



QUICK REFERENCE GUIDE

FireMastic-HPE™ Systems

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Thankyou

Thankyou for purchasing or enquiring about the BOSS Fire Products. We manufacture our products to the highest quality standards, and we appreciate your supporting an Australian Owned company. If you have any feedback or questions relating to the product or it's designed purposes, please contact us on 1300 502 677 or +61 2 9531 8591 or info@bossfire.com.au.



Publication Version

This document may be superseded by newer versions. If you are unsure of whether or not this document is a current publication, please call us on 1300 502 677 or +61 2 9531 8591 or info@bossfire.com.au to confirm.

Introduction

This Quick Reference Guide is a document developed as a first reference for users to be able to determine if FireMastic-HPE™ might be suitable for their firestopping building application in Fire Rated Plasterboard Systems.

This document must be read in conjunction with the appropriate Technical Data Sheets, Safety Data Sheets and relevant Test or Assessment report relative to the listed system. You must follow adhere to the items outlined in the Important Information section outlined below before specifying, installing or certifying any BOSS Fire products or systems.

Important Information

Fire separation is a critical part of life safety in building design and must be treated carefully. Follow the steps below to help ensure your installation is carried out correctly and compliantly.

1. Always read and understand the appropriate certification relevant to the listed system contained in this guide. Test and Assessment reports are available at bossfire.com.au. If you cannot access a copy of a particular report please contact BOSS Fire® to request a copy. If you do not understand it, then please contact BOSS Fire® for technical clarification on the details contained therein.
2. Ensure the Approved Applications detailed in the Test and/or Assessment report is applicable to your construction details or for further details on 'as-tested' systems contact BOSS Fire® on the details below.
3. All BOSS Products must be installed in accordance with the manufacturer's specifications & certification or be subject of a Performance Solution.
4. This Quick Reference Guide must be read in conjunction with the product test or assessment reports. Always read and understand these documents carefully.
5. Always check your relevant Building Regulations, local laws and AS/NZS Standards to properly understand your obligations.
6. Ensure you have an accredited Certifier or 3rd party compliance inspector to check your proposed system before installation. Pre-approval can help to save significant costs and delays and avoid non-compliance.
7. NOTE: This guide will be updated from time to time, and you must ensure they are reviewing the most recent version at the time of installation. Please visit the BOSS Fire® website (bossfire.com.au) to check for further updates or contact us on the below details.
8. If you don't understand anything contained in this guide and would like clarification, contact BOSS Fire® on the details below.

Contact Details

- **Phone Toll Free (AUS):** 1300 502 677
- **International:** +612 9531 8591
- **Email:** info@bossfire.com.au
- **Website:** bossfire.com.au

FireMastic-HPE™

FireMastic-HPE™ - Introduction

FireMastic-HPE™ is a graphite-based, High Pressure Exerting Fire Rated sealant used to reinstate the fire resistance performance of wall, floor & ceiling systems. Under heat, FireMastic-HPE™ will expand 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.

APPLICATIONS

- Use for a variety of different services:
 - Lagged Copper Pipes
 - A/C Paircoil Bundles
 - Combustible Pipes:
 - uPVC & DWV Pipes
 - cPVC Sprinkler Pipes
 - PEX water pipes
 - PEX-AL Gas Pipes
 - PP-R Pipes (Aquatherm)
 - Electrical Cable Bundles
 - Power Cables
 - Data & Comms Cables

KEY BENEFITS

- Long life and Paintable
- Fire Rating up to FRL -/240/240
- Easy gunning & tooling
- Lubrizol Compatible Sealant for cPVC Sprinkler Pipes
- Ultra-low VOC
- Packaging made from recycled materials



Table 1. Flexible and Rigid walls – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Wall details	FRL	Ref.
Power cable bundle	Bundle of 8 × 2.5 mm ² , 3 Core TPS cables	Sealant to depth of plasterboard in 10 mm annular gap finished flush	90 mm thick – 1 layer of 13 mm plasterboard both sides OR	-/60/60	CSIRO FSP 1791
Power cable bundle	8 × 2.5 mm ² 3 core power cables.	Sealant to depth of plasterboard in max. 60 mm aperture finished flush	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 90 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	WF FAS 190335
Power cable bundle	Up to 22 × 2.5 mm ² 2C+E power cables.	Sealant to depth of plasterboard in 90 mm aperture finished flush	116 mm thick - 2 layers of 13 mm plasterboard both sides OR	-/120/60	WF FAS 190335
Power cable bundle	<ul style="list-style-type: none"> • 10 × small sheathed (PVC/PVC) 5 mm × 1.5 mm², • 10 × small sheathed (EPR/PO) 5 mm × 1.5 mm², • 10 × small sheathed (XLPE/EVA) 5 mm × 1.5 mm², • 2 × small sheathed (PVC/PVC) 1 mm × 95 mm², Up to 63 mm HDPE pipe.	Sealant to depth of plasterboard applied in the voids around the cables and pipe in a maximum aperture of 300 mm wide x 100 mm high.	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Power cable bundle	Up to 4 × 0.75 mm ² TPS (fire alarm) power cables.	Sealant 25 mm deep in 30 mm aperture finished flush	116 mm thick - 2 layers of 13 mm plasterboard both sides OR	-/120/120	WF FAS 190335
Power cable bundle	Up to 6 × 2.5 mm ² 2C+E power cables.	Sealant 25 mm deep in 57 mm aperture finished flush	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335
Power cable bundle	Up to 1 × 16 mm ² 2C+E power cables.	Sealant 25 mm deep in 40 mm aperture finished flush	<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335
Power cable bundle	16 mm ² 2C+E power cables.	Sealant to depth of plasterboard in 24 mm aperture finished flush	118 mm thick - 1 layer of 13 mm plasterboard both sides OR	-/60/60	PF 23029
Power cable bundle	16 mm ² 2C+E power cables.	Sealant to depth of plasterboard in Max 3 mm annular gap with additional 15 mm × 15 mm fillet both sides	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23031
Power cable bundle	4 × 2.5 mm ² 2C+E TPS cable bundle.	Sealant to depth of plasterboard in 4.5-6mm annular gap with additional 15 mm × 15 mm fillet both sides	<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23029
Power cable bundle	1- way installation. 4 × 2.5 mm ² 2C+E TPS cable bundle.	Sealant to depth of plasterboard in Max 4 mm annular gap finished flush to penetrated side	FR Plasterboard or BOSS Batts.	-/60/60	PF 23030

