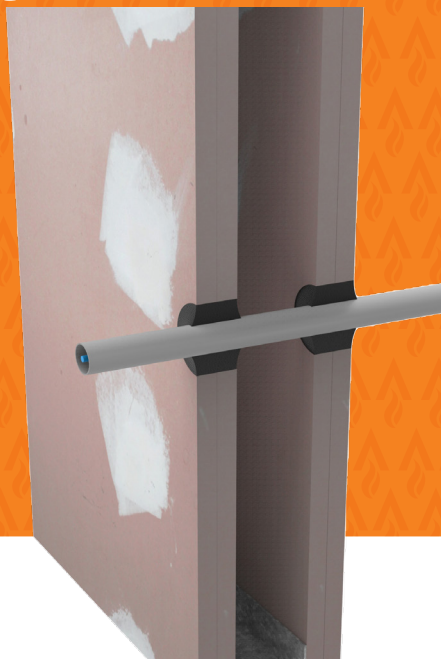
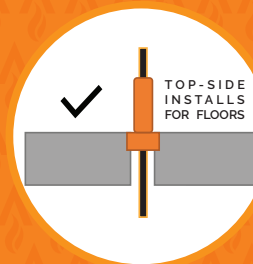


SEALANT GUIDE FOR ELECTRICIANS

FyrePEX™ HP



FyrePEX™ High-Performance Sealant is a graphite water-based intumescent mastic sealant that is used for fire stopping of service penetrations through fire-rated walls and floors to prevent the spread of fire for up to 2 hours.



Click To Watch:



KEY FEATURES



- Tested for PVC conduits and various types of copper and aluminium core cables
- Also suitable for HVAC&R and plumbing services
- Quick and easy to apply and install
- Tested with common wall and floor types
- Non-toxic & Green star rated for low VOC
- Water based for easy clean up
- Fire tested and approved in accordance with AS1530.4-2014 and AS4072.1

APPLICATIONS



Electrical and data services

- Power cables
- Copper and aluminium core cables
- Data cables
- PVC Conduits

This manual specifically covers electrician service penetrations. For details on Plumbing or HVAC&R service penetrations with FyrePEX HP® sealant, visit: <https://tfire.com.au/product/fyrepep-hp-fire-rated-sealant/>

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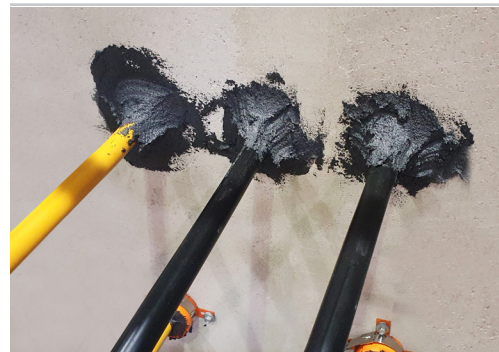


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WHAT IS FYREPEX HP?



FyrePEX High-Performance (HP) Sealant is a graphite & water-based intumescent mastic/sealant that is used for fire protection of service penetrations through fire-rated walls and floors to prevent the spread of fire for up to 2 hours. This type of sealant is designed to expand with a high pressure to fill any gaps that form when plastic pipes and cables melt away and maintain the FRL of the wall or floor that they pass through.

Whilst it was first developed for plumbing services (hence the FyrePEX name!) this sealant has proven extremely useful when tested with a wide range of building services. This manual lists the cable and conduit services that can be sealed with FyrePEX HP, however you can click the icons below to find trade specific installation manuals:

 Plumbing	Electrical and data (see below manual)	HVAC&R 
PEX pipes PEX-AL-PEX pipes	Fire cable and data cable bundles Power cables (Al and Copper core) PVC conduits	Pair coil bundles Small CHW pipes
		

Key Features:

- Specifically designed for water and gas PEX pipe penetration seals
- Also suitable for electrical, data and HVAC&R services
- Quick and easy to apply and install
- Tested for SpeedPanel, Hebel, Walsc, Maxilite and plasterboard walls
- Non-toxic fire-rated mastic
- Green star rated for low VOC
- Water based fire mastic for easy clean up
- Tested and approved in accordance with AS1530.4-2014 and AS4072.1
- FyrePEX HP Fire-rated mastic compliance made easy with FyreSHEATH
- Head of wall penetrations now approved when using the [FyreSTRAP systems](#)

Please check the product approvals listed below and in the FyrePEX HP fire assessment report FAR 4849 before use on your project. For test reports, installation videos and more please visit www.tfire.com.au.

