FireMastic-HPE™

The ultimate high pressure exerting fire sealant for plumbing, electrical & HVAC/R services.

Approved to AS1530.4-2014, AS4072.1 & EN 1366

Technical Data Sheet

Edition 3

Published: October 2020

The ultimate High Pressure Exerting FR sealant…

POTTER INTERIOR SYSTEMS

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0800 POTTERS | info@potters.co.nz
Auckland, Wellington + Christchurch

KEY BENEFITS

- Class leading proven 2HR high-performance fire sealant
- High pressure 40x expansion rate
- uPVC Pipes up to 80mm
- Suitable for PEX & PEX AL Water & Gas pipes
- Various power and comms cable bundles
- Extensive variety of A/C Paircoil bundles
- Approved for use on copper pipes up to 60mm with Armaflex insulation
- Compatible with Lubrizol and Spears cPVC products
- Approvals for single & double layer plasterboard systems, concrete, masonry, Hebel & Speedpanel
- Suitable for control joints

1. INTRODUCTION

FireMastic-HPE™ is a graphite-based, High Pressure Exerting FR sealant used to reinstate the fire resistance performance of wall, floor & ceiling systems. Under heat, **FireMastic-HPE™** will expand with enough pressure to close combustible pipes and seal around cables and metal pipes to maintain the integrity and insulation performance of the seal, without placing any unnecessary pressure on the building substrate.

FireMastic-HPE™ is supplied in cartridges suitable for caulking via an applicator gun or also available in foil sausages. It has excellent non-slump properties coupled with the ease of application due to its water-based nature.

The sealant is intended for use in control joints or service penetrations through walls, floors and ceilings where fire integrity and insulation needs to be preserved. Under fire conditions the product expands up to 40 times its volume and exerts pressure to the surrounding substrates leading to closure of the penetration. The integrity and insulation are then maintained by the stability of the remaining product char.

2. PRODUCT FEATURES

- Sealing combustible and non-combustible penetrations.
- Sealing around metal pipes with insulated lagging remaining on the pipe.
- Easy gunning and tooling.
- Odourless.
- Sealing of power and comms cables.
- Easy clean up with water.
- Approved on a wide range of single and double layer plasterboard systems.
- Approved for a wide variety of other wall types including concrete, masonry, Hebel and Speedpanel.
- Internal use only, can be painted.

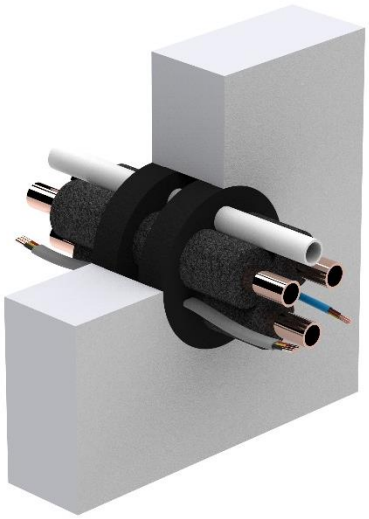

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Table 1. PHYSICAL SPECIFICATION

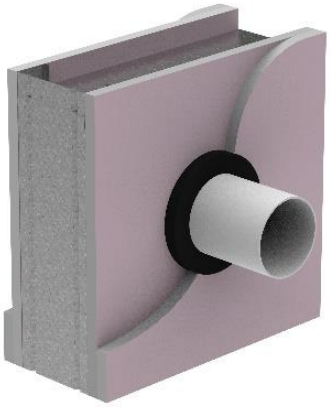
Sizes:	310ml / 600ml
Product code:	FMHPE-3 / FMHPE-6
Colour:	Charcoal Grey
Density:	1.23-1.33g/cm³
Application Temperature:	+5°C to 30°C
Expansion Onset Temperature:	180°C
Cure rate:	1.7mm per 24 hours. Cure for min 28 days curing before fire exposure.
pH:	6-9
Skin time:	15 minutes @ 25°C/50%RH
Manufacture:	ISO 9001:2008
FRL:	Up to -/120/120
Acoustic Rating:	Up to Rw (C;Ctr): 64 (-2;-7) in partition. Rw (C;Ctr): 52 (-1;-6) sealant only.
Certification:	AS1530.4, AS4072.1 & EN1366, EN ISO 10140-2:2010
VOC:	18g/Litre SCAQMD

3. APPROVED APPLICATIONS

FireMastic-HPE™ has extensive fire test approvals including AS1530.4-2014, and AS4072.1 offering up to FRL -/120/120. A wide variety of plumbing, electrical & HVAC/R services are tested and approved using FireMastic-HPE™ including:

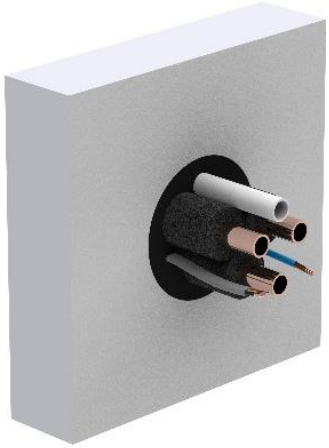
Plumbing:

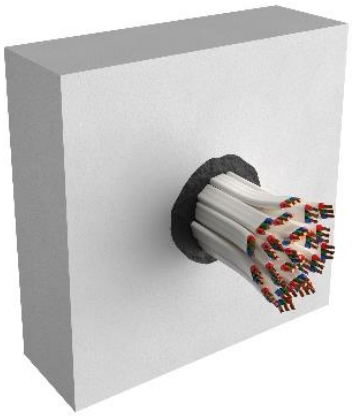
- PEX Water Pipes
- PEX AL Gas Pipes
- cPVC Sprinkler Pipes
- uPVC DWV and Non DWV Pipes
- PP-R Polypropylene Pipes
- Faucet & Tap Sets



Electrical:

- TPS Power Cables
- Orange Circular Mains Cables
- Data / Comms Cables
- CAT6 Cables
- Fire Alarm Cables
- Conduits





HVAC/R:

- Lagged Copper Pipes
- Unlagged Copper Pipes
- Paircoil Bundles (including cables)

Construction Details:

- Control Joints
- Timber Penetrations

For detailed performance information refer to Section 6 - Performance Specification beginning on page 4.

