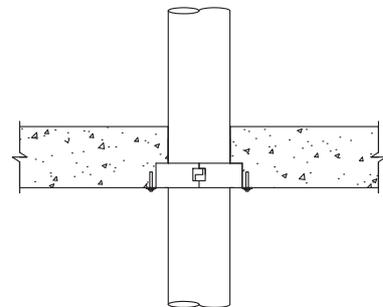


Fig E. Cast-into Concrete Slab

1. The collar should be fitted fully cast-into the slab
2. Ensure that there is sufficient annular space between the pipe outer wall and inside face of the concrete slab to push the collar into the slab full depth
3. This annular space should be as small as possible to reduce the amount of back-filling
4. Fasten the collar around the pipe and push firmly into the annular space between the pipe and the edge of the slab
5. If the collar is loose, carefully back-fill the annular space between the slab and outer face of the collar shell, taking care not to place any material between the collar and the pipe
6. Back-filling material should comprise sand and cement, concrete or a suitable fire-rated mortar
7. Once the collar is cast-in, fasten collar using suitable non combustible anchors or bolts (recommended 50mm minimum length)



<p>UL INTERNATIONAL (UK) LTD Womersley House, Building C, The Guildway, Old Pipers Road, Guildford, GU3 1LR, United Kingdom</p> <p>designated according to Article 29 of the Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment, www.eota.eu)</p>			
<p>European Technical Assessment</p>		<p>ETA 14/0241 of 24/07/2014</p>	
<p>Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: UL International (UK) Ltd</p>			
<p>Trade name of the construction product</p>		<p>Firewise Collar (FireCollar 55 / Firewise Collar 82 / Firewise Collar 110 / Firewise Collar 125 / Firewise Collar 160)</p>	
<p>Product family to which the construction product belongs</p>		<p>Fire Stopping and Sealing Product: • Penetration Sealant</p>	
<p>Manufacturer</p>		<p>Firewise Supplies Brewery Road Pampisford Cambridge England CB22 3HG</p>	
<p>Manufacturing plant(s)</p>		<p>A006</p>	
<p>This European Technical Assessment contains</p>		<p>9 pages including 1 Annex which forms an integral part of this assessment.</p>	
<p>This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of</p>		<p>ETAG 026-2, edition 2011, used as European Assessment Document (EAD)</p>	
<p>Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.</p> <p>Reproduction of this European Technical Assessment, including transmission by electronic means, shall be full. However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.</p>			
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<p>EC CERTIFICATE</p>	
<p>Notified Body No. 0843 CPR Notified Body, UL International (UK) Ltd, Womersley House, The Guildway, Old Pipers Road, Guildford, Surrey, GU3 1LR, United Kingdom</p>	
<p>Certificate of constancy of performance 0843-CPR-0197</p>	
<p>In compliance with the Regulation 305/2011/EC of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), the certificate applies to the construction product</p>	
<p>Firewise Collar Penetration Seal Classified for use in flexible & solid walls and solid floors</p>	
<p>A pipe closure device used to form penetration seals where combustible pipes penetrate walls and floors. The Firewise Collar is supplied with intumescent fire-protective mineral wool inner shell, to be clamped around the service and screw fixed back to the supporting element. The Firewise Collar has two half shells with slots together being</p>	
<p>produced by and produced in the manufacturing plant</p>	
<p>Firewise Supplies Brewery Road Pampisford Cambridge England CB22 3HG</p>	
<p>This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in the ETA:</p>	
<p>ETA 14/0241 under system AVCP 1 for the performance set out in this certificate are applied and that</p>	
<p>Firewise Collar fulfils all the prescribed requirements for these performances.</p>	
<p>This certificate was first issued on 19th September 2014 and will remain valid as long as the ETA remains valid and the manufacturing conditions in the plant or the factory production control shall not be modified significantly, unless suspended or withdrawn by the product certification body.</p>	
<p>Certificate issue date: 19th September 2014</p>	
<p>Karl Harland Quality Engineering Manager UL International (UK) Ltd</p>	
<p>UL International (UK) Limited Womersley House, The Guildway, Old Pipers Road, Guildford, Surrey, GU3 1LR, United Kingdom</p>	

<p>0843</p>	
<p>Firewise Supplies Ltd Brewery Road Pampisford Cambridge England CB22 3HG</p>	
<p>14</p>	
<p>0843-CPR-0197</p>	
<p>ETA-14/0241</p>	
<p>ETAG N° 026 Part 2</p>	
<p>Penetration Seal 'Firewise Collar'</p>	
<p>Use category Z₂</p>	
<p>see ETA 14/0241 for other relevant characteristics</p>	