FyrePEXTM HP

FIRE RATING – HOW IS FIRE PERFORMANCE MEASURED?

An FRL (fire resistance level) is a handy way of summarising the performance of a building element. It consists of 3 numbers, all given in minutes:

FRL 120/120/120

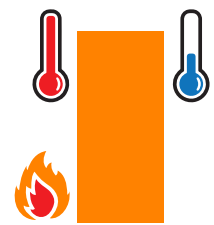
(example)



Structural Adequacy
The ability of the building element to support the weight of adjacent building elements.
ie: a brick wall supporting a concrete floor slab above.



Integrity
The ability of an element to prevent the passage of flames and hot gasses.
ie: a plasterboard wall remaining intact and not allowing holes to form.



Insulation
The ability of an element to resist heat transfer from the exposed face to the unexposed face.
ie: a bundle of cables remaining below a set temperature limit on the unexposed side of the wall penetration system.

Note: Penetrations are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 2 hour load bearing wall would be written as -/120/120.

INTEGRITY

The FyrePEXTM HP Sealant system will achieve the integrity performance for up to 2 hours physically stopping the direct spread of fire, however the insulation performance of the penetration will be limited to the type of wall being used and conductivity of the services in the penetration.

INSULATION (TEMPERATURE RISE)

Heat transfer via conduction (or heat rise) will occur through the conductive parts of any penetration system. To limit the heat rise through some of the FyrePEXTM HP Sealant penetration systems, our 25mm thick TWRAPTM foil encased blanket can be wrapped around the services to achieve up to 2 hours of insulation performance. There are some applications that won't require any TWRAPTM to achieve the full FRL, please refer to the tables below for specific details.

PRE-INSTALL NOTES

ANNULAR GAP

The annular gap is the space between a service and the hole. Annular gaps are important as they allow for movement in the building and service.

FyrePEX® HP sealant is used in the annular gap to form a seal to stop the spread of fire formed by plastic pipes, lagged pipes and cables when they melt away. The approved annular gap for this sealant is 10-20mm, depending on application.

If an opening has already been formed and it is larger than what is prescribed here in this manual, Trafalgar Fire has several systems that can be used to close down the opening to the correct size:

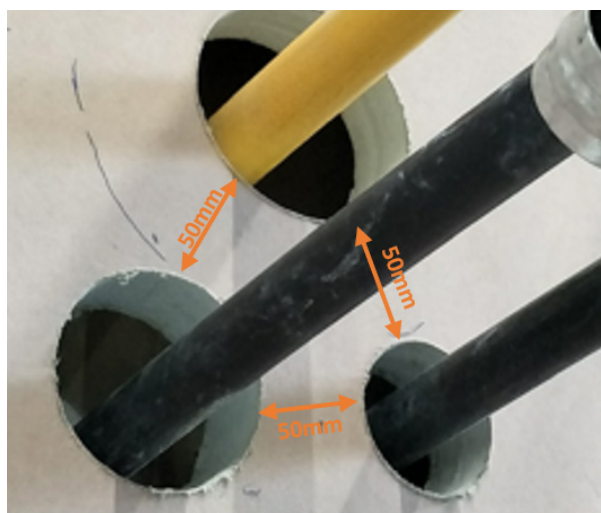
- FyreBATT
- FyreBOARD Maxilite®
- FyreBOX range

Refer to your preferred system technical manual for details on installation and approved barriers and services or, contact Trafalgar Fire at technical@tgroup.com.au for technical assistance.



SERVICE SEPARATION

The distance between any two services can be a tricky topic of conversation. There are trade specific requirements (i.e. proximity of electrical services to gas services), but often asked is what are the requirements for compliance with fire stopping systems? FyrePEX® HP Sealant is approved to have penetrations as close as 50mm away from one another (i.e. 50mm between openings, edge-to-edge).