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4. FBC™ System Compatible

FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with FlowGuard Gold®, BlazeMaster® and Corzan® piping systems and products made with TempRite® Technology." "The FBC System Compatible Logo, FBC™, FlowGuard Gold®, BlazeMaster®, Corzan®, and TempRite® are trademarks of Lubrizol Advanced Materials, Inc. or its affiliates.

5. Spears System Compatible

Spears® laboratory testing has shown FireMastic-HPE™ to be compatible with satisfactory performance in normal installation of CPVC products. FireMastic-HPE™ has been tested and has shown no adverse CPVC compatibility issues when installed and utilized as intended with Spears systems known as FlameGuard®, LabWaste®, EverTuff® and CTS.

6. PERFORMANCE SPECIFICATIONS

FireMastic-HPE™ has extensive fire test approvals including AS1530.4-2014, and AS4072.1 offering up to FRL -/120/120. It also carries approvals for EN1366-3 and EN1366-4. Please refer to the further tables contained in this document for specific performance information relevant to each various application.

IMPORTANT:
In order to ensure performance and compliance, passive firestopping products must be installed in accordance with the test evidence, manufacturer's specifications or be the subject of a performance solution.
Each project and/or application may have specific requirements and you should investigate these carefully.
Ensure that you read and understand the appropriate certification and how it relates to your specific construction details, and ensure you seek acceptance from the Certifying Authority or compliance inspector before installation.
Ensure your installation is carried out in accordance with the test certification, manufacturer's instructions, and in accordance with the relevant local building regulations, National Construction Code or Building Code.
For updates on the range of BOSS Fire® certification please contact BOSS Technical Services. +612 9531 8591 OR info@bossfire.com.au

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Table 2 - ELECTRICAL SERVICE PENETRATIONS – POWER CABLES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Power Cables							
Power Cable Bundle	Wall	Min 90mm Thick FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	10mm (W) x 13mm (D) Flush Seal	-/60/60	Bundle of 8 x 3-Core TPS Power Cables	CSIRO COT 2922
Power Cable Bundle	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Annular Gap x Min 25mm (D) Flush Seal	-/120/120	Bundle of 10 Power Cables PVC/PVC EPR/PO XLPE/EVA 1mm x 1.5mm²	CSIRO FCO-2990B
Power Cable Bundle	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Annular Gap x Min 25mm (D) Flush Seal	-/120/120	Bundle of 2 Power Cables PVC/PVC 1mm x 95mm²	CSIRO FCO-2990B
Power Cable Bundle	Wall	75mm Thick Hebel / AAC	FireMastic-HPE™	20mm (W) x 25mm (D) Flush Seal	-/120/60	50mm Bundle TPS Cables (22 Cables 2.5mm² 2C+E)	SFC FRT180473a.1
Power Cable Bundle	Floor	Min 130mm Thick Concrete / Comflor® 60	FireMastic-HPE™ & BOSS Batt sealed with Ablative Coating	25mm (W) x 25mm (D) Flush Seal in Batt on underside & 25mm deep in annular gap top side.	-/120/120	50mm Bundle TPS Cables (22 Cables 2.5mm² 2C+E)	SFC FRT180137b.2
Power Cable Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-HPE™ & FireMastic-300™	FM HPE-Annular Gap x 26mm (D) Ceiling Side FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	Bundle 4 x TPS Cables 2C+E 2.5mm²	SFC FRT180474.2
Power Cable Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-HPE™ & FireMastic-300™	FM HPE-Annular Gap x 26mm (D) Ceiling Side FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	Bundle 3 x Orange Circular Mains Cables 2C+E	SFC FRT180474.2
Conduit Bundle with Power Cables	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	BOSS MaxiCollar™ 65mm with FireMastic-HPE™ Infill & FireMastic-300™	MC-65 to underside with FMHPE Infill to depth of Collar. FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	2 x 25mm uPVC Conduits with 2 x TPS Power Cables 2C+E 2.5mm²	SFC FRT180474.2

The table above only relates to BOSS Fire® solutions relating to the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified electrical service penetration systems please consult the BOSS Fire® website - bossfire.com