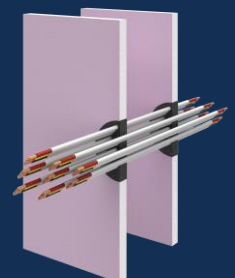


Table 2. Rigid walls – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Wall details	FRL	Ref.
Power cable bundle	Bundle of 22 × TPS cables - 2C+E 2.5 mm ²	25 mm deep in annular gap finished flush both sides	75 mm thick Hebel PowerPanel	-/120/60	WF FRT 180473
Power (Conduit)	<ul style="list-style-type: none"> Up to 32 mm conduit (WT1.9 mm) Up to 8 × 2.5 mm² 2C+E TPS power cable inside the 32 mm conduit 	20 mm deep in annular gap finished flush both sides	OR Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 	-/90/90	WF FAS 190335
Power cable bundle	Up to 22 × 2.5 mm ² 2C+E power cables.	Full depth of wall in annular gap finished flush both sides.	101 mm thick - 75 mm thick Hebel PowerPanel with additional layer of 13 mm plasterboard on each side OR Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 101 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335

Table 3. CLT walls – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Wall details	FRL	Ref.
Power cable bundle	<ul style="list-style-type: none"> • 32 mm conduit – 1.9 mm thick • Up to 8 × 2.5 mm² 2C+E cable TPS cables inside 32 mm conduit 	20 mm deep in annular gap both sides finished flush	130 mm thick CLT	-/90/90	WF FAS 190335
Power cable bundle	Up to 16 mm ² 3C+E cable	20 mm deep in annular gap both sides finished flush		-/90/90	WF FAS 190335
Power cable bundle	40 mm aperture incorporating the following cables: <ul style="list-style-type: none"> • Up to 2 CAT6 cables • Up to 2 RG6 Coax cables • Security cable • 1 × Fig 8 cable 	20 mm deep in annular gap both sides finished flush		-/90/90	WF FAS 190335

Table 4. AAC and Concrete floors – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Floor details	FRL – With 600 mm P40-MAK Wrap	FRL – Without P40-MAK Wrap	Ref.
Power cable bundle	Aperture 500 mm wide × 130 mm high incorporating a 500 mm wide steel cable tray supporting the following cables: <ul style="list-style-type: none"> • A1 - Bundle of up to 10 × 5C × 1.5 mm² PVC/PVC cables – Ø14 mm • A2 - Bundle of up to 10 × 5C × 1.5 mm² EPR/PO cables – Ø11.2 mm – Ø14.4mm • A3 - Bundle of up to 10 × 5C × 1.5 mm² XLPE/EVA cables – Ø13 mm • B - Bundle of up to 2 × 1C × 1.5 mm² PVC/PVC cables – Ø18 mm – Ø21 mm • C1 - 4C × 95 mm² PVC/PVC cable – Ø40 mm – Ø47 mm • C2 - 4C × 95 mm² EPR/PO cable – Ø48.4 mm – Ø61 mm • C3 - 4C × 95 mm² XLPE/EVA cable – Ø42 mm 	HPE 25 mm deep to both faces, with a 300 mm 'coatback' of FireMastic 300 along the cables to the top side of the system.	100 mm - 2 layers of 50 mm BOSS Batt OR 150 mm thick AAC floor OR Min 120 mm concrete slab	-/120/120	-/120/60	WF FAS 190335
Power cable bundle	Aperture 200 mm wide × 200 mm high incorporating the following cables: <ul style="list-style-type: none"> • C1 - 4C × 95 mm² PVC/PVC cable – Ø40 mm – Ø47 mm • C2 - 4C × 95 mm² EPR/PO cable – Ø48.4 mm – Ø61 mm • C3 - 4C × 95 mm² XLPE/EVA cable – Ø42 mm 	25 mm deep finished flush with the upper face of the floor, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/180/120	-/180/30	WF FAS 190335
Power cable bundle	Aperture 200 mm wide × 200 mm high incorporating the following cables: <ul style="list-style-type: none"> • D1 - 4C × 185 mm² PVC/PVC cable – Ø52 mm • D2 - 4C × 185 mm² EPR/PO cable – Ø64 mm – Ø80 mm • D3 - 4C × 185 mm² XLPE/EVA cable – Ø58 mm 	25 mm deep finished flush with the upper face of the floor, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/120/120	-/120/30	WF FAS 190335
Power cable bundle	Aperture 200 mm wide × 200 mm high incorporating the following cables: <ul style="list-style-type: none"> • A1 - Bundle of up to 10 × 5C × 1.5 mm² PVC/PVC cables – Ø14 mm • A2 - Bundle of up to 10 × 5C × 1.5 mm² EPR/PO cables – Ø11.2 mm – Ø14.4mm • A3 - Bundle of up to 10 × 5C × 1.5 mm² XLPE/EVA cables – Ø13 mm 	25 mm deep finished flush with the upper face of the floor, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/180/120	-/180/30	WF FAS 190335
Data	Aperture 200 mm wide × 200 mm high incorporating the following cables: <ul style="list-style-type: none"> • F - 20 × 2 (20 pair) × 0.6 mm² 	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/240/120	- /240/45	WF FAS 190335
Power cable bundle	Aperture 200 mm wide × 200 mm high incorporating the following cables: <ul style="list-style-type: none"> • G1 - 1C × 95 mm² non-sheathed PVC/- cable – Ø14.1 mm – Ø17.1 mm • G2 - 1C × 185 mm² non-sheathed PVC/- cable – Ø19.3 mm – Ø23.3 mm 	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/180/120	-/180/-	WF FAS 190335
Power cable bundle	Aperture 50 mm wide × 50 mm high incorporating the following cables: <ul style="list-style-type: none"> • E - 1C × 185 mm² PVC/- cable – Ø23 mm – Ø27 mm 	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/240/120	-/240/-	WF FAS 190335