PVC CONDUITS

Power and Data



Service Specification		Wall Type	Installation Method	Hole Size	Fill Depth	FRL	Report Reference
PVC Conduit*	up to 40mm	Single layer plasterboard walls min 13mm FR plasterboard each side of 64mm stud system	1. Locally Thickened Wall Fill (each side of wall)	20mm annular gap	Depth of plaster (26mm)	-/60/60	FAR 4849
		Single layer plasterboard walls min 16mm FR plasterboard each side of 64mm stud system	1. Locally Thickened Wall Fill (each side of wall)		Depth of plaster (26mm)	-/90/90	
		Double layer plasterboard walls min 13mm FR plasterboard each side of 64mm stud system	2. Wall Fill (each side of wall)		Depth of plaster (26mm)	-/120/120	
		Concrete/masonry wall as per AS3600 & AS3700 (Minimum 116mm thick)	3. Wall Fill (each side of wall)		26mm both sides of wall	-/120/120	
		AAC Hebel & Walsc wall systems (Minimum 75mm thick)	4. Wall Fill (one side of wall only)		60mm	-/90/90	
		Minimum 78mm Speedpanel wall	5. Wall Fill (one side of wall only)		78mm	-/120/120	
PVC Conduit*	up to 25mm	Minimum 60mm thick Maxilite board	Full panel fill (with a 25x25mm fillet)	40mm hole	60mm	-/120/90	
		Double layer plasterboard walls min 13mm FR plasterboard each side of 64mm stud	Full FyreSTRAP depth secured to concrete lintel (each side of wall)	30mm	Full depth of FyreSTRAP	-/120/120	

* Conduit may be empty or contain combinations of power cables up to 20 mm OD, 6 mm OD fibre optic cables (NBN) or 5mm OD CAT5 or CAT6 data cables.



POWER & DATA CABLES

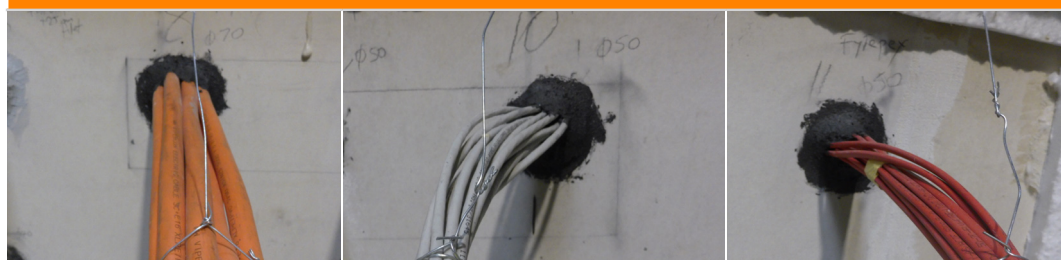
Copper Core Cables



Service Specification		Wall Type	Installation Method	Hole Size	Fill Depth	FRL	Report Reference
Firesense TPS Cables	Up to 15x1.5mm ²	Concrete/masonry walls (120mm) AAC Hebel/Waslc walls (75mm)* Speedpanel (78mm) Maxilite board (60mm)	Panel fill (with a 25x25mm fillet)	50mm	Full depth	-/120/90	FAR 4849
CAT6 Cables	Up to 15x		Panel fill (with a 25x25mm fillet)	50mm		-/120/90	
TPS power Cables	Up to 15x2.5mm ²		Panel fill (with a 50x50mm fillet)	50mm		-/120/60	
3C +E Power Cables	Up to 8x16mm ²		Panel fill (with a 50x50mm fillet)	40mm		-/120/60	
2.5mm ² 2C+E TPS cable	Up to a max of 3x of these services can be installed using FyreSTRAP at the head of wall	Concrete/masonry walls (120mm)	Head of wall: FyreSTRAP installed at the head of wall secured to concrete soffit, filled to full depth 50mm on each side of the wall	5mm oversized hole for each separate service.	Full depth of FyreSTRAP	-/120/120	
Two and three core +Earth Power Cables up to 16mm ²		Single and double layer plasterboard walls					
RG6 coax cables		AAC Hebel/Waslc walls (75mm)*					
CAT6 Cable		Speedpanel (78mm) Maxilite board (60mm)					

* AAC panel wall FRLs limited to 90 minutes maximum. For higher FRL cable penetration systems please refer to the [FyreFLEX acrylic sealant](#).