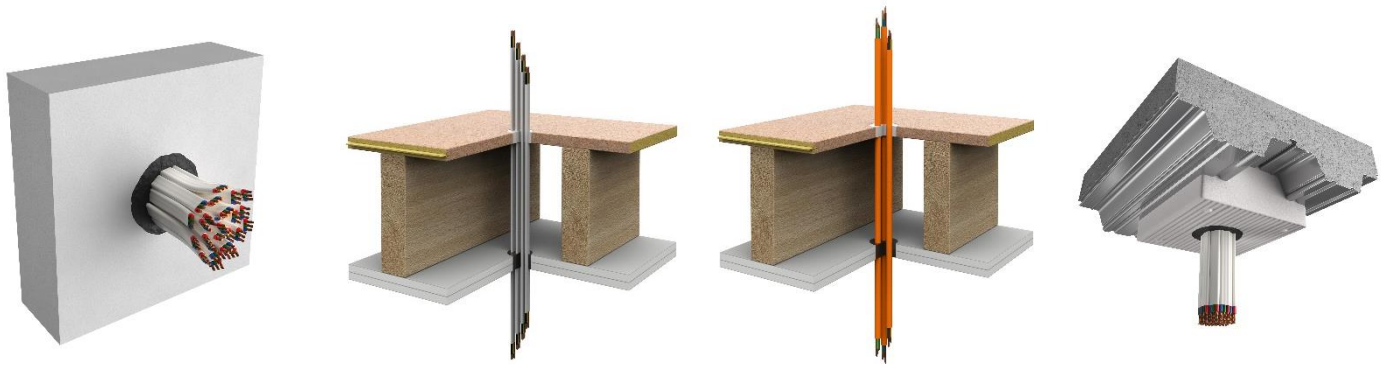

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Table 3 - ELECTRICAL SERVICE PENETRATIONS COMMS / DATA CABLES & CONDUITS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Comms / Data Cables							
Data / Comms Cable Bundle	Wall	75mm Thick Hebel / AAC	FireMastic-HPE™	20mm (W) x 25mm (D) Flush Seal	-/120/60	50mm Bundle 38 x CAT6 Data Cables	SFC FRT180473a.1
NBN / Optical Cable	Wall	Min 90mm Thick FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	20mm x 20mm Surface Fillet required one side of wall only	-/60/60	NBN / Optical Cable	CSIRO COT 2921 & 2924
Bundle Fire Alarm System Cable Bundle	Wall	Min 116mm Thick FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	15mm (W) x 26mm (D) Flush Seal	-/120/120	40mm Bundle 8 x Fire Alarm Cables	SFC FRT 180472b.1
Conduits (including cables)							
Up to 25mm uPVC or NBN 'P23 NBN' Conduit	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap and 20mm x 20mm Surface Fillet	Up to -/120/120	Up to 25mm uPVC or NBN 'P23 NBN' Conduit	EWFA 49599300.7
Up to 20mm uPVC or NBN Conduit	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap and 15mm x 15mm Surface Fillet	Up to -/120/120	Up to 20mm uPVC or NBN Conduit	EWFA 49599300.7
25mm uPVC Conduit	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-HPE™ & FireMastic-300™	FM HPE- Annular Gap x 26mm (D) Ceiling Side FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	25mm uPVC Conduit	SFC FRT180474.2
Conduit Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	BOSS MaxiCollar™ 65mm with FireMastic-HPE™ Infill & FireMastic-300™	MC-65 to underside with FMHPE Infill to depth of Collar. FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	2 x 25mm uPVC Conduits with 2 x TPS Power Cables 2C+E 2.5mm²	SFC FRT180474.2

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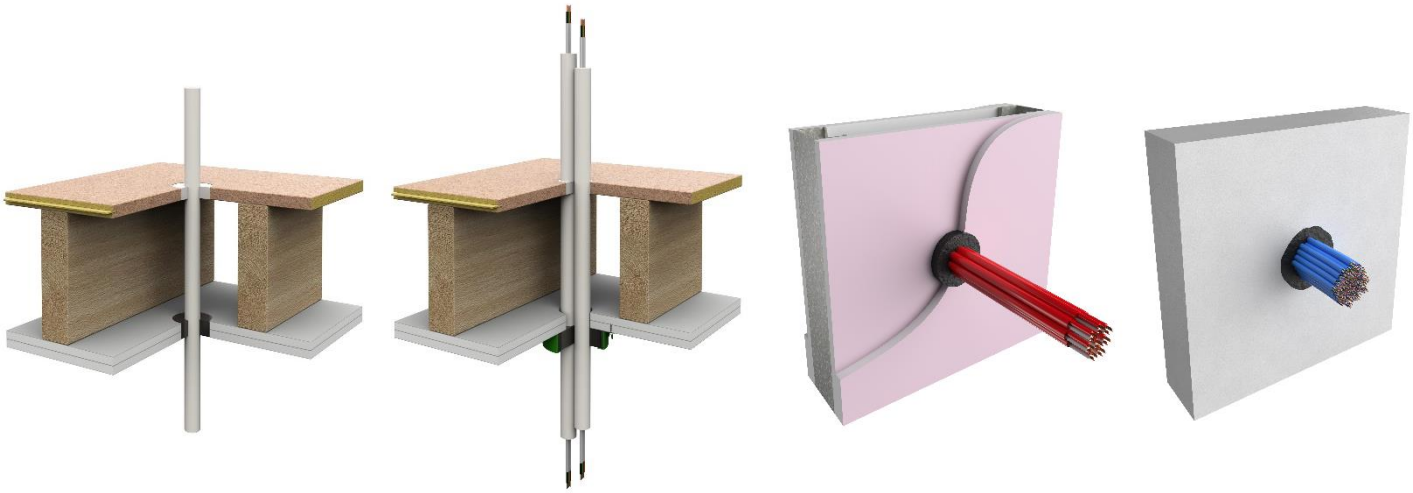

Table 4 - NON-INSULATED METAL PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Non-Insulated Metal Pipes							
15-60mm Copper / Steel Pipe	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Max 20mm (W) x Min 25mm (D) Flush Seal	-/120/-	15-60mm Copper / Steel Pipe	CSIRO FCO-2990B

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified non-insulated non-combustible pipe penetration systems please consult the BOSS Fire website - bossfire.com

Table 5 - INSULATED METAL PIPES (HVAC+R)

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Insulated Metal Pipes							
Lagged 15mm Copper / Steel Pipe	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Max 20mm (W) x Min 25mm (D) Flush Seal	-/120/120	15mm Copper Pipe Continuously lagged with 13mm thick Armaflex Insulation	CSIRO FCO-2990B
Up to Lagged 40mm Copper / Steel Pipe	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Max 20mm (W) x Min 25mm (D) Flush Seal	-/120/120	Up to 40mm Copper Pipe – Continuously lagged with 32mm thick Armaflex Insulation	CSIRO FCO-2990B
50 - 60mm Lagged Copper / Steel Pipe	Wall	Min 120mm Thick FR Plasterboard, AAC, Concrete, Masonry	FireMastic-HPE™	Max 20mm (W) x Min 25mm (D) Flush Seal	-/120/90	50 to 60mm Copper Pipe – Continuously lagged with 32mm thick Armaflex Insulation	CSIRO FCO-2990B
Up to 3x 20mm Lagged Copper Pipes / Power Cable / Data Cable / Outlet Pipe Bundle	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 25mm x 25mm Surface Fillet	Up to -/120/120	Up to 3x 20mm Lagged Copper Pipes, TPS Power Cable 2C+E, 2C Data Cable up to 20mm uPVC Pipe	EWFA 49599300.7