Table 4 Continued. AAC and Concrete floors – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Floor details	FRL – With 600 mm P40-MAK Wrap	FRL – Without P40-MAK Wrap	Ref.
Power cable bundle in conduit	60 mm diameter PE pipe filled with the following cables: <ul style="list-style-type: none"> • A1 - Bundle of up to 3 × 5C × 1.5 mm² PVC/PVC cables – Ø14 mm • A2 - Bundle of up to 3 × 5C × 1.5 mm² EPR/PO cables – Ø11.2 mm – Ø14.4mm • A3 - Bundle of up to 3 × 5C × 1.5 mm² XLPE/EVA cables – Ø13 mm • B - 1 × 1C × 1.5 mm² PVC/PVC cables – Ø18 mm – Ø21 mm 	25 mm deep in 20 mm annular gap finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/120/120	-/120/90	WF FAS 190335
Cable tray	Aperture 200 mm wide × 200 mm high incorporating a perforated cable tray	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.	150 mm thick - AAC or concrete floor	-/120/120	-/120/30	WF FAS 190335

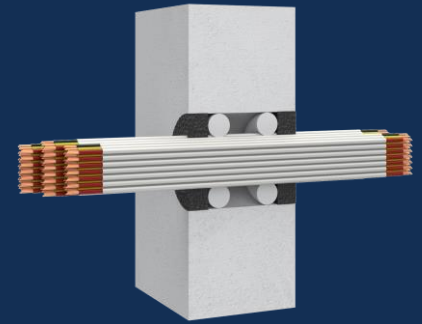


Table 5. 150 mm Concrete floors – FireMastic-HPE™ – Electrical – Power cables

Service type	Service details	Sealant details	Floor details	FRL	Ref.
Power cable bundle	Up to 6 × 2.5 mm ² TPS cable in maximum 30 mm aperture	25 mm deep – Both sides with backing rod finished flush.	150 mm thick concrete floor	-/240/240	WF FAS 190335
Power cable bundle	50 mm aperture incorporating the following cables: <ul style="list-style-type: none"> • Up to 4 RG6 Coax cables • Up to 4 CAT6 cables • Up to 2 Fire alarm cables • Security cable 	25 mm deep – Both sides with backing rod finished flush.	150 mm thick concrete floor	-/240/240	WF FAS 190335

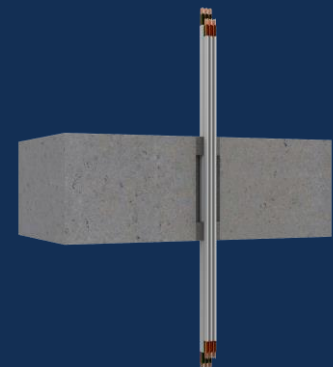


Table 6. Flexible and Rigid walls – FireMastic-HPE™ – Electrical – Comms / Data Cables

Service type	Service details	Sealant size	Wall details	FRL	Ref.
Optical cable	Single core 5 mm OD NBN cable.	20 mm × 20 mm fillet on non-exposed side only OR exposed side only	90 mm thick – 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 90 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	WF FAS 190335
Alarm cables	Up to 4 × ELV extra low voltage alarm cables.	Sealant to depth of plasterboard in 57 mm aperture finished flush	116 mm thick - 2 layers of 13 mm plasterboard both sides	-/120/90	WF FAS 190335
Fire alarm cable	Up to 8 Fire alarm cables.	Sealant to depth of plasterboard with 15 mm annular gap finished flush both sides	OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/120/120	WF FAS 190335
Data and communication	• Up to 2 × RG6 coax cables, • Up to 2 × CAT6 cables, Up to 2 × 4 core security cables (7/0.20 mm).	20 mm deep in 40 mm aperture finished flush	NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Fire alarm cable	4 × 1.5mm ² 2C+E fire alarm cable bundle.	Sealant to depth of plasterboard in Max 2.5 mm annular gap finished flush both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides	-/60/60	PF 23031
Communication cable bundle	2 × Cat6, 2 × COAX, 1 × security cable bundle.	Sealant to depth of plasterboard with Max 5.5 mm annular gap finished flush both sides	OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/60/60	PF 23029
Communication cable bundle	2 × Cat6, 2 × COAX, 1 × security cable bundle.	Sealant to depth of plasterboard with Max 6 mm annular gap with additional 15 mm × 15 mm fillet both sides	NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23029
Communication cable bundle	1-way installation. 2 × Cat6, 2 × COAX, 1 × security cable bundle.	Sealant to depth of plasterboard in Max 7.5 mm annular gap finished flush on penetrated side		-/60/60	PF 23030

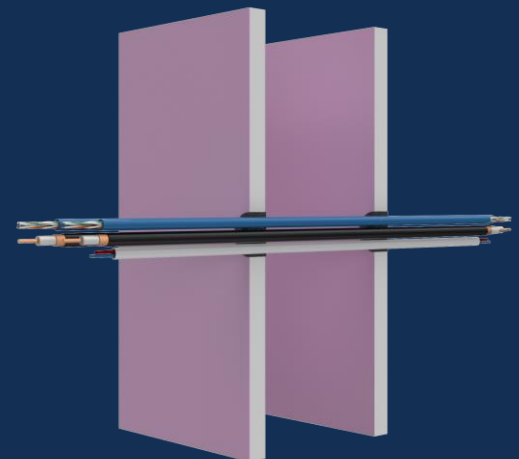


Table 7. Rigid walls – FireMastic-HPE™ – Electrical – Comms / Data Cables

Service type	Service details	Sealant size	Wall details	FRL	Ref.
Data cable bundle	Up to 38 CAT6 data cables	Full depth of wall in annular gap finished flush both sides.	75 mm thick Hebel PowerPanel OR	-/120/60	WF FAS 190335
Data cable bundle	Up to 38 CAT6 data cables.	Full depth of wall with additional 25 mm × 25 mm fillet both sides	Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 		
Data cable bundle	Up to 38 CAT6 data cables.	Full depth of wall in annular gap finished flush both sides.	101 mm thick - 75 mm thick Hebel PowerPanel with additional layer of 13 mm plasterboard on each side OR Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 101 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Alarm cables	Up to 4 × ELV extra low voltage alarm cables.	25 mm deep in annular gap finished flush both sides	75 mm thick Hebel PowerPanel OR	-/120/120	WF FAS 190335
Fire alarm cable	Up to 4 × 0.75 mm ² TPS (fire alarm) power cables.	25 mm deep in annular gap finished flush both sides	Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335
Data and comms	<ul style="list-style-type: none"> • Up to 2 × RG6 coax cables • Up to 2 × CAT6 cables • Up to 2 × 4 core security cables (7/0.20 mm) 	20 mm deep in annular gap finished flush both sides		-/120/120	WF FAS 190335