Cable penetrations through wall



FyreSTRAP head of wall penetration



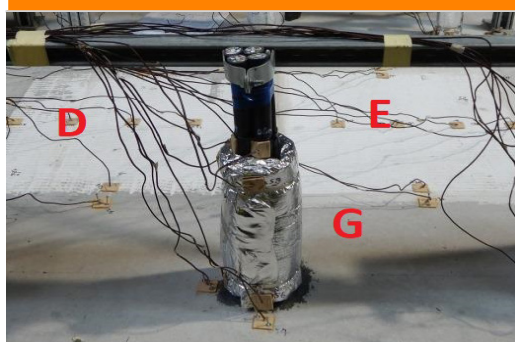
POWER CABLES

Aluminium cables



Wall/Floor Type	Service Specification		Installation Method	Hole Size	Fill Depth	FRL	Report Reference
Concrete Floor slab , Minimum 150mm thick	Single Power Cables	Up to 16mm ²	1. Slab Fill (with a 30x30mm fillet) with 300mm TWrap applied top side only	100mm (or 20mm annular gap around cables)	60mm	-/180/120	FAR 4849
		Up to 240mm ²					
	Bundles of Power cables	Up to 5x 240mm ²	1. Slab Fill (with a 30x30mm fillet) with 300mm TWrap ap-		60mm	-/180/120	
		Up to 4x 240mm ² single core + 120mm ²	1. Slab Fill (with a 30x30mm fillet) with 300mm TWrap applied top side only		60mm	-/180/180	
Concrete/ masonry walls (135mm)	Single Power Cables	1x 16mm ²	2. Wall Fill + 30x30mm fillet on both sides	50mm	60mm from both sides of the wall	-/120/120	FAR 4849
	Bundles of power cables	Up to 1x 630mm ²	2. Wall Fill + 300mm TWrap on both sides of the wall	50mm	135mm fill depth	-/120/120	
AAC Hebel/ Wasc walls (75mm)	Single power cables	1x 16mm ²	2. Wall Fill + 30x30mm fillet on both sides	50mm	75mm	-/120/120	FAR 4849
	Bundles of power cables	Up to 5x 630mm ² single core al cable and 1x 120mm ² single	3. Thickened with 60mm Maxilite with 300mm TWrap applied on both sides	120mm	Full depth of wall and Maxi-lite panel	-/120/120	

1. Concrete Slab



2. AAC Powerpanel/Hebel Wall Fill



3. Large cable penetration thickened with Maxi-lite board in Hebel/Wasc walls



INSTALLATION SEALANT ONLY

WALLS

FyrePEX™ HP Sealant can be applied directly into the thickness of a fire barrier to provide fire separation using the following installation method. Note that single layer plasterboard walls will require a second layer of plasterboard locally to the penetration.

CUT HOLES



Cut opening to suit the penetration size as per the tables in this product manual. Ensure that the services are run straight through the centre line of the opening and is free from movement.

CLEAN OPENINGS



Surfaces to be sealed must be clean, dry and free from dust, dirt and grease. To achieve a clean finish, apply masking tape either side of the penetration to prevent sealant spreading onto unwanted areas.

FyrePEX™ HP SEALANT



Apply sealant with a standard applicator gun ensuring good surface contact is achieved by forcing sealant into the opening to be sealed. Ensure that the correct depth of sealant is applied as required for the specific installation - refer to tables on [pages 6-8](#) (foam or other backing rods can be used to achieve the correct depth if required).

FINISH



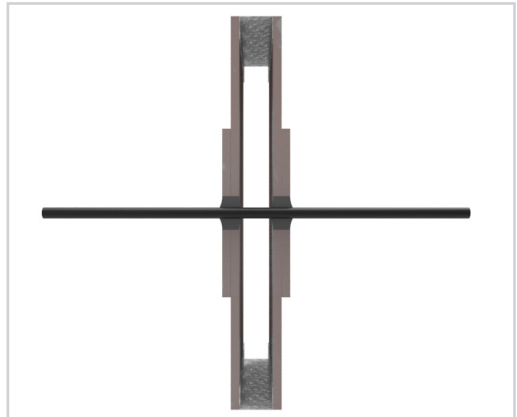
If necessary, tool within 5 minutes of application using a spatula dipped in soapy water, applying sufficient pressure to ensure good contact of the sealant against the joint surfaces. Remove masking tape. FyrePEX™ HP Sealant is easily cleaned off tools and hands with warm water.

INSTALLATION WALL SPECIFIC

SINGLE LAYER PLASTERBOARD



WALL FILL



Penetration to be locally thickened with an additional layer of FR plasterboard on each side of the wall. FyrePEX™ HP Sealant then applied to the full depth of the plasterboard. Refer to service specific requirements on [page 6-8](#).