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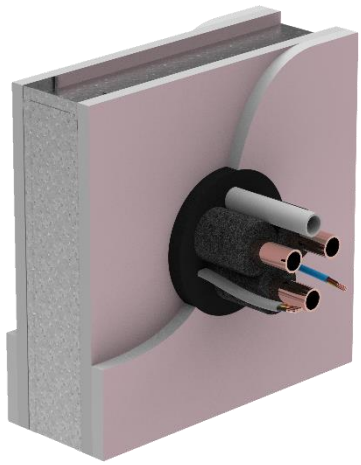

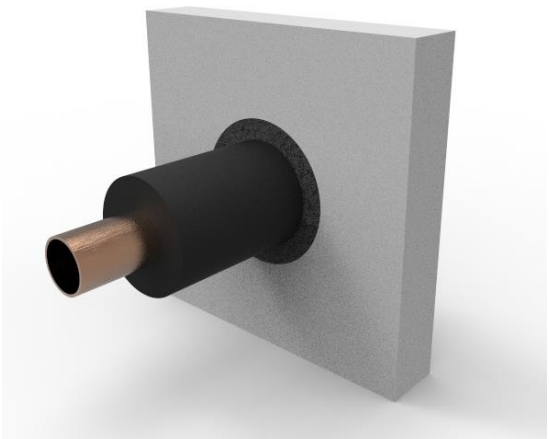

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Table 6 - PAIRCOIL / MULTI-SERVICE BUNDLES – WALLS UP TO 60MINS (HVAC+R)

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Paircoil / Multi Service Bundles							
Paircoil / Power Cable / Outlet Pipe Bundle	Wall	Min 90mm Thick - 13mm FR Plasterboard, Concrete, Masonry	FireMastic-HPE™ (One Side Only)	Annular Gap x Min 13mm (D) Flush Seal	-/60/60	One sided penetration: Paircoil, TPS Power Cable 2C+E, 16mm PVC outlet pipe.	CSIRO COT2918
Paircoil / Power Cable / Data Cable / Outlet Pipe Bundle	Wall	Min 90mm Thick - 13mm FR Plasterboard + 13mm FR Plasterboard Pattress, Concrete, Masonry	FireMastic-HPE™ FireMastic-300™ to pattress edges.	FMHPE – 26mm Deep x Annular Gap FM300 – Pattress Edges	-/60/60	Paircoil (non-rated lagging), TPS Power Cable 2C+E, 2C Data Cable & 20mm uPVC outlet pipe.	CSIRO COT2919
Paircoil / Power Cable / Data Cable / Outlet Pipe Bundle	Wall	Min 90mm Thick - 13mm FR Plasterboard, Concrete, Masonry	BOSS MaxiCollar™ 80mm with FireMastic-HPE™ Infill	MC-80 with FMHPE Infill to depth of Collar.	-/60/60	Paircoil (non-rated lagging), TPS Power Cable 2C+E, 2C Data Cable & 20mm uPVC outlet pipe.	CSIRO COT2920

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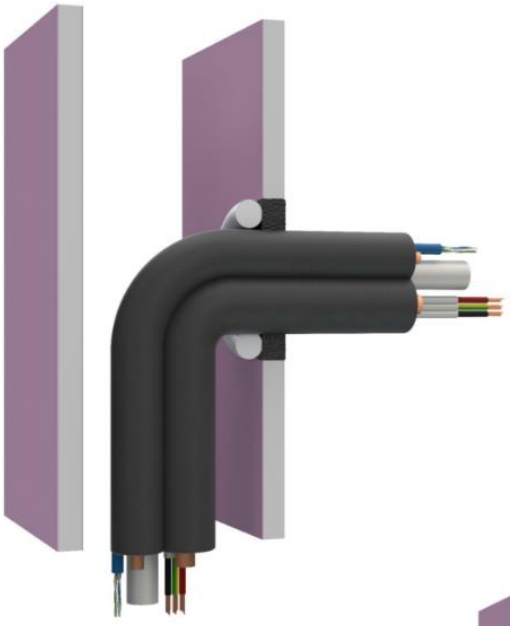