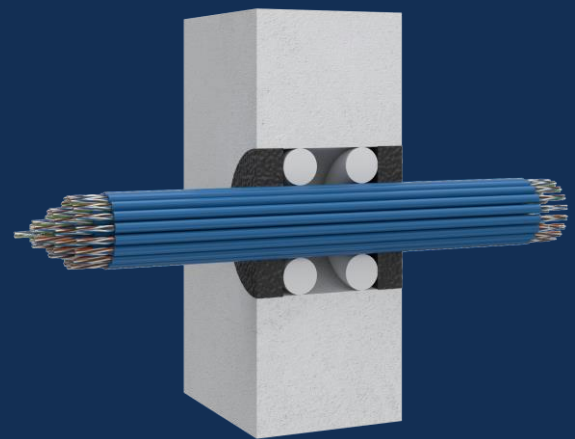


Table 8. Flexible and Rigid walls – FireMastic-HPE™ – Plumbing – cPVC pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
cPVC	Up to 32 mm	Sealant to depth of plasterboard in 18.5 mm annular gap with additional 15 mm × 15 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
cPVC	Up to 32 mm	Sealant to depth of plasterboard in Max 6.5 mm annular gap with additional 15 mm × 15 mm fillet both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23029
cPVC	Up to 40 mm	Sealant to depth of plasterboard in Max 7 mm annular gap with additional 15 mm × 15 mm fillet both sides	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23030
cPVC	Up to 50 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	144 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 144 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/60	WF FAS 190335

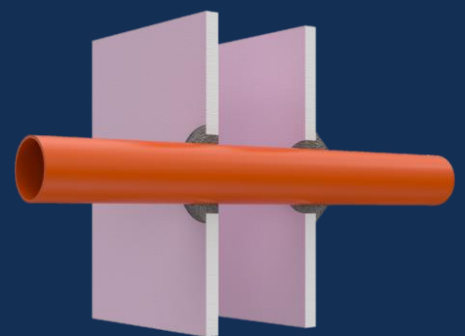


Table 9. Rigid walls – FireMastic-HPE™ – Plumbing – cPVC pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
cPVC	Up to 32 mm	20 mm deep in annular gap with additional 15 mm × 15 mm fillet both sides	75 mm thick Hebel PowerPanel OR	-/120/120	WF FAS 190335
cPVC	Up to 60 mm	25 mm deep in 20 mm annular gap finished flush both sides	Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 		

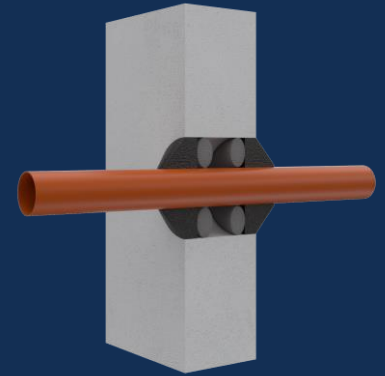


Table 10. Flexible and Rigid walls – FireMastic-HPE™ – Plumbing – uPVC pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
uPVC	Up to 20 mm	15 mm × 15 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides	-/120/120	WF FAS 190335
uPVC	Up to 20 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 20 mm × 20 mm fillet both sides	OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
uPVC	Up to 32 mm	Sealant 25 mm deep in 20 mm annular gap with additional 20 mm × 20 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/120/120	WF FAS 190335
uPVC – NBN Conduit	25 mm	Sealant to depth of plasterboard in 6 mm annular gap with additional 15 mm × 15 mm fillet both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides OR	-/60/60	PF 23029
uPVC	1-way installation Up to 43 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/90/90	WF FAS 190335
uPVC	Up to 40 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	144 mm thick - 2 layers of 13 mm plasterboard both sides	-/120/120	WF FAS 190335
uPVC	Up to 50 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/120/120	WF FAS 190335
uPVC	Up to 80 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	• AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 144 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/90/90	WF FAS 190335

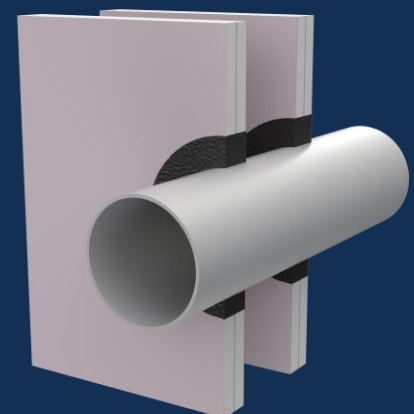


Table 11. Rigid walls – FireMastic-HPE™ – Plumbing – uPVC pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
uPVC	Up to 20 mm	Surface seal only both sides	75 mm thick Hebel PowerPanel	-/120/120	WF FAS 190335
uPVC	Up to 25 mm	25mm deep in annular gap with additional 20 mm × 20 mm fillet both sides	OR Other rigid walls, including:		
uPVC	40 mm	10 mm deep in annular gap with additional 25 mm × 25 mm fillet both sides	<ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 		
uPVC	30 40 mm	10mm deep in annular gap with additional 25 mm × 25 mm fillet both sides	101 mm thick - 75 mm thick Hebel PowerPanel with additional layer of 13 mm plasterboard on each side OR Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry <p>NOTE: Walls less than 101 mm must contain localised thickening using FR Plasterboard or BOSS Batts.</p>	-/120/120	WF FAS 190335