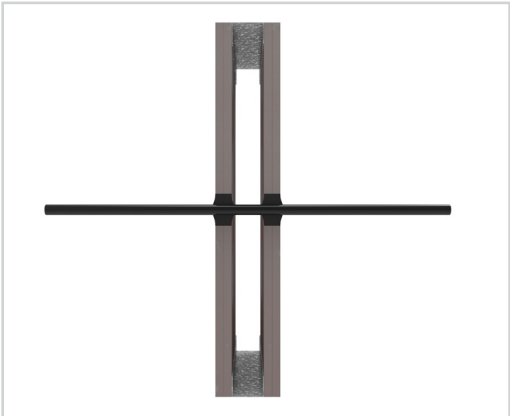
FyrePEX™ HP Sealant filled to the full depth of the plasterboard on both sides of the wall.

INSTALLATION WALL SPECIFIC

DOUBLE LAYER PLASTERBOARD



WALL FILL



FyrePEX™ HP Sealant applied to the full depth of the plasterboard on each side of the wall. Refer to service specific requirements on [page 6-8](#).

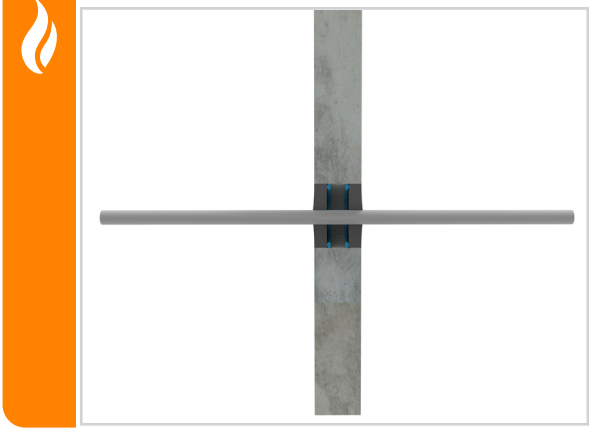


FyrePEX™ HP Sealant applied to full depth of plasterboard.

INSTALLATION WALL SPECIFIC

CONCRETE/MASONRY

WALL FILL



FyrePEX™ HP Sealant to be filled to depth specified. Refer to service specific requirements on [page 6-8](#).

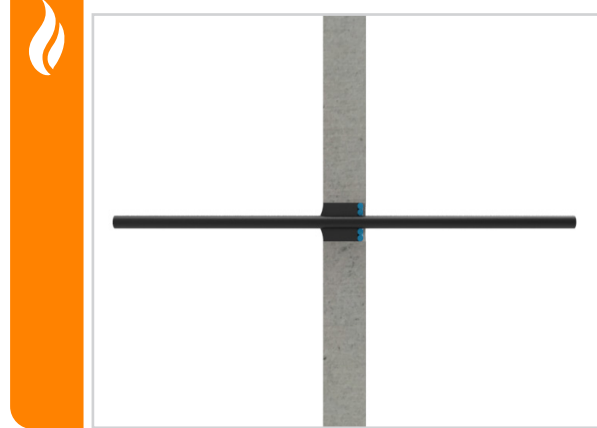


FyrePEX™ HP Sealant applied to a depth of at least 26mm from each side of the wall.

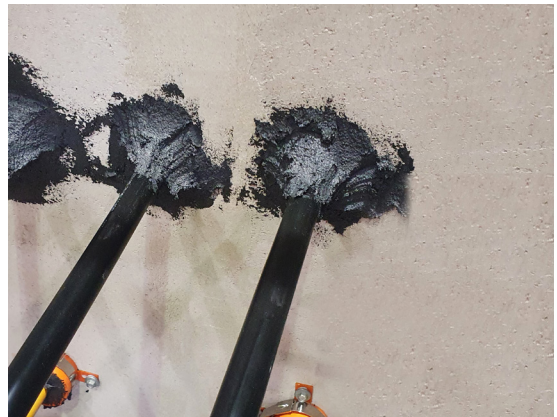
INSTALLATION

Hebel®, WALSC & SPEEDPANEL

WALL FILL



FyrePEX™ HP Sealant installed into wall opening to full depth. Note that Maxilite board may be required for large cables. Refer to service specific requirements on [page 6-8](#).