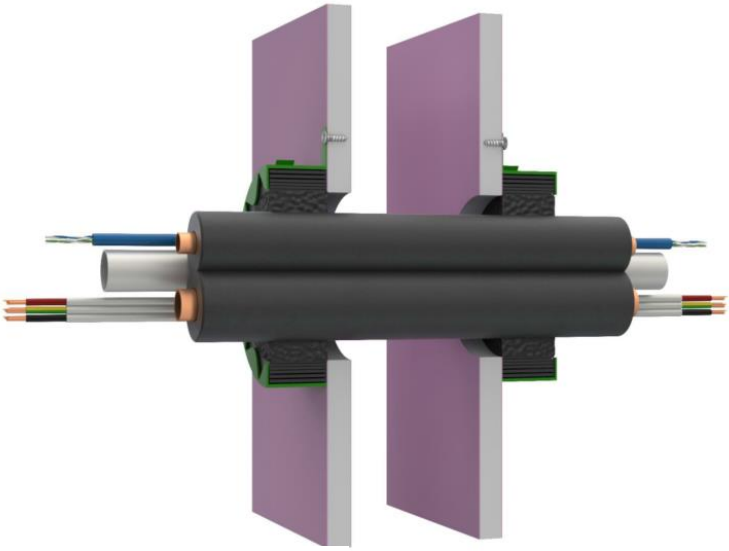

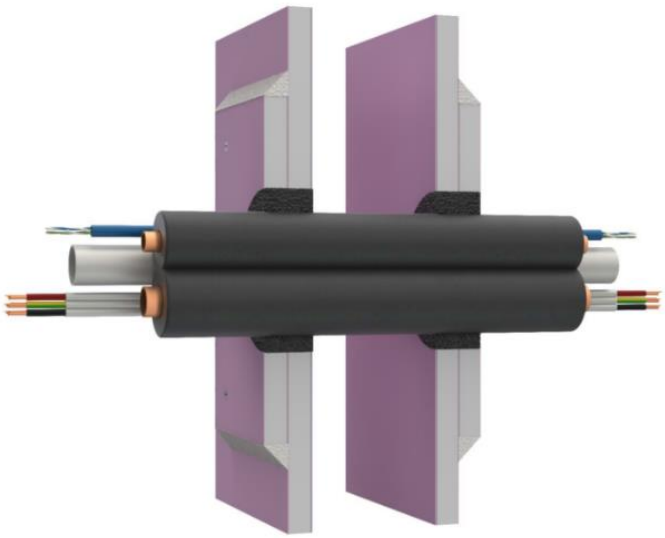

Table 7 - PAIRCOIL / MULTI-SERVICE BUNDLES – WALLS UP TO 120MINS (HVAC+R)

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Paircoil / Multi Service Bundles							
Paircoil / Power Cable / Data Cable / Outlet Pipe Bundle	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 25mm x 25mm Surface Fillet	Up to -/120/120	Paircoil, TPS Power Cable 2C+E, 2C Data Cable up to 20mm uPVC Pipe	EWFA 49599300.7
Up to 3x 20mm Lagged Copper Pipes / Power Cable / Data Cable / Outlet Pipe Bundle	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 25mm x 25mm Surface Fillet	Up to -/120/120	Up to 3x 20mm Lagged Copper Pipes, TPS Power Cable 2C+E, 2C Data Cable up to 20mm uPVC Pipe	EWFA 49599300.7
Paircoil / Power Cable / Data Cable Bundle	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 25mm x 25mm Surface Fillet	Up to -/120/120	Paircoil, TPS Power Cable 2C+E, 2C Data Cable	EWFA 49599300.7
Paircoil / Power Cable Bundle	Wall	Min 116mm FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 25mm x 25mm Surface Fillet	-/120/120	Paircoil, Orange Circular Power Cable 6C,	CSIRO COT 2792

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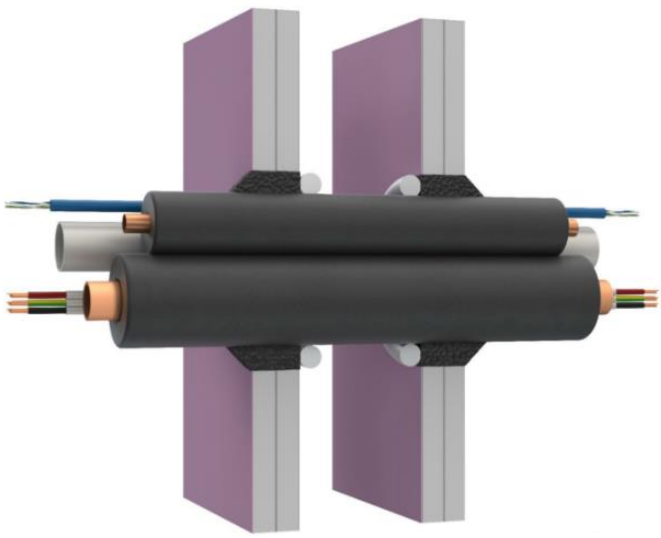

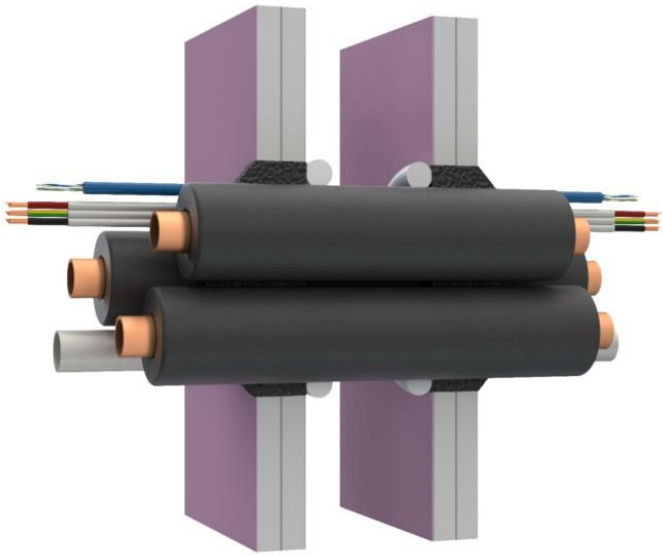

Table 8 - PAIRCOIL / MULTI-SERVICE BUNDLES – FLOORS & CEILINGS (HVAC+R)

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Paircoil / Multi Service Bundles							
Paircoil / 25mm PVC Pipe Bundle	Floor	Min 130mm Thick Concrete / Comflor® 60	FireMastic-HPE™ & BOSS Batt sealed with Ablative Coating	25mm (W) x 25mm (D) Flush Seal in Batt on underside & 25mm deep in annular gap top side.	-/120/120	Paircoil / 25mm PVC Pipe Bundle	SFC FRT 180137b.2
Paircoil / Power Cable / Data Cable / Outlet Pipe Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	BOSS MaxiCollar™ 80mm with FireMastic-HPE™ Infill FireMastic-300™	MC-80 with FMHPE Infill to depth of Collar. FM300 - Annular Gap x 19mm (D) Floor Side	-/60/60 -/90/90	Paircoil, TPS Power Cable 2C+E, CAT6 Data Cable up to 25mm uPVC	SFC FRT 180474.2