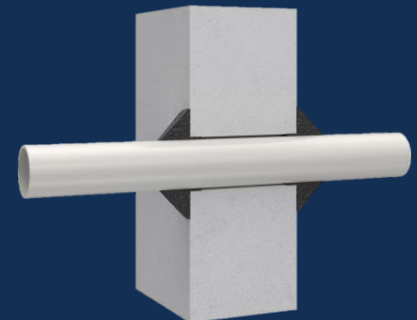


Table 12. Flexible and Rigid walls – FireMastic-HPE™ – Plumbing – PVC pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PVC	Up to 40 × 1.9 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 10 mm × 10 mm fillet both sides	100 mm thick - 2 layers of 13 mm plasterboard both sides OR	-/120/120	WF FAS 190335
PVC	Up to 125 × 9.2 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 10 mm × 10 mm fillet both sides	75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/60/60	WF FAS 190335
PVC	Up to 125 × 1.8 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 10 mm × 10 mm fillet both sides	NOTE: Walls less than 100 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/30/30	WF FAS 190335
PVC	1-way installation Up to 40 × 1.9 mm	Sealant to depth of plasterboard with additional 10 mm × 10 mm fillet both sides		-/120/120	WF FAS 190335
PVC	1-way installation 43 mm	Sealant to depth of plasterboard in 88 mm aperture finished flush	118 mm thick - 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/90/90	WF FAS 190335
PVC	1-way installation 43 mm	Sealant to depth of plasterboard in 90 mm aperture finished flush	156 mm – 2 layers of 13mm plasterboard both sides, with additional baffle of 13 mm plasterboard both sides and 12 mm plywood fixed to steel angles inside cavity to penetrated side	-/120/120	WF FAS 190335

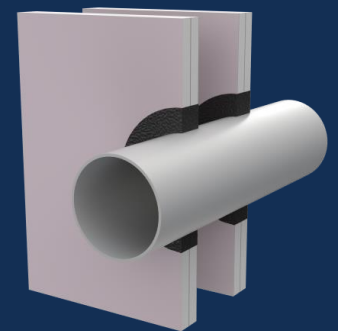


Table 13. Flexible and Rigid walls – FireMastic-HPE™ – Plumbing – Plastic Pipes (PP / PP-R / HDPE / ABS / PE)

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PE	40 × 3.7 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 10 mm × 10 mm fillet both sides	100 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/30/30	WF FAS 190335
ABS	Up to 40 mm	Sealant to depth of plasterboard in 20 mm annular gap with additional 10 mm × 10 mm fillet both sides	<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry <p>NOTE: Walls less than 100 mm must contain localised thickening using FR Plasterboard or BOSS Batts.</p>	-/120/120	WF FAS 190335

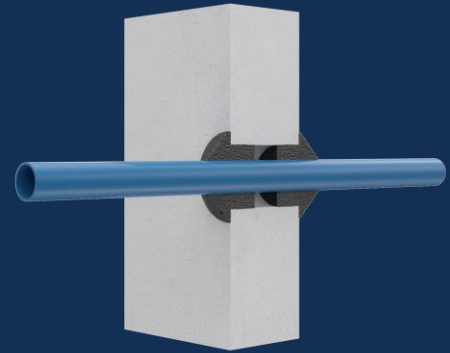


Table 14. Flexible and Rigid walls – FireMastic-HPE™ – PEX Pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PEX	Up to 20 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	90 mm thick – 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/60/60	CSIRO FSP 1791
PEX	Up to 20 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 90 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	WF FAS 190335
PEX	Up to 20 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	96 mm – 1 layer of 16mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/90/90	WF FAS 190335
			<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 96 mm must contain localised thickening using FR Plasterboard or BOSS Batts.		
PE-Xa	Up to 25 mm	Sealant 25 mm deep in 10 mm annular gap finished flush both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR	- /120/120	WF FAS 190335
PE-Xa	Up to 20 mm	Sealant 25 mm deep in 20 mm annular gap with additional 20 mm x 20 mm fillet both sides	75 mm thick rigid walls, including:	- /120/120	WF FAS 190335
			<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 		
PE-Xb	Up to 25 mm	Sealant 25 mm deep in 10 mm annular gap finished flush both sides		- /120/120	WF FAS 190335
PE-Xb	Up to 20 mm	Sealant 25 mm deep in 20 mm annular gap with additional 20 mm x 20 mm fillet both sides		- /120/120	WF FAS 190335
PEX	Up to 25 mm	Sealant to depth of plasterboard in 5.5 mm annular gap finished flush	118 mm thick - 1 layer of 13 mm plasterboard both sides OR	-/45/30	PF 23030
PEX	Up to 25 mm	Sealant to depth of plasterboard in Max 4.5 mm annular gap finished flush. Additional BOSS 32 mm MaxiCollar both sides.	75 mm thick rigid walls, including:	-/60/60	PF 23030
			<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 		
PEX	Up to 20 mm	Sealant to depth of plasterboard in Max 6 mm annular gap finished flush	NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23029
PEX	1-way installation Up to 20 mm	Sealant to depth of plasterboard in Max 5 mm annular gap finished flush to penetrated side		-/60/60	PF 23030
PE-Xa	1-way installation Up to 20 mm	Sealant to depth of plasterboard in 17.5 mm annular gap finished flush		-/90/90	WF FAS 190335
PE-Xa	1-way installation Up to 20 mm	Sealant to depth of plasterboard in 55 mm annular gap finished flush to penetrated side	118 mm thick – 1 layer of 13mm plasterboard both sides, with additional baffle of 13 mm plasterboard both sides and 12 mm plywood fixed to steel angles inside cavity to penetrated side	-/60/60	WF FAS 190335
PE-Xb	Up to 25 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	144 mm thick - 2 layers of 13 mm plasterboard both sides OR	- /120/120	WF FAS 190335
			75 mm thick rigid walls, including:		
PE-Xb	Up to 25 mm	Fill the gap between the collar and the pipe on both sides	<ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/120/60	WF FAS 190335
PE-Xb	Up to 32 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	NOTE: Walls less than 144 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/0	WF FAS 190335

Table 15. Rigid walls – FireMastic-HPE™ – PEX Pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PE-Xa	Up to 32 mm	25 mm deep with 19 mm annular gap finished flush both sides.	75 mm thick Hebel PowerPanel OR	-/120/0	WF FRT 180473
PE-Xa	Up to 32 mm	25 mm deep in annular gap with additional 20 mm × 20 mm fillet both sides	Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335