FyrePEX™ HP Sealant applied to depth of at least 60mm from one side of the wall with fillets if required.

INSTALLATION

HEBEL/WALSC WITH MAXILITE PATCH



For large AL core cables penetrating Hebel/Walsc walls an additional patch of 60mm Maxilite must be fixed to one side of the wall. Refer to service specific requirements on [page 8](#).



Cut the Maxilite with hand or power saws to overlap the penetration by 100mm and fix to the wall with 10g x 100mm plasterboard screws 50mm in from each corner. Fill the sealant to the full depth of both wall and panel, and wrap with TWrap on both sides.

INSTALLATION

CONCRETE FLOORS



FyrePEXTM HP Sealant installed into Slab opening to a depth of at least 60mm from one side only. Refer to service specific requirements on [page 8](#).



FyrePEXTM HP Sealant applied to depth of at least 60mm from top side of floor slab.

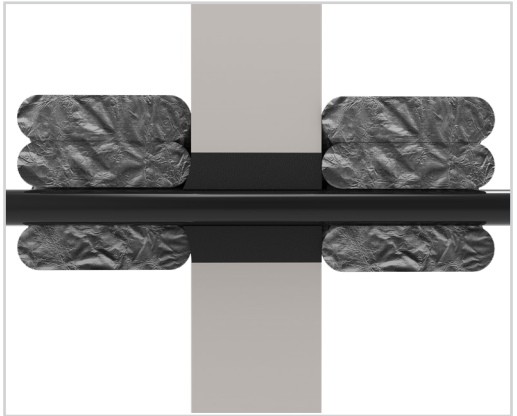
INSULATION PERFORMANCE

TWRAPTM

In some instances, service penetrations with power cables can draw too much heat during fire conditions and will not meet the thermal insulation requirements of the fire barrier's FRL. Where this occurs, TWRAPTM can simply be wrapped around the services for 300mm to better insulate the penetration. Refer to the barrier and service specific tables from page 5 for details on when TWRAPTM should be used.



WALLS



FyrePEXTM HP Sealant applied to the correct depth of the wall.



TWRAPTM secured on each side of penetration using three strips of reinforced aluminium tape applied around the wrap's circumference. TWRAPTM applied on both sides of the wall. Alternatively, apply steel ties 50mm from each end and at 150mm centres in between.



FLOORS



FyrePEXTM HP Sealant applied to the correct fill depth.



On the top side of the slab, TWRAPTM secured on each side of penetration using three strips of reinforced aluminium tape applied around the wrap's circumference. Alternatively, apply steel ties 50mm from each end and at 150mm centres in between.

SYSTEM RANGE




- Available in 310ml tube
- Suitable for PEX and air-con pipes and conduit



Item Number	Size	Colour	Box Qty
FYREPEX HP310	310ml Cartridge	Black/Dark Grey	25





Item Number	Description	Min Order Qty	Pallet QTY
TWRAP 300*	300mm wide, 25mm thick blanket	7620mm long roll	24
TWRAP 450*	450mm wide, 25mm thick blanket	7620mm long roll	12
TWRAP 600*	600mm wide, 25mm thick blanket	7620mm long roll	12
Tape	Foil tape, 95mm wide, 50m roll	1	N/A
Cable Tie SS 12 x 521	4.6mm wide x 521mm long	25	N/A
Cable Tie SS 12 x 910	4.6mm wide x 910mm long	25	N/A

* FyreWrap® can be substituted for TWRAP™

FAQ

Q Can I use FyrePEX™ HP Sealant to seal cable only penetrations?

A FyrePEX™ HP Sealant is now approved for use with various aluminium and copper core cables. Refer to the above tables for specific test approvals.

Q Can I use FyrePEX™ HP Sealant to seal PVC conduits?

A Yes, up to 40mm. Refer to installation specifics for separate wall types.

Q Is the opening size important?

A Yes, intumescent sealants require the perfect volume of sealant to expand and perform appropriately.

Q Do I need access to both sides of the wall?

A Yes, except for Hebel or Speedpanel walls and concrete floor slabs which include approved one-sided installations. If TWrap is required to provide the full FRL, access to both sides will be needed.

Q How far apart do the penetrations need to be spaced?

A Penetrations are required to be spaced 50mm apart.

SOCIAL MEDIA