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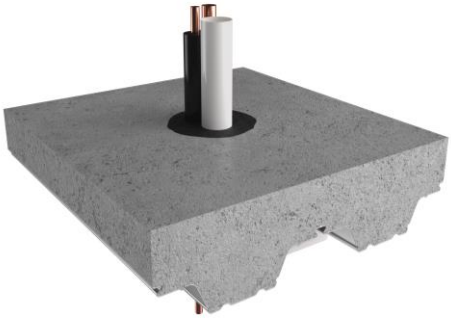

Table 9 - PP-R (POLYPROPELENE RANDOM) PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
PP-R Pipes							
PP-R Pipe (Aquatherm) 20mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	BOSS MaxiCollar™ 32mm with FireMastic-HPE™ Infill	MC-32 with FMHPE Infill to depth of Collar.	-/60/60	20mm OD Pipe	COT 180403b.1
PP-R Pipe (Aquatherm) 32mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	BOSS MaxiCollar™ 32mm with FireMastic-HPE™ Infill	MC-32 with FMHPE Infill to depth of Collar.	-/60/60	32mm OD Pipe	COT 180403b.1

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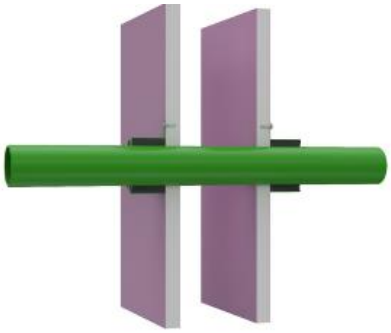

Table 10 - PEX WATER PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
PEX WATER Pipe							
PEX Pipe 20mm	Wall	Min 90mm Thick FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	20mm (W) x 13mm (D) Flush Seal	-/60/60	20mm OD Pipe	CSIRO COT 2923
PEX Pipe 20mm	Wall	Min 96mm Thick FR Plasterboard, Concrete, Masonry	FireMastic-HPE™	20mm (W) x 16mm (D) Flush Seal	-/90/90	20mm OD Pipe	CSIRO COT 2967
PEX Pipe 20mm	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x Min 26mm (D) Flush Seal	Up to -/120/120	20mm OD Pipe	EWFA 49599300.7
PEX Pipe 20mm	Wall	137mm CLT – Cross Laminated Timber	FireMastic-HPE™	13mm (W) x 25mm (D) Flush Seal	-/90/90	20mm OD Pipe	EWFA 54783400.1
PEX Pipe 20mm	Wall	Min 118mm FR Plasterboard	FireMastic-HPE™ (One Side Only)	18mm (W) x 26mm (D) Flush Seal – One Side Only	-/90/90	One sided penetration: 20mm OD Pipe	CSIRO FSP 2053 & 2084
PEX Pipe 20mm	Wall	Min 128mm FR Plasterboard Shaftliner Wall System	FireMastic-HPE™ (One Side Only)	18mm (W) x 26mm (D) Flush Seal – One Side Only	-/120/120	One sided penetration: 20mm OD Pipe	CSIRO FSP 2073 & 2054
PEX Pipe 25mm	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	20mm (W) x 26mm (D) Flush Seal	-/120/120	25mm OD Pipe	COT 180403h.1
PEX Pipe 25mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	20mm (W) x 13mm (D) Flush Seal	-/60/30	25mm OD Pipe	COT 180403c.1
PEX Pipe 25mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	BOSS MaxiCollar™ 32mm with FireMastic-HPE™ Infill	MC-32 with FMHPE Infill to depth of Collar.	-/60/30	25mm OD Pipe	COT 180403c.1
2 x PEX Pipe 20mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	BOSS MaxiCollar™ 40mm with FireMastic-HPE™ Infill	MC-40 with FMHPE Infill to depth of Collar.	-/60/30	2 x 20mm OD Pipes	COT 180403c.1

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified PEX pipe penetration systems please consult the BOSS Fire® website - bossfire.com

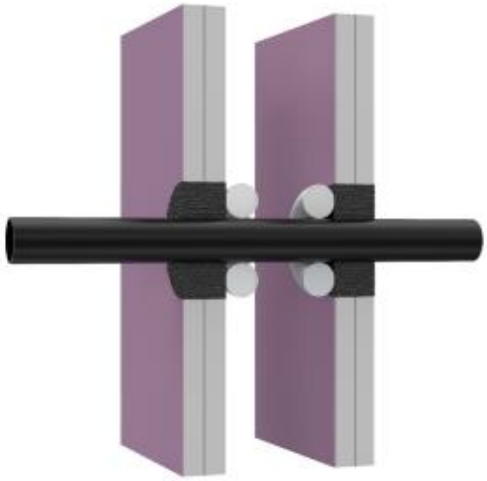

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Table 11 - PEX AL GAS PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
PEX AL GAS Pipe							
PEX AL Pipe 20mm	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x Min 26mm (D) Flush Seal	Up to -/120/120	20mm OD Pipe	EWFA 49599300.7
PEX AL Pipe 25mm	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	20mm (W) x 26mm (D) Flush Seal	-/120/30	25mm OD Pipe	COT 180403h.1
PEX AL Pipe 25mm	Wall	Min 118mm FR Plasterboard Concrete, Masonry	BOSS MaxiCollar™ 32mm with FireMastic-HPE™ Infill	MC-32 with FMHPE Infill to depth of Collar.	-/60/30	25mm OD Pipe	COT 180403c.1

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified PEX AL pipe penetration systems please consult the BOSS Fire® website - bossfire.com