Table 16. Flexible and Rigid walls – FireMastic-HPE™ – Plumbing – PEX/AL/PEX pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PEX/AL/PEX	Up to 20 mm	Sealant to depth of plasterboard in 5 mm annular gap finished flush both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides	-/120/120	WF FAS 190335
PEX/AL/PEX	Up to 25 mm	Sealant to depth of plasterboard in 11.5 mm annular gap with additional 20 mm × 20 mm fillet both sides	OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/120/30	WF FRT 190033
PEX/AL/PEX	Up to 20 mm	Sealant to depth of plasterboard in 10 – 20 mm annular gap with additional 20 mm × 20 mm fillet both sides	NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
PEX/AL/PEX	Up to 20 mm	Sealed 26 mm deep in 10 mm annular gap with additional 20 mm × 20 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335
PEX/AL/PEX	Up to 20 mm	Sealant to depth of plasterboard in Max 20 mm annular gap with additional 15 mm × 15 mm fillet both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides OR	-/60/60	PF 23029
PEX/AL/PEX	Up to 20 mm	Sealant to depth of plasterboard in Max 5 mm annular gap both sides finished flush	75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry 	-/60/60	PF 23029
PEX/AL/PEX	1-way installation Up to 20 mm	Sealant to depth of plasterboard in Max 5.5 mm annular gap both sides finished flush	NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23031
PEX/AL/PEX	Up to 25 mm	Sealant to depth of plasterboard in 20 mm annular gap finished flush both sides	144 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: <ul style="list-style-type: none"> • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 144 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/30	WF FAS 190335

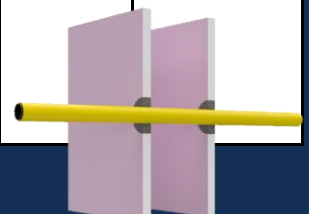


Table 17. Rigid walls – FireMastic-HPE™ - Plumbing – PEX/AL/PEX pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
PEX/AL/PEX	Up to 20 mm	25 mm deep in annular gap finished flush both sides – 40 mm aperture	75 mm thick Hebel PowerPanel OR	-/120/120	WF FAS 190335
PEX/AL/PEX	Up to 25 mm	20 mm deep in annular gap with additional 20 mm × 20 mm fillet both sides – 48 mm aperture	Other rigid walls, including: <ul style="list-style-type: none"> • AAC • Speedpanel/Korok • Concrete/Masonry 	-/120/120	WF FAS 190335

Table 18. CLT walls – FireMastic-HPE™ – Plumbing – PEX/AL/PEX pipes

Service type	Service details	Sealant details	Wall details	FRL	Ref.
PEX-A	Up to 20 mm	20 mm deep in 20 mm annular gap in maximum 60 mm aperture, finished flush on both sides.	130 mm thick CLT	-/90/90	WF FAS 190335
	Up to 20.4 mm	25 mm deep in 12.5 mm annular gap in maximum 45 mm aperture, finished flush on both sides.		-/90/90	WF FAS 190335
PEX/AL/PEX and PE-Xb	Up to 20 mm	25 mm deep in 20 mm annular gap in maximum 60 mm aperture, finished with 20 mm × 20 mm fillet of sealant on both sides.		-/90/90	WF FAS 190335
Kelox Plus pipe	Up to 25mm (with additional 13mm thick insulation)	20 mm deep in 16.5 mm annular gap in maximum 83 mm aperture, finished flush on both sides.		-/90/90	WF FAS 190335

Table 19. AAC and Concrete floors – FireMastic-HPE™ – Plumbing – Plastic pipes

Service type	Service details	Sealant details	Floor details	FRL	Ref.
PEX	Up to 40 mm with maximum 4mm wall thickness	25 mm deep both sides, finished flush	150 mm thick - AAC or concrete floor	-/120/120	WF FAS 190335
	Up to 110 mm with maximum 10 mm wall thickness	25 mm deep both sides, finished flush		-/120/60	WF FAS 190335
PE	Up to 50 mm with maximum 3.7 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/120/120	WF FAS 190335
	Up to 50 mm with maximum 2.4 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/120/120	WF FAS 190335
	Up to 125 mm with maximum 4.8 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/120/90	WF FAS 190335
	Up to 125 mm with maximum 7.4 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/120/120	WF FAS 190335
PVC	Up to 114 mm with maximum 3.6 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/90/30	WF FAS 190335
	Up to 114 mm with maximum 8.1 mm wall thickness	25 mm deep finished flush on both sides, including a 100 mm deep infill of friction fitted stonewool insulation.		-/120/30	WF FAS 190335