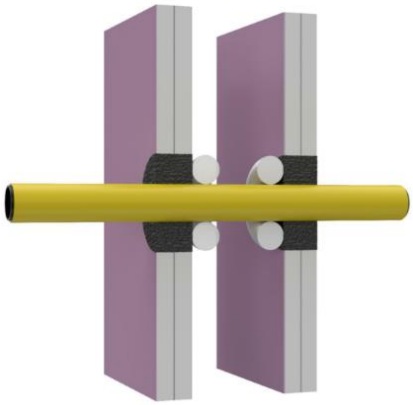

Table 12 - cPVC SPRINKLER PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
cPVC Pipes							
Up to 43mm cPVC Pipe	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap x 25mm (D) + 15mm x 15mm Surface Fillet	Up to -/120/120	Up to 43mm OD Pipe	EWFA 49599300.7
60mm cPVC Pipe	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	15mm (W) x 26mm (D) Flush Seal	-/120/60	60.3mm OD Pipe	COT 180403g.1

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified cPVC pipe penetration systems please consult the BOSS Fire® website - bossfire.com

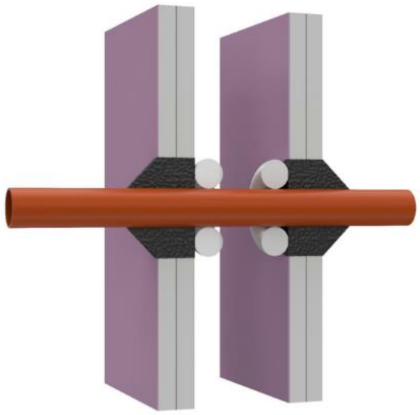

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Table 13 - PVC WATER DWV PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
PVC Pipes							
Up to 20mm uPVC Pipe	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap and 15mm x 15mm Surface Fillet	Up to -/120/120	Up to 20mm uPVC	EWFA 49599300.7
Up to 25mm uPVC Pipe	Wall	Min 116mm FR Plasterboard Min 75mm Thick Rigid Walls incl Concrete, Speedpanel, Hebel, Reinforced AAC, Solid or Hollow Masonry	FireMastic-HPE™	Annular Gap and 20mm x 20mm Surface Fillet	Up to -/120/120	Up to 25mm uPVC Pipe	EWFA 49599300.7
PVC Pipe 40mm	Wall	75mm Thick Hebel / AAC	FireMastic-HPE™	Annular Gap and 25mm x 25mm Surface Fillet	-/120/90	42mm OD Pipe	SFC FRT 180473a.1
PVC Pipe 40mm	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	19mm (W) x 26mm (D) Flush Seal	-/120/120	42mm OD Pipe	COT 180403g.1
PVC Pipe 50mm	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	17mm (W) x 26mm (D) Flush Seal	-/120/120	55mm OD Pipe	COT 180403g.1
PVC Pipe 80mm	Wall	Min 144mm FR Plasterboard Concrete, Masonry	FireMastic-HPE™	19mm (W) x 26mm (D) Flush Seal	-/90/90	82mm OD Pipe	COT 180403g.1
PVC Pipe 43mm	Wall	Min 118mm FR Plasterboard	FireMastic-HPE™ (One Side Only)	23mm (W) x 26mm (D) Flush Seal – One Side Only	-/90/90	One sided penetration: 43mm OD Pipe	CSIRO FSP 2053 & 2084
PVC Pipe 43mm	Wall	Min 128mm FR Plasterboard Shaftliner Wall System	FireMastic-HPE™ (One Side Only)	23mm (W) x 26mm (D) Flush Seal – One Side Only	-/120/120	One sided penetration: 43mm OD Pipe	CSIRO FSP 2073 & 2054

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified uPVC pipe & conduit penetration systems please consult the BOSS Fire® website - bossfire.com

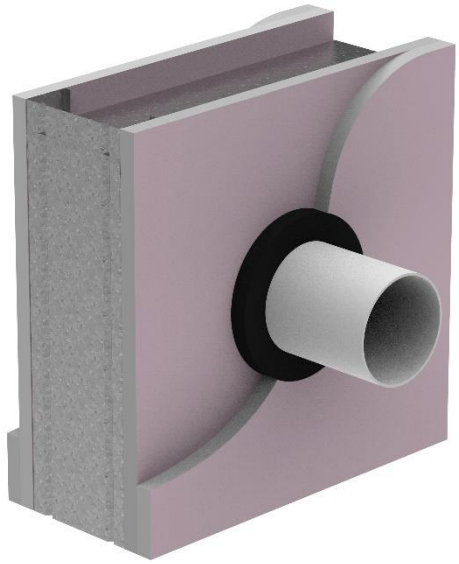

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Table 14 - 3 PIECE TAP SETS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
3 Piece Tap Set							
3 Piece Tap Set	Wall	Min 118mm FR Plasterboard	FireMastic-HPE™ (One Side Only)	18mm (W) around sleeve x 26mm (D) Flush Seal – One Side Only	-/90/90	One sided penetration: Faucet / 3 piece hand basin tap set	CSIRO FSP 2084
3 Piece Tap Set	Wall	Min 128mm FR Plasterboard Shaftliner Wall System	FireMastic-HPE™ (One Side Only)	18mm (W) around sleeve x 26mm (D) Flush Seal – One Side Only	-/120/120	One sided penetration: Faucet / 3 piece hand basin tap set	CSIRO FSP 2073

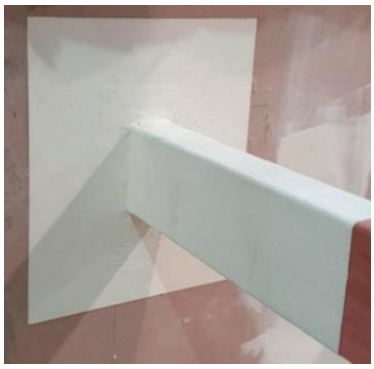
Table 15 - CONTROL JOINTS

Type	Element	System Description	Seal Size	FRL	Report Ref
Min 120mm Thick Fire Rated Plasterboard AAC / Hebel Concrete Masonry	Control Joint	FireMastic-HPE™	10-20mm Wide x 25mm Deep	-/120/120	CSIRO FCO-2990B

The table above only relates to BOSS Fire® solutions using the FireMastic-HPE™ product. For other BOSS Fire® products that offer certified control joints or linear gap seals please consult the BOSS Fire® website - bossfire.com

Table 16 - TIMBER PENETRATIONS

Interface Materials	Orientation	Substrate	System Description	Detail	FRL	Certification Reference
Timber Penetration	Wall	FR Plasterboard / GIB	FireMastic-HPE™ / FBL-100 Intumescent Coating System	Timber Penetration - 4 Exposed Timber Faces	60/60/60	PFITS PF19022
Timber Penetration	Wall	FR Plasterboard / GIB	FireMastic-HPE™ / FBL-100 Intumescent Coating System	Timber Penetration – with Combustible Substrate	60/60/60	PFITS PF19022
Timber Penetration	Wall	FR Plasterboard / GIB	FireMastic-HPE™ / FBL-100 Intumescent Coating System	Timber Penetration – with Non-Combustible Substrate	60/60/60	PFITS PF19022



FireMastic-HPE™ used in conjunction with Tech Coatings FBL-100 intumescent paint system. For more information contact BOSS Fire on 1300 502 677.

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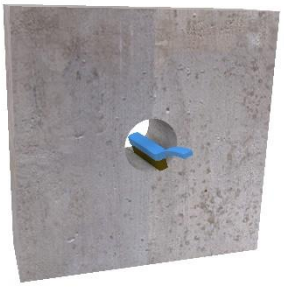
7. INSTALLATION

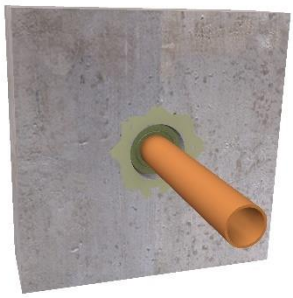
1. Ensure that the gap, aperture and/or services in question are tested with BOSS FireMastic-HPE™ and the site conditions are within the application specification.

2. Cut the appropriate size aperture in accordance with the tested system.

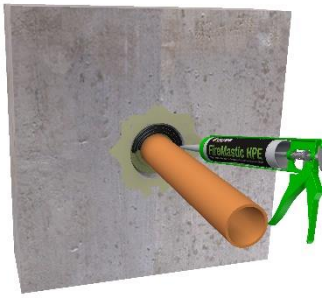
3. Ensure the opening and any surface / substrate which the product will come into contact with is clean, dry, free of dust and loose particles and free from oil or grease.



4. Mask the surface of the wall if an aesthetic finish is required. Install the service and pack the aperture if required with foam backing road to control the sealant depth on each side in accordance with the tested or certified system.

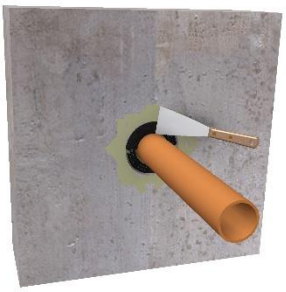


5. Cut nozzle to required bead size and apply sealant around the service and fill the void to the surface of the substrate using an appropriate caulking gun. Best results are achieved if filling is started at the bottom of the void and working upwards.



6. If a fillet of sealant is required, measure the required fillet size along the service from face of the substrate, and again the distance along the substrate from the service. build up a fillet of sealant around the surface and back to the wall. Apply sealant, building up the fillet to the required distance out from the substrate and service.

7. Smooth out sealant with a wet spatula within 5 minutes for professional finish.



8. Clean tools immediately after use with water.
9. Label penetration in accordance with regulatory requirements.

All dimensions and tolerances should be in accordance with recommended guidelines as dictated by the relevant test data and assessment documents.

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8. STORAGE & DISPOSAL

FireMastic-HPE™ is not affected by external environments. However, for long term storage and ease of installation, FireMastic-HPE™ should be stored indoors in a dry, frost-free environment below 30˚C. BOSS FireMastic-HPE™ has an expected shelf life of approximately 24 months.

9. HEALTH AND SAFETY

To learn more about the safe handling of FireMastic-HPE™, see the Safety Data Sheet available at bossfire.com

Safety Caution:
FireMastic-HPE™ contains graphite to provide its high performance intumescent, it is therefore highly conductive of electricity. Extreme caution is needed to ensure FireMastic-HPE™ does not come into contact with live current or electrically charged equipment, as electric shock may occur. When using FireMastic-HPE to firestop around power cables, check to make sure that the cables' insulation is free from defects. For more information on this please contact BOSS Fire & Safety Technical Services on 1300 502 677.

10. IS THIS PUBLICATION CURRENT?

This document may be superseded by new versions. If you are unsure of whether or not this document is a current publication, please call us on +61 2 9531 8591 to confirm.

11. LIMITATION

BOSS Fire & Safety Pty Ltd has provided the above technical information in good faith and to the best of its knowledge. This information was deemed to be correct at the time of publication. Should any data come to BOSS Fire & Safety's attention relating to the fire resistance or performance of the product described, BOSS Fire & Safety reserve the right to amend this report.

BOSS Fire & Safety strive to constantly improve and develop products so this information may change without notice.

The information contained herein has been developed as a guide only and it does not constitute a guarantee of compliance of all applications. Each project and/or application may have specific requirements and you should investigate these carefully. Ensure that you have read and understood the appropriate certification relative to your needs, and ensure you seek acceptance from the Certifying Authority or compliance inspector before installation. For updates on the range of BOSS Fire® certification please contact BOSS Technical Services. +61 2 9531 8591

12. FURTHER INFORMATION

For additional technical information on the performance of BOSS FireMastic-HPE™, other BOSS Fire® products or any other BOSS Fire® related information please contact us on:

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