Table 20. Flexible and Rigid walls – FireMastic-HPE™ – HVAC Bundles

Service type	Service details	Sealant size	Wall details	FRL	Ref.
Pair coil / uPVC drain / Cable bundle	1-way installation 6.35mm/9.52mm insulated copper pipes with non-rated lagging, 1.5mm ² 2C+E TPS power cable, 16mm PVC flexible outlet pipe.	Sealed to depth of plasterboard in 80 mm aperture finished flush on penetrated side	90 mm thick – 1 layer of 13mm plasterboard both sides. Second layer of plasterboard 150 mm x 150 mm over penetration	-/60/60	CSIRO FSP 1791
Pair coil / uPVC drain / Cable bundle	1-way installation 6.35 mm / 9.52 mm insulated copper pipes with non-rated lagging, 1.5 mm ² 2C+E TPS power cable and a 16 mm PVC flexible outlet pipe.	Sealed to depth of plasterboard in 80 mm aperture finished flush on penetrated side	90 mm thick – 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/60/60	CSIRO FSP 1791
Power cables / Pair coil	1-way installation <ul style="list-style-type: none"> Up to 6.35 mm / 9.52 mm insulated copper pipes with non-rated lagging, Up to 1.5 mm² 2C+E TPS power cable Up to 16 mm PVC flexible outlet pipe. 	Sealed to depth of plasterboard in annular gap finished flush on penetrated side	<ul style="list-style-type: none"> AAC/Hebel Speedpanel/Korok Concrete/Masonry NOTE: Walls less than 90 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	WF FAS 190335
Copper insulated	<ul style="list-style-type: none"> Up to 9.5mm OD copper pipes with up to 35.5mm OD lagging Up to 15.8mm OD Copper Pipes with up to 41.1mm OD lagging, 	Sealed to depth of plasterboard in annular gap with additional 10 mm x 10 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/90/90	WF FAS 190335
Power cables / Pair coil	<ul style="list-style-type: none"> Polyaire© insulated copper pipe, Up to 1.5 mm² 2C+E TPS power cable, Up to 16 mm PVC flexible outlet pipe. 	Sealed to depth of plasterboard in annular gap finished flush on both sides	<ul style="list-style-type: none"> AAC/Hebel Speedpanel/Korok Concrete/Masonry 	-/60/60	WF FAS 190335
Power cables / Pair coil and conduit	<ul style="list-style-type: none"> Up to 10 mm / 15 mm insulated copper pipes with non-rated lagging, Up to 2.5 mm² 2C+E TPS power cable, Up to 1.5 mm² 2C data cable. Up to 20 mm uPVC conduit 	Sealed to depth of plasterboard in annular gap finished flush on both sides	NOTE: Walls less than 116 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	WF FAS 190335
Power cables / Pair coil	<ul style="list-style-type: none"> Up to 3/8" x 5/8" pair coil with 9 mm thick non fire-retardant lagging Up to 2.5 mm² 2C+E TPS power cable 	Sealed 26 mm deep in annular gap with additional 20 mm x 20 mm fillet both sides	116 mm thick - 2 layers of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/120/120	WF FAS 190335
Power cables / Data & comms cables / Plastic pipes & Conduits / Pair coil	<ul style="list-style-type: none"> 1 x 15.5 mm + 9.5 mm pair coil with 19 mm + 17.5 mm insulation, 1 x TPS cable, 1 x Instrolex® control cable, 1 x 20 mm uPVC condensate drain. 	Sealed to depth of plasterboard in Max 6.5 mm annular gap with additional 15 mm x 15 mm fillet both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including:	-/60/60	PF 23031



Table 21. Rigid walls – FireMastic-HPE™ – HVAC Bundles

Service type	Service details	Sealant size	Wall details	FRL	Ref.
Power cables / Data & comms cables / Plastic pipes & conduits / Lagged and unlagged steel & copper pipes / Pair coil	<ul style="list-style-type: none"> Up to 1 x 3/8" x 3/4" pair coil with 19 mm thick FR lagging Up to 1 x 2.5 mm² 3C+E TPS power cable Up to 1 x Cat6 cable Up to 1 x 20 mm uPVC condensate pipe (WT 1.4 mm). 	20 mm deep in annular gap with additional 25 mm x 25 mm fillet both sides	75 mm thick Hebel PowerPanel OR Other rigid walls, including: <ul style="list-style-type: none"> AAC Speedpanel/Korok Concrete/Masonry 	-/120/120	WF FAS 190335
Power cables / Data & comms cables / Plastic pipes & conduits / Lagged and unlagged steel & copper pipes / Pair coil	<ul style="list-style-type: none"> Up to 1 x 3/8" x 5/8" pair coil with 13 mm thick FR lagging Up to 1 x 2.5 mm² 3C+E TPS power cable Up to 1 x Cat6 cable Up to 1 x 20 mm uPVC condensate pipe (WT 1.4 mm). 	20 mm deep in annular gap with additional 25 mm x 25 mm fillet both sides		-/120/120	WF FAS 190335
Power cables / Data & comms cables / Plastic pipes & conduits / Lagged and unlagged steel & copper pipes / Pair coil	<ul style="list-style-type: none"> Up to 1 x 3/8" x 3/4" pair coil with 19 mm thick FR lagging Up to 1 x 3/8" x 5/8" pair coil with 13 mm thick FR lagging Up to 1 x 32 mm type B copper pipe (WT 1.2 mm) with 25 mm thick lagging 	20 mm deep in annular gap with additional 25 mm x 25 mm fillet both sides		-/120/120	WF FAS 190335
Power cables / Data & comms cables / Plastic pipes & conduits / Pair coil	<ul style="list-style-type: none"> Up to 1 x 3/8" x 5/8" pair coil with 9 mm thick FR lagging Up to 2 x 2.5 mm² 3C+E TPS power cable Up to 2 x Cat6 cable Up to 1 x 20 mm uPVC condensate pipe (WT 1.4 mm) 	25 mm deep in annular gap with additional 20 mm x 20 mm fillet both sides		-/120/120	WF FAS 190335
Power cables / Data & comms cables / Plastic pipes & conduits / Pair coil	<ul style="list-style-type: none"> Up to 1 x 3/8" x 5/8" pair coil with 19 mm thick FR lagging Up to 1 x 2.5 mm² 3C+E TPS power cable Up to 1 x Cat6 cable Up to 1 x 20 mm uPVC condensate pipe (WT 1.4 mm) 	20 mm deep in annular gap with additional 25 mm x 25 mm fillet both sides		-/120/120	WF FAS 190335

Table 22. CLT walls – FireMastic-HPE™ – HVAC Bundles

Service type	Service details	Sealant details	Wall details	FRL	Ref.
Power cables / Data & comms cables / Plastic pipes & conduits / Pair coil	<ul style="list-style-type: none"> Up to 3/8" x 3/4" paircoil with 19 mm thick FR lagging – 1.4 mm / 2.8 wall thickness Up to 20 mm condensation drainpipe – 1.8 mm wall thickness Up to 2.5 mm² 3C+E TPS cable Instrolex control cable 	20 mm deep in annular gap in maximum 121 mm aperture, finished flush on both sides.	130 mm thick CLT	-/90/90	WF FAS 190335

Table 23. Concrete floors – FireMastic-HPE™ – HVAC Bundles

Service type	Service details	Sealant details	Floor details	FRL	Ref.
HVAC	<ul style="list-style-type: none"> Up to 1 1/8" (28.6 mm) copper pipe with 25 mm thick E-Flex ST lagging – 1.2 mm wall thickness Up to 7/8" (22 mm) copper pipe with 25 mm thick E-Flex ST lagging – 1.6 mm wall thickness Up to DN 18 copper pipe with 19 mm lagging – 1.3 mm wall thickness Up to 20 mm condensation drainpipe – 1.5 mm wall thickness Up to 2.5 mm² 3C+E TPS cable Fire alarm cable Instrolex control cable 	25 mm deep in annular gap in maximum 150 mm aperture, finished flush on both sides.	150 mm thick concrete floor	-/240/120	WF FAS 190335
Insulated copper pipe	<ul style="list-style-type: none"> Up to 3/8" × 3/4" Paircoil with 19 mm thick FR lagging – 1.4 mm / 2.8 wall thickness Up to 2.5 mm² 3C+E TPS cable Up to 1 × Cat6 cable Instrolex control cable Up to 2.5 mm² 2C+E TPS cable Up to 20 mm condensation drainpipe – 1.5 mm wall thickness 	25 mm deep to backing rods in annular gap in maximum 100 mm aperture, finished flush on both sides.	150 mm thick concrete floor	-/240/240	WF FAS 190335

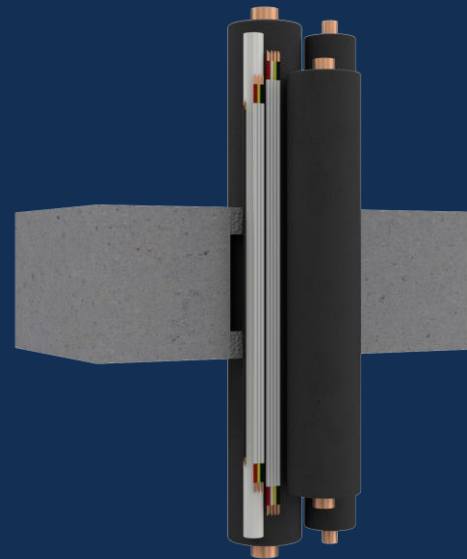


Table 24. Flexible and Rigid walls – FireMastic-HPE™ – Metal Pipes

Service type	Service details	Sealant size	Wall details	FRL	Ref.
Copper	Up to 159 mm	32 mm glass wool insulation around pipe min. 1000 mm on both sides with sealant to a depth of 25 mm in annular gap finished flush both sides.	100 mm thick - 2 layers of 13 mm plasterboard both sides	-/120/120	WF FAS 190335
Copper	Up to 159 mm	32 mm Armaflex® insulation around pipe min. 1000 mm on both sides with sealant to a depth of 25 mm in annular gap finished with additional 10 mm x 10 mm fillet both sides.	OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/120/120	WF FAS 190335
Uponor water valves	1-way installation Up to 52 mm	Sealed to depth of plasterboard in annular gap finished flush on penetrated side.	NOTE: Walls less than 100 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Steel	40 mm	Sealant to a depth of plasterboard in Max 8.5 mm annular gap with additional 30 mm x 30 mm fillet both sides	118 mm thick - 1 layer of 13 mm plasterboard both sides OR 75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/60/60	PF 23031
Steel	Up to 324 mm	75 mm insulation installed around pipe 300 mm on exposed face and 400 mm on non-exposed face with sealant to a depth of plasterboard in 5 mm annular gap finished flush both sides.	130 mm thick - 2 layers of 13 mm plasterboard both sides OR	-/90/90	WF FAS 190335
Copper	Up to 15 mm	13 mm Armaflex® insulation around pipe 580 mm each side with sealant to a depth of 25 mm in annular gap finished flush both sides.	75 mm thick rigid walls, including: • AAC/Hebel • Speedpanel/Korok • Concrete/Masonry	-/120/120	WF FAS 190335
Copper	Up to 25 mm	25 mm stone wool insulation around pipe 400 mm on each side with sealant to a depth of 16 mm in annular gap with additional 35 mm x 35 mm fillet both sides.	NOTE: Walls less than 118 mm must contain localised thickening using FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Copper	Up to 60 mm	32 mm Armaflex® insulation around pipe min. 600 mm on both sides. Additional wrapping with P40 MAK Wrap extending 600 mm on both sides, with sealant to a depth of 25 mm finished flush both sides.	FR Plasterboard or BOSS Batts.	-/120/120	WF FAS 190335
Copper	Up to 100 mm	50 mm stone wool insulation around pipe min. 600 mm on both sides with sealant to a depth of 16 mm in annular gap with additional 35 mm x 35 mm fillet both sides.		-/120/120	WF FAS 190335

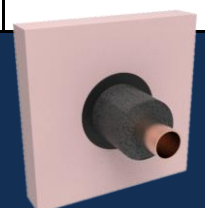


Table 25. Concrete Floors – FireMastic-HPE™ – Metal Pipes

Service type	Service details	Sealant details	Floor details	FRL	Ref.
Insulated copper pipe	Up to Ø25 mm with 25 mm thick insulation	16 mm deep in 10 mm annular gap with 10 mm × 10 mm fillet to both sides	125 mm thick concrete floor	-/120/120	WF FAS 190335
Insulated copper pipe	Ø25 mm – Ø100 mm with 25 mm – 50 mm thick insulation	16 mm deep in 10 mm annular gap with 10 mm × 10 mm fillet to both sides	125 mm thick concrete floor	-/120/90	WF FAS 190335
Insulated copper pipe	Up to Ø100 mm with 50 mm thick insulation	16 mm deep in 10 mm annular gap with 10 mm × 10 mm fillet to both sides	125 mm thick concrete floor	-/120/90	WF FAS 190335
Insulated copper pipe	Ø100 mm – Ø200 mm with 32 mm thick insulation	25 mm deep in 20 mm annular gap on top side only, finished flush, backed with stonewool insulation	125 mm thick concrete floor	-/60/30	WF FAS 190335

Health and Safety

To learn more about the safe handling of BOSS fire products, refer to the relevant products Safety Data Sheet available at bossfire.com.au.

Limitation

BOSS Fire 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's attention relating to the fire resistance or performance of the product described BOSS Passive Fire reserve the right to amend this document.

BOSS Fire 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 must 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

Further Information

